

**MANISTEE CITY PLANNING COMMISSION**  
70 Maple Street, Manistee, Michigan 49660  
Public Hearing/Special Meeting of Thursday, December 4, 2003  
7:00 p.m. - Library, Manistee Middle School, 550 Maple Street

**AGENDA**

- I Roll Call
- II Election of Secretary - 2003 unexpired term
  - 1. Appoint Recording Secretary
- III Public Hearing
  - None
- IV Citizen Questions, Concerns and Consideration  
**(Public Comment Procedures on the Reverse Side)**
- V Approval of Minutes
  - Planning Commission Meeting (11/20/03)
- VI New Business
  - 1. Meeting Dates 2004
  - 2. Election of Officers - 2004
  - 3. Appoint Recording Secretary
- VII Unfinished Business
  - 1. Manistee Saltworks Development Corporation - Proposed Power Plant
  - 2.
- VIII Other Communications
  - 1.
- IX Work/Study Session
  - 1.
- X. 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

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TO: Planning Commission Members

FROM: Denise Blakeslee   
Administrative Assistant Community Development Department

DATE: November 26, 2003

RE: Planning Commission Meeting December 4, 2003

Joyce Jeruzal has submitted her resignation (attached). The first item on the Agenda will be the appointment of a Secretary for the remainder of her 2003 unexpired term. The appointed Secretary will then appoint a recording secretary.

There is no Public Hearing scheduled for this Meeting. Citizen Questions, Concerns and Consideration will follow the guidelines on the Back of the Agenda.

Under the Business Session we will have approval of Minutes followed by the approval of Meeting Dates for 2004. Next the meeting will be turned over to Jon Rose who will ask for the nomination of officers for the 2004 term. The nominations will be for Chair, Vice-Chair, and Secretary. The appointed Secretary will then appoint a recording secretary for the 2004 term.

The two people who applied for the two previous vacancies on the Planning Commission have been asked if they are interested in the position. This item will be on the Council Agenda for December 2, 2003 and the Mayor may appoint a new member at that time. The two applications are Christa Johnson-Ross, 215 First Avenue and William Brooks, 385 ½ River Street

Last we will continue our discussion on the request from Manistee Saltworks Development Corporation - Proposed Coal Fired Power Plant. Attachments are listed on the following page.

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

:djb

# Attachments for Manistee Saltworks Development Corporation Proposed Coal Fired Power Plant

Memo from Jon Rose to Planning Commission  
Boat Traffic Information  
Questions from the Public Hearing/Special Meeting November 20, 2003  
Article - Siting Electricity Generation Facilities

## Letters/Correspondence

William & Martha Day, 320 First Avenue, Manistee (Dated 11/22/03)  
Jim Nordlund Jr., Nordlund & Associates, Inc.  
Judith Cunningham, 4466 Potter Road, Bear Lake  
Kristin Penzyl, 10030 Alkire Road, Bear Lake  
M. Jo Miller, 3480 Potter Road, Bear Lake  
Jim Sluyter, 3480 Potter Road, Bear Lake  
Frank J. Fahey, Elmhurst, IL  
Kurt Harvey, 17136 Fourth Street, Arcadia  
Bob & Beth Polidan, 377 Lighthouse Way S., Manistee  
Dana Schidler, 2005 Merkey Road, Manistee  
Mark Dougher, 266 Feemont Street, Manistee  
Nancy McCaslin, 613 Hopkins Street, Manistee  
Jimmie Mitchell, 8846 Coates Hwy., Manistee  
Marty Holtgren, 1308 East 25<sup>th</sup> Street, Manistee  
William & Martha Day, 320 First Avenue, Manistee (Dated 11/24/03)  
Francis Johnston, 388 First Street, Manistee  
Mark Knee, 4290 North Sherman Road, Ludington  
Mark Sanford, 260 E. Piney Road, Manistee  
William & Mary Kracht, 403 First Street, Manistee  
April Saad, 2005 Merkey Road, Manistee  
Helen Ann Yunis, 444 Third Street, Manistee  
Nate Suoboda, P.O. Box 735, Manistee (No street address)  
Jan Sapak, 2749 Old Stronach Road, Manistee  
Patricia Didion, 88 Greenbush Street, Manistee  
Ellyn Niesen, 1603 Niesen Drive, Manistee  
Kurt Harvey, 17136 Fourth Street, Arcadia  
Shirley Skiera, 1307 24<sup>th</sup> Street, Manistee  
Carol Pasco, 610 Spruce Street, Manistee  
Roberta Szpiet, 2311 Filer City Road, Manistee  
Gerard Grabowski, 1004 Alkire Road, Bear Lake  
Bernard Ware Jr., 9094 Alkire Road, Bear Lake, MI 49614  
Jan Shireman, 10040 Alkire Road, Bear Lake  
Sande Ware, 9094 Alkire Road, Bear Lake  
Ned Atkins, 1870 Pine Ridge Drive, Manistee  
Lee Sprague, Little River Band of Ottawa Indians, 375 River Street, Manistee

November 22, 2003

City of Manistee Planning Commission  
70 Maple Street  
Manistee MI 49660

Dear City of Manistee Planning Commission:

It is with deep regret that I must resign from my position on the City of Manistee Planning Commission.

My husband John Jeruzal and I have both taken positions in Ludington. We have decided to build a house in Scottville to be closer to work.

Even though we are still living in Manistee and will be for a few more months, I feel that the decisions that are ahead of the Planning Commission are too important for the future of Manistee.

With us moving soon I feel someone should be on this Commission that is living in the City and will be in the future.

This has been a very positive experience and I will miss this and everyone on the Commission. Thank you for the opportunity to serve on this Commission.

Sincerely yours,

A handwritten signature in cursive script that reads "Joyce Jeruzal". The signature is written in black ink and is positioned above the printed name.

Joyce Jeruzal

**Tentative Meeting Dates**  
**2004**

<b><u>Meeting Dates</u></b>	<b><u>Worksession Dates</u></b>
January 8, 2004	January 22, 2004
February 5, 2004	February 19, 2004*
March 4, 2004	March 18, 2004
April 1, 2004 *	April 15, 2004
May 6, 2004	May 20, 2004 (Annual Bus Tour)
June 3, 2004	No Worksession
July 1, 2004	July 22, 2004
August 5, 2004	No Worksession
September 2, 2004	September 16, 2004
October 7, 2004	October 21, 2004
November 4, 2004	November 18, 2004
December 2, 2004	No Worksession

The City Offices will be moving to the Old Middle School the week of December 15 - 19, 2003.

We have made arrangements to hold our meetings in the Library of the New Middle School .

There is a conflict for a few dates when they do not have school. We may have to find an alternate for those two dates (marked with \*).



70 Maple Street • P. O. Box 358 • Manistee, Michigan 49660

231-723-2558  
FAX 231-723-1546

November 26, 2003

TO: Planning Commission

FROM: Jon R. Rose   
Community Development Director

DATE: November 26, 2003

Good Afternoon!

Enclosed is your packet for the Meeting of December 4, 2003. The packet includes the Agenda, an article from Planning Zoning News on siting power plants, minutes from the public hearing, and several letters regarding the Special Use Permit Request.

Congratulation to the Planning Commission and Citizens of Manistee on a well run, orderly, and informative Public Hearing. The people who spoke in support of, and in opposition to, the proposed Special Use Permit all displayed courtesy and respect.

The December Meeting is the Organizational Meeting. The elected officers will take office at the January Meeting. The only other item on the agenda at this time is the Manistee Saltworks Development Corporation request for a Special Use Permit. Our attorney has advised that prior to taking any action on the permit the Planning Commission should find that the application is complete. Once the application is determined to be complete, the Planning Commission has 60 days to grant, grant with conditions, or deny the application.

This determination should be on whether or not the Planning Commission feels that the applicant needs to furnish more information in order for deliberations to begin. If the determination by Planning Commission is that the application is found to be incomplete, Planning Commission should try to compile a list of items required of the applicant to insure completeness. If the Planning Commission makes formal finding that the application is complete the remainder of this meeting could be spent discussing the various issues and potential conditions that might be required for approval or changes to the site plan which might be required for approval etc. I would anticipate action on this at the January 8, 2004 meeting at the earliest.

We continue to receive letters both in support of and opposing this project. We have made an effort to circulate the questions furnished so far and to answer those questions which are not rhetorical in nature. We will continue to receive questions and probably have a large number of speakers at the Public Comment period of this meeting. I believe that we have an obligation to attempt to answer questions which do arise, but are under no obligation to defer action until all questions have been answered to the satisfaction of the questioners. The process of reviewing this plan should be orderly and deliberative. The process should neither be rushed by the applicant nor delayed by the opponents.

Have a good Thanksgiving and we will see you on December 4<sup>th</sup>.

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-97	2	7	12	9.5	19	0	2
Feb-97	0	0	0	0	0	0	0
Mar-97	0	0	0	0	0	0	0
Apr-97	13	3	19	9.38	122	1	12
May-97	38	3	17	5.13	195	29	9
Jun-97	65	3	16	4.21	274	52	13
Jul-97	75	3	18	3.86	290	66	9
Aug-97	69	3	14	4.39	303	52	17
Sep-97	52	3	20	4.11	214	46	6
Oct-97	46	3	16	5.17	238	34	12
Nov-97	11	8	16	12.36	136	0	11
Dec-97	5	8	15	11.6	58	0	5
<b>Totals</b>	<b>376</b>	<b>4.4</b>	<b>16.3</b>	<b>4.86</b>	<b>1849</b>	<b>280</b>	<b>96</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-98	7	5	7	5.71	40	0	7
Feb-98	0	0	0	0	0	0	0
Mar-98	4	4	7	5.5	22	0	4
Apr-98	17	3	19	7.64	130	5	12
May-98	56	3	14	4.55	255	34	22
Jun-98	58	3	16	4.68	272	37	21
Jul-98	78	3	18	4.66	364	62	16
Aug-98	73	3	18	4.83	353	55	18
Sep-98	58	3	18	5.03	292	26	32
Oct-98	38	3	17	4.47	170	24	14
Nov-98	33	3	16	4.96	164	2	31
Dec-98	9	4	13	6.88	62	0	9
<b>Totals</b>	<b>431</b>	<b>3.08</b>	<b>14.81</b>	<b>4.92</b>	<b>2124</b>	<b>245</b>	<b>186</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-99	0	0	0	0	0	0	0
Feb-99	0	0	0	0	0	0	0
Mar-99	2	4	6	5	10	0	2
Apr-99	13	5	22	10.84	141	0	13
May-99	52	2	21	6.57	342	23	29
Jun-99	37	3	14	5.67	210	24	13
Jul-99	99	3	13	3.65	362	75	24
Aug-99	50	3	14	4.3	215	39	11
Sep-99	45	3	16	4.55	205	29	16
Oct-99	42	3	25	6.5	273	26	16
Nov-99	13	3	17	10.69	139	2	11
Dec-99	12	5	15	9.91	119	0	12
<b>Totals</b>	<b>365</b>	<b>3.4</b>	<b>16.3</b>	<b>5.52</b>	<b>2016</b>	<b>218</b>	<b>147</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-00	3	3	15	7.33	22	0	3
Feb-00	0	0	0	0	0	0	0
Mar-00	5	4	8	5.6	28	0	5
Apr-00	17	3	16	8.17	139	1	16
May-00	30	3	14	5.36	161	19	11
Jun-00	32	3	14	5.28	169	19	13
Jul-00	33	3	15	5.69	188	21	12
Aug-00	35	3	17	5.88	206	22	13
Sep-00	35	3	24	5.57	195	21	14
Oct-00	40	3	15	5.55	222	27	13
Nov-00	11	4	18	12.22	110	0	9
Dec-00	4	8	19	14	56	0	4
<b>Totals</b>	<b>245</b>	<b>3.63</b>	<b>15.9</b>	<b>6.1</b>	<b>1496</b>	<b>130</b>	<b>113</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-01	0	0	0	0	0	0	0
Feb-01	2	10	13	11.5	23	0	2
Mar-01	8	3	10	6.75	54	0	8
Apr-01	19	3	12	8.36	159	1	18
May-01	49	3	17	7.06	346	17	32
Jun-01	75	3	15	6.46	485	35	40
Jul-01	90	3	16	6.66	600	38	52
Aug-01	50	3	16	7.14	357	18	32
Sep-01	61	3	20	6.72	410	25	36
Oct-01	70	3	70	6.97	488	29	41
Nov-01	31	3	22	9.54	296	2	29
Dec-01	26	3	17	10.11	263	0	26
<b>Totals</b>	<b>481</b>	<b>3.33</b>	<b>19</b>	<b>7.23</b>	<b>3481</b>	<b>165</b>	<b>316</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-02	22	7	14	9.95	219	0	22
Feb-02	20	4	15	9.45	189	0	20
Mar-02	18	5	15	9.5	171	0	18
Apr-02	19	7	15	9.84	187	0	19
May-02	50	3	18	6.2	310	21	29
Jun-02	51	3	15	6.33	323	19	32
Jul-02	93	3	16	5.52	514	52	41
Aug-02	60	3	19	6.48	389	27	33
Sep-02	109	3	24	7.08	772	46	63
Oct-02	62	3	20	7.56	469	28	34
Nov-02	30	7	19	11.9	359	0	30
Dec-02	20	7	19	11.9	238	0	20
<b>Totals</b>	<b>554</b>	<b>4.58</b>	<b>17.41</b>	<b>7.47</b>	<b>4140</b>	<b>193</b>	<b>361</b>

Month/Year	# of Boats	Min. Opening Time minutes	Max. Opening Time minutes	Average Opening Time minutes	Total time Opened minutes	# Sailboats	# Freighters/Others
Jan-03		8	16	11.87	95	0	8
Feb-03	8	0	0	0	0	0	0
Mar-03	0	3	12	7.12	114	0	16
Apr-03	16	3	19	10.9	229	0	21
May-03	21	3	21	6.78	319	23	24
Jun-03	47	3	18	6.8	442	34	31
Jul-03	65	3	26	8.08	501	23	39
Aug-03	62	3	16	7.74	395	15	36
Sep-03	51	3	16	6.39	339	20	33
Oct-03	53	3	19	7.59	547	36	36
Nov-03	0						
Dec-03							
<b>Totals</b>	<b>323</b>	<b>3.2</b>	<b>16.3</b>	<b>7.54</b>	<b>2981</b>	<b>151</b>	<b>244</b>

**Questions from the  
Public Hearing/Special Meeting  
November 20, 2003**

1. How many wind generators would provide the same power output as the proposed coal fired plant?
2. What will be the projected increase in the temperature of Manistee Lake resulting from the discharge of treated process water?
3. Has the developer requested any tax abatements?
4. What will be the effect of 30 truckloads per day of additional solid waste on the local landfill?
5. How will air emissions and water discharge impact Manistee Lake?
6. What will happen if there is a structural or mechanical failure at the plant?
7. What quantities of air pollution will be emitted?
8. What steps will be taken to prevent migration of existing on-site pollution to the lake or adjoining properties?
9. What will be the impact of thermal pollution on Manistee Lake?
10. If the emissions from the stack is so clean, why must the stack be so tall?
11. Will there be air monitoring stations around the site?
12. How will the 425 megawatts from the plant be transmitted?
13. How much tax revenue will the plant generate?
14. How many jobs will be provided for existing Manistee residents?

Planning Commission Member Bob Davis asked that a few more questions that were added to the list as follows:

15. What are the safety implications of the proximity of the railroad lines carrying chemicals to the plant to the coal piles?
16. Of current bridge openings, how many are freighters versus sailboats and what will be the percentage increase in freighter openings?
17. What will be the quantities of particulate emissions (including mercury) from the facility and what are the radiation impacts?

# SITING ELECTRICITY GENERATION FACILITIES

By Erin Kilpatrick

Energy production has been a hot topic over the last two years and is a growing source of concern, and sometimes confusion for planners across the nation. Last year, the U.S. Department of Energy released a report from the National Energy Policy Development Group titled **Reliable, Affordable, and Environmentally Sound Energy for America's Future**. This report concluded, "A fundamental imbalance between supply and demand defines our nation's energy crisis. If energy production increases at the same rate as during the last decade our projected energy needs will far outpace U.S. energy production."<sup>1</sup> President Bush followed this claim with a proposed policy that offered to streamline the regulatory procedures for siting new energy facilities and infrastructure.<sup>2</sup> While the U.S. House of Representatives and U.S. Senate have yet to deliver a comprehensive new energy policy to President Bush, the private energy sector continues to scramble in response to state-by-state electrical energy deregulation initiatives. The result is developers are approaching communities throughout the U.S. to build more new electric power generating plants and Michigan is no exception. [For a comprehensive review of energy policy in the U.S. and Michigan, see *PZN*, October 2002].

If an energy facility developer knocks on your community's door, what questions will be going through your head?

*"What zone(s) should energy facilities be permitted in? Do we have the appropriate zoning standards to address the impacts of a power plant? What will we do with the additional tax revenue? What will we do if the facility is built and then mothballed due to market over saturation; or worse yet, if the ownership evaporates and leaves us with a half-built or defunct electric plant?"*

The main articles in this issue of *PZN* address the role of government agencies in permitting, key steps in the process of siting

and approval of electricity generation facilities, and the local planners' role. Companion articles and sidebars present case examples, additional information on energy production and transmission, and similar material on wind power facilities.

## Michigan's Energy Facility Siting Climate

The Michigan Public Service Commission (MPSC) of the Department of Consumer & Industry Services reported in their February 2002 report to the Legislature, entitled **Status of Electric Competition in Michigan**, that Michigan has experienced the addition of approximately 3000 MW of electric generating capacity since 1999 and 3645 MW of additional in-state capacity is currently under construction. Completion of these additions would result in 6645 MW of new generating capacity for the state. [See page 17 of the Oct. 2002 issue of *PZN* for a map of the location of these new facilities].

In their report, the MPSC notes:

*"There is some uncertainty nationwide about the continued additions of both utility and non-utility generating capacity. Around the country, there have been many reports of project delays and cancellations. Thus, the Commission believes there may be greater uncertainty associated with projects whose expected completion dates are farthest in the future, based on a number of factors which could include wholesale prices, fuel costs, and regulatory requirements."*<sup>3</sup>

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## Observers say deregulation and simple economics are the two biggest reasons for the boom in merchant energy plants.

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An article in *Utility Business* in February 1999 titled "Merchant Power Plants Paved with Gold," begins, "Welcome to the world of merchant power. Whether new or refurbished, merchant plants are popping up—or at least plans to build them are popping up—all over the land."<sup>4</sup> The article explains that while merchant plants can take different forms, the basic concept is that "a utility or energy company builds or buys new capacity outside its regulated or traditional region in order to sell that capacity to wholesalers in the region in which the plant is built."<sup>5</sup> Observers say deregulation and simple economics are the two biggest reasons for the boom in merchant energy plants. "Look at the regulatory agencies

and look at the (energy) prices, and you can tell where merchant plants will crop up," says John Hanson, a manager at Deerfield, Illinois based energy consultancy Metzler Associates.<sup>6</sup>

In May of this year, the Michigan Renewables Energy Program (MREP) was established by the State Legislature, and implemented by the Public Service Commission, to promote the use of renewable energy in the state. The program consists of a diverse group of individuals and organizations assembled to identify and address barriers to the advancement of renewables and recommend initiatives to increase renewable use in Michigan. Section 10r(6) of Public Act 141 directs the Public Service Commission to establish a Michigan Renewables Energy Program "to inform customers of the availability and value of using renewable energy generation and the potential for reduced pollution." It will "promote the use of existing renewable energy sources and encourage the development of new facilities." The Michigan Legislature has defined renewable energy sources as "energy generated by solar, wind, geothermal, biomass, including waste-to-energy and landfill gas, or hydroelectric."<sup>7</sup>

Michigan is well located to supply the growing demand for electric power in the Midwest, and due to abundant supplies of especially natural gas and wind, and the absence of MPSC authority to license new plants (see page 13, October 2002 *PZN*), it is likely to see more proposals for electric power generating facilities and wind turbine farms. This means local governments need to be prepared for future energy facility proposals.

This issue of *PZN* identifies the key issues involved with siting and regulating electric generating facilities. Guidelines for zoning ordinance language are also presented. Please tailor ordinance language to fit local conditions with assistance from a professional planner and municipal attorney.

For a good basic description of the energy production and transmission cycle, visit <http://www.elpaso.com/auqusta/default.htm>. □

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## FOOTNOTES

1. United States Department of Energy website [www.energy.gov](http://www.energy.gov)
2. Michigan Public Radio, "Talk of the Nation", May 12, 2001.
3. Michigan Public Service Commission, "Status of Electric Competition in Michigan," 2002.
4. Dukart, James R., "Merchant Power Plants Paved with Gold," *Utility Business*, February 1999.
5. Ibid.
6. Ibid.
7. Op.Cit., Michigan Public Service Commission.

## About the Author

Erin Kilpatrick wrote this article while an associate planner with the Planning & Zoning Center, Inc. She is now a planner with Williams & Works, Inc. in Grand Rapids. She can be reached at ph. 616/224-1500 or email: [kilpatrick@williams-works.com](mailto:kilpatrick@williams-works.com). Mark Wyckoff, *PZN* editor, also assisted with the content of the articles in this issue and Harmony Gmazel provided key research on several of the sidebars and graphics. □

# SITING ISSUES FOR COAL AND NATURAL GAS POWERED ELECTRIC GENERATING FACILITIES

By Erin Kilpatrick

This article presents basic siting criteria the energy industry uses to locate coal-fired or natural gas-fired electric generating facilities. It also summarizes the basic siting and permitting process that is followed. The role of planners, and local planning and zoning considerations are also identified and explained.

## Siting Criteria

When siting a coal or natural gas powered electric generating plant, there are three major criteria an energy company will look for, 1) close proximity to a high pressure gas line or coal source, 2) close proximity to the power transmission grid, and 3) accessibility to water for cooling. "The most important things are location, location and location. We always propose to site plants where they would create a good interconnect with the grid and have a good fuel source nearby," says Danny Gibbs, a spokesman for Duke Energy.<sup>1</sup> The gas line must be nearby and preferably runs through the property where the power company is hoping to locate the facility. The transmission grid should be no more than 10 miles away, but the closer to the grid (depending on its infrastructure capabilities) the more desirable the location. Depending on how the plant is to be designed, it may use millions of gallons of water every day and will require ready access to either municipal water or a large, reliable well system. Map 1 shows the location of most of the major natural gas lines in Michigan. Since Michigan has no high quality, low sulphur coal reserves, a coal-burning power plant must be close to a deep harbor port on the Great Lakes, or on a rail line for reliable coal delivery.

In addition, to these critical criteria, there are other factors that can make a site more or less desirable. First, it is important to un-

derstand that land costs are a very small portion of the total costs for an energy facility. This is why energy companies have been known to pay for options on land and get all of the way through the permitting process only to decide not to proceed. The power company's goal is to maximize their position within the electric grid and minimize their political and environmental battles. If this means stopping and starting the location processes several times before getting to the stage of construction, so be it. Smooth facilities siting can often be achieved when the following other considerations are easily met; such as:

- Assembling land with as few landowners as possible.
- Selecting a parcel within a zoning district where energy facilities (or something the zoning administrator is willing to interpret as energy generation facilities) are a use by right so a rezoning or special use permit is not required.
- Locating on a brownfield site where by it may be seen as a benefit to the community to locate a large facility such as a power plant that has the money to invest in site remediation. In addition to generating community support, this environmental investment will often result in an offer to the power company of a tax abatement for up to 12 years.

***The power company's goal is to maximize their position within the electric grid and minimize their political and environmental battles.***

## Siting Process

Often the process begins by an energy company approaching the State Department of Consumer & Industry Services or the Michigan Economic Development Corporation and inquiring about communities that may be interested in energy facilities. The State will then often direct the energy companies to the regional level, or a County Economic Development Commission which can further explain the background about an area's economic development interests and political climate. Then the energy company will often work with local real estate professionals to see if they can find a prime location based on the siting criteria mentioned earlier. Once the company has narrowed their scope to a site or two, they will usually begin an open

discussion with local officials. At this level of discussion the power company often carries great influence, as local officials quickly understand that the development of a power facility could bring an additional \$1-2 million in annual local tax revenue.

***The licensing process can take several months in other states, so this lack of state level "red tape" makes Michigan an attractive place to build electric power-generating facilities.***

## Approval and Permitting

Unlike most states, Michigan does not require energy providers to be issued an energy supplier's license before they begin the environmental permitting process. The licensing process can take several months in other states, so this lack of state level "red tape" makes Michigan an attractive place to build electric power-generating facilities. Larger utility providers such as Detroit Edison and Consumers Power, are regulated by the MPSC. The lack of a state license requirement does not mean that no state permits are required. Some of the major state environmental permits and authorizations required for all fossil-fuel electric power generating projects prior to construction and/or operation of the facility include:

- Air Permits from the Michigan Department of Environmental Quality (MDEQ)
- Water Supply and Discharge Permits from MDEQ
- Stormwater Discharge Permit from MDEQ
- A fugitive dust control permit from the DEQ may be needed for the time of construction.

Local level environmental and safety rules, regulations, and ordinances often vary between jurisdictions. Permits that are common to the process include:

- Land use approval and/or a site development permit for the local area. This may require a special use permit in some zoning districts or a variance for exceeding height limitations (for smoke stacks to power lines). It may also require rezoning – usually to an industrial district.
- Approval from the County or District Health Department for on-site septic and leachfield permit if needed.

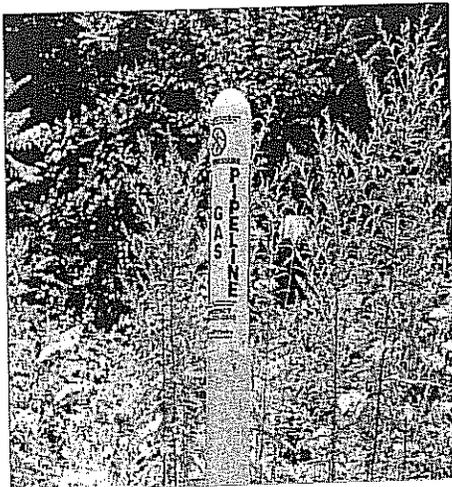
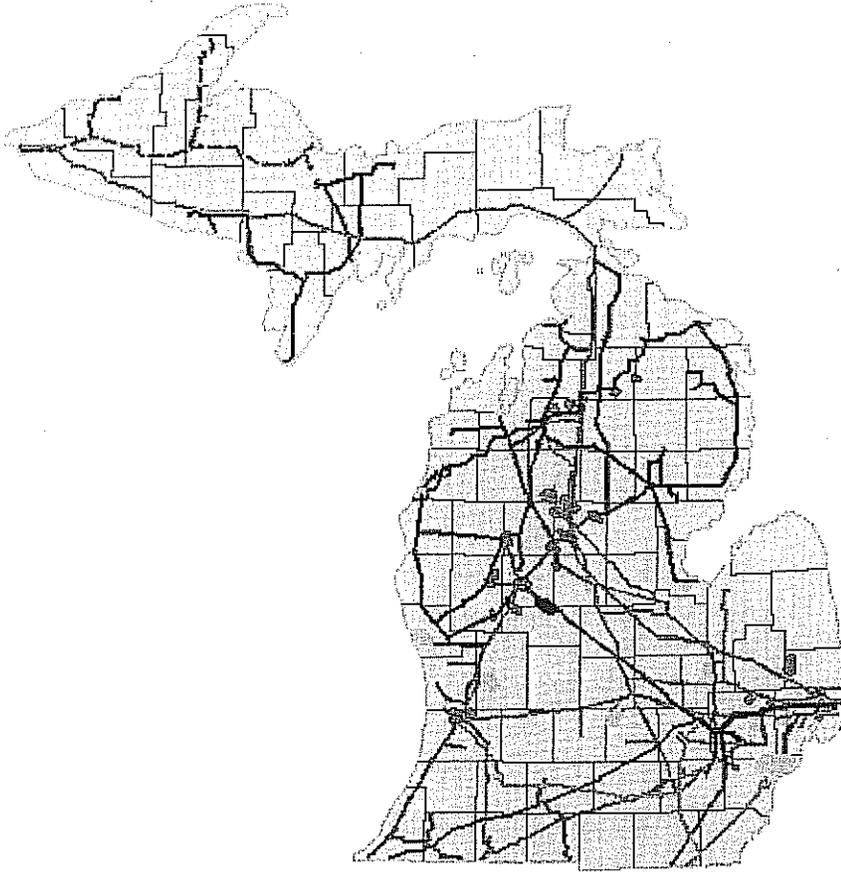


Photo by Juan Ganum, City of Niles

Map 1  
MAJOR NATURAL GAS PIPELINES AND STORAGE FIELDS



Source: Michigan Public Service Commission, <http://www.cis.state.mi.us/mpsc/gas/gasmaps.htm>. This map is in color and has more detail on the website, including which company owns each line.

*The Council may find compliance based on surety mechanisms such as letters of credit, performance bonds or other financial instruments that the applicant might propose.*<sup>3</sup>

Since the State of Michigan does not make such a requirement on electric energy providers, it might be appropriate for local governments to address the issue of financial assurance. This would be handled as a performance guarantee. In zoning districts where power plants are listed as a use by right, it may be appropriate to amend the ordinance to require power plants to obtain a special use permit in those zoning districts with the condition of providing financial assurance. While it is not the place of the community to determine the financial viability of the energy company, it is important to protect the locality from the negative impacts of half completed projects.

### The Planners' Role

There are several actions planners and planning commissioners can take to best serve their communities when presented with proposals for locating a power plant in their communities. It is the planner's role to ensure that the protection of human life, public welfare, and the environment are considered and protected when making siting decisions. Energy facility siting decisions should be made only as part of overall land use planning and should include protection of air and water quality. The first step in this process is to become well informed. Understand how energy generating facilities operate; what is required in terms of local and regional resources; what state and local permits apply; and what the potential impacts on the community might be.

### Planning and Zoning Considerations

Review the zoning ordinance and the master plan to assure compatibility of uses. Power companies will often be interested in a site in an agricultural area that meets all of their siting criteria and where the needed resources are readily available. Often power companies will purchase a parcel five-ten times the size they actually need for facility operations in order to adequately buffer the project, so parcel size would be similar to farming (generally 40-80 acres). While the heights of the smokestacks on small generating facilities are often higher than grain elevators, the building mass of grain elevators is often more. See Figure 1. Agricultural areas are generally distanced from densely populated residential areas and do not pose a use conflict. Some rural communities that have no industrial zones, only permit energy facilities in agricultural zones. Although they are more commonly allowed only in industrial zones.

- Soil erosion and drain permit, often from the County Drain Commissioner or other county office.
- Approval from the County Road Commission if curb-cuts are made into a county road, or from the Michigan Department of Transportation if located on a state highway.
- The Federal Aviation Administration (FAA) may need to approve stack and powerline heights within a five-mile proximity of any airport.
- Army Corps of Engineers and/or DEQ approval may be needed for a wetlands permit (especially in coastal areas).

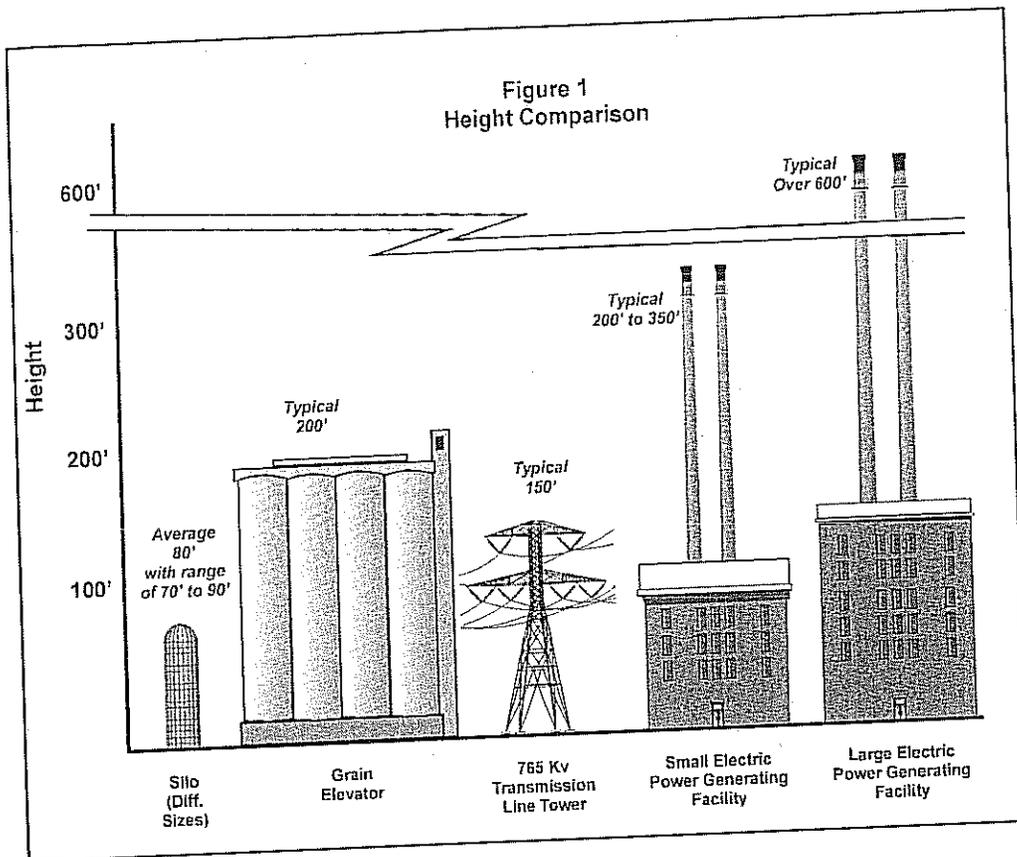
Many power companies chose to do a Baseline Environmental Assessment (BEA) to determine the extent of any potential environmental and social impacts on the community. A BEA is a light-weight version of an Environmental Impact Statement (EIS). It will assess impacts such as erosion, noise, emissions, stormwater run-off, viewshed obstruction, and air and water discharge rates and quality. For brownfield sites, soil samples must be taken to determine standards for remediation and capping. A BEA is a good tool for energy com-

panies because it quells many of the unfounded fears associated with power plants and assists planners in evaluating and ultimately regulating negative externalities of energy facilities.

In addition, some states have adopted a financial assurance component to their energy facilities review process. For example, the State of Oregon provides some protection for local jurisdictions in the event a power facility is not successful.<sup>2</sup> A summary of the Oregon regulation states:

*"The [Energy Facility Siting] Council recognizes the risk that a large construction project could stop in a partially completed state, leaving the community with an abandoned construction site and no funds for site restoration. This standard protects against that risk by requiring financial assurance to pay for site restoration. The applicant does not have to show adequate funding to complete the facility but needs only show adequate funding to restore the site in case of early termination of the project.*

*The Council can find compliance in a number of ways, including the financial strength of the applicant or ratings by major rate services such as Moody's.*



However, if the master plan suggests the parcel is prime agricultural land and is planned to continue as an agricultural area for the future, this may not be an appropriate use conversion. Also, if the master plan identifies the area around the site as an urban growth area and it is planned for additional residential or commercial development in the future, this may also preclude the planner from supporting a rezoning. In contrast, if the area is planned for industrial use, then rezoning may be appropriate if all other support infrastructure is available and adequate (such as roads, sewer, water, etc).

From a "big picture" environmental perspective, the Sierra Club long ago issued a list of land use categories that should be excluded from consideration as sites for energy facilities<sup>4</sup>:

- Land included in federal, state, or local park or natural area systems, or;
- In wildlife refuges or management areas, or in such proximity as to threaten the environmental quality of protected areas;
- Units of the National Wilderness Preservation System, the Wild and Scenic Rivers System, the National Trails System, or the National Landmarks System;
- Areas reserved for ecological, scenic, natural, wildlife, geological, educational, or scientific value including Primitive Areas, Roadless Areas, Natural Areas, and Pioneer Areas;

- De facto wilderness or wild areas on federal lands that are under active study by citizens groups or government agencies prior to submission of formal proposals and final action by the Congress for inclusion of the lands in the above systems;
- Wild, natural, scenic or pastoral portions of coasts or shores, including bays, estuaries, wetlands, lakes and rivers;
- Coastal or riverine areas serving as spawning grounds for commercial and sport fishing;
- Habitats of rare, endangered, or threatened plant or animal species;
- Areas containing outstanding examples of plant communities, such as virgin timber stands;
- Valuable archeological or historic sites;
- Prime agricultural lands;
- Lands that play a vital role in the hydrologic cycle such as aquifer recharge areas and wetlands;
- Land characterized by adverse geological or geophysical characteristics such as earthquake zones or floodplains.

While these areas may be obvious as inappropriate locations for energy facilities, communities with such lands should specifically list both appropriate and inappropriate areas for power plants in the master plan. The zoning ordinance should then list

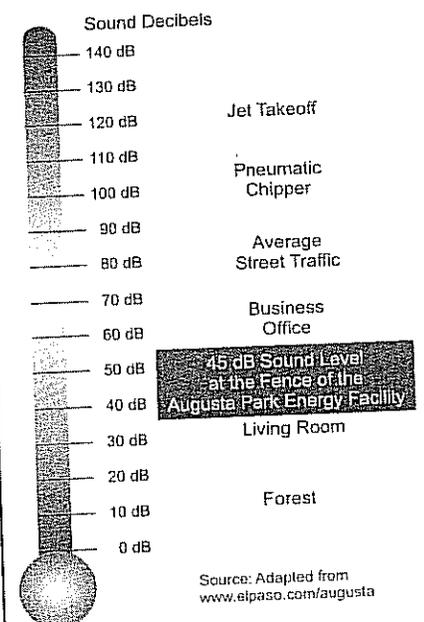
the zones and compatible uses for energy facilities.

Assuming the prospective site has all the necessary public infrastructure to get large vehicles to and from the site, to handle liquid and solid waste, and to provide adequate water for steam production, cooling, and fire fighting, most of the remaining planning issues deal with compatibility with adjoining land uses. One of the most significant of these issues is usually noise.

Most people are surprised to learn the newer coal and natural gas powered electrical generating facilities make very little noise. Larry Nix, former planning consultant for Tallmadge Township in Kent County visited a newer PANDA energy facility when the company was considering constructing a similar facility in the township. Nix recalls, "I stood at the fence line of the project and could not hear it operating. The rustling of the leaves in the trees made more noise than the power plant." See Figure 2.

The easiest way to deal with noise is a large lot and deep setbacks. The other is to site the facility among other industrial facilities with sim-

**Figure 2  
Quieter than a  
Day at the Office**



More commonly, the noise from combined cycle natural gas plants runs between 50-60 decibels. Of course, the greater the separation distance between the power plant and the listener, the lower the noise level.

**Table 1  
COMPARISON OF ANNUAL AIR EMISSIONS FROM COAL &  
NATURAL GAS-FIRED POWER PLANTS**

The following is a rough comparison of the difference in annual emissions from a natural gas-fired power plant and a coal-fired power plant.

Types of Air Emissions	Natural Gas-Fired*	Coal*
Nitrous Oxides (NOx)	409 tons	8,969 tons
Sulfur Dioxide (SO2)	0 tons	29,957 tons
Carbon Monoxide (CO)	327 tons	537 tons
Volatile Organic Compounds	89 tons	65 tons
Mercury	0 pounds	212 pounds

\* The natural gas-fired figures are based on a proposed plant in Zeeland, Michigan, that will utilize both combined-cycle and single-cycle turbines. The coal numbers are for the River Rouge facility owned by Detroit Edison. The numbers assume both 950-1,000 MW facilities would be running at approximately 45% capacity.

Source: Michigan Environmental Council, "Siting of Natural Gas-Fired Electricity Generating Plants," page 4.

ilar noise contours. Obviously, not placing such a facility adjacent to an existing residential subdivision or adjacent to an area planned or zoned for future residential use is also wise.

Compatibility issues also extend to physical character, size and scale as well. Many electric power generating plants have tall smokestacks and large building bulk. On a small parcel that is not adjacent to buildings of similar size and bulk, such buildings will dramatically stand out. This is another reason why location in industrial zones is desirable. If an agricultural area is planned for future industrial use, or if a large brownfield site is proposed for future industrial uses after cleanup, an electric generating plant could serve to attract industries that are large electrical users.

Air pollution remains a significant concern with coal-fired generating facilities, even though contemporary plants that burn low sulfur coal are far less a threat than older plants. See Table 1 above. Nevertheless, such facilities should not be sited near planned or existing residential areas, and special care should be taken to avoiding areas that already have a significant air pollution problem.

### Public Involvement

Public participation in siting decisions should be assured at all stages of decision-making. It is very important for the planner to remain objective in the process. The siting of energy generating facilities has the potential to cause huge groundswells of support and opposition. Because of the large amount of tax revenue these facilities sometimes bring, local officials often view the locating of power plants like winning the lotto. Suddenly all the little pet projects elected officials have been dreaming of seem plausible. Community concerns may fall in the shadows of the dollar signs.

Planning staff and planning commissioners, should remain neutral and focus their attention on community input, education and proper application of the zoning ordinance to the request.

***The initial reaction of the public to a power plant will almost always be negative. Yet we all use electricity and power plants must be sited somewhere.***

The initial reaction of the public to a power plant will almost always be negative. Yet we all use electricity and power plants must be sited somewhere. Planners can serve the role of listening to concerns, educating themselves and educating the citizenry about the issues. Working with the public to determine if there is an acceptable level of comfort about the project is essential. This is particularly important when a rezoning is involved. Power companies may abandon a project if there is a threat of referendum.

There are several things planners can do in coordination with the power company that may facilitate informed discussions about the project. Indeck Energy, a power company that has recently been approved to build a plant in the City of Niles, made 5000 copies of their BEA for distribution to the general public. (See case study on page 10.) PANDA Energy has taken planning commissions on field trips to other power plants to learn about siting issues and to experience the impacts of a facility first hand. Several power companies have produced videos that explain the operations of facilities and show footage of plants in operation<sup>5</sup>. Planners can facilitate informational open houses, hold focus group sessions or bring in third party organiza-

tions such as the Kettering Foundation to facilitate roundtable discussions<sup>6</sup>.

In the end, a facility decision should be made that best balances all the competing interests without undermining important public concerns. Obviously, the need to mitigate the potential impacts of power plant proposals would be greatly reduced with good site selection that considers all the factors mentioned above. This may be best achieved by a regional or multi-jurisdictional public planning process that picked the best locations in a metro area for power plants and then zoned land accordingly.

**NOTE:** A useful 5-page pamphlet entitled "Siting of Natural Gas-Fired Electricity Generating Plants" by the Michigan Environmental Council is available from: Michigan Environmental Council, 119 Pere Marquette Dr., Suite 2A, Lansing, MI 48912; ph. 517/487-9539.

The pamphlet is designed for use by citizen groups and has useful information on environmental impacts. It strongly encourages construction of state-of-the-art facilities. □

### FOOTNOTES:

1. Dukart, James R. *Utility Business*, February 1999.
2. Oregon State Archives, *Administrative Rules*, OAR 345-022-0050.
3. Ibid.
4. Sierra Club Website, Policy Adopted by the Board of Directors, November 10-12, 1978.
5. Indeck Energy Co. and PANDA Energy have developed informational videos about electrical power generating facilities.
6. The Kettering Foundation developed a program called the National Issues Forums (NIF). NIF is an independent network of civic and educational groups, uses issue books as a basis for deliberative choice work in forums based on the town meeting tradition. NIF is non-partisan and does not advocate a specific solution or point of view. Rather, deliberative forums provide a way for citizens to exchange ideas and experiences with one another, and make more thoughtful and informed decisions. In 1991 the Kettering Foundation added Energy and Environment to their list of national issues. **Energy Options: Finding a Solution to the Power Predicament.** For more information see [www.nifi.org](http://www.nifi.org).

### Thanks

The author and the editor would like to extend special thanks to the following individuals for their assistance with this issue:

- Juan Ganum, Niles City Planner
- Larry Nix, Principal, Williams & Works
- Tom Stanton, MPSC
- Mike Davidson, PAS, APA
- Max Putter, Planning Director, Emmet County
- Richard Robinson, Indeck Energy
- Steve Schnell, Planner, Mackinaw City
- Larry Hartman, Minnesota Environmental Quality Board
- Michigan Environmental Council
- Sierra Club
- National Wind Coordinating Committee
- Lisa Daniels, Windustry.com
- Richard VanderVeen, Bay Windpower
- Christine Realde Azua, AWEA
- Christine Mitchell, Environmental Law Attorney, Honolulu, HI. □

November 22, 2003

Some concerns about the 'Northern Lights Project' by: Tondu's Corporation and the 'Manistee's Saltwork's Development Corporation'.

**Assumptions:**

1. 425 Megawatt Power Coal Burning Generator Plant
2. \$700 Million Dollar Project
3. 13 Ships 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. Expenditure of 4.4 Million Dollars/Year on General Maintenance
8. Generating Plant Burns 1.8 Million Tons of Coal per Year

**Concerns:**

Several important issues have not been addressed or have been ignored by both the town council and the Tondu's Corporation. These issues will impact both the long-term health of its citizens and the 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 and its day-to-day activities. The daily requirement to keep the plant running, from the noise of truck activity, especially during the three year conduction phase, as well as from the plant itself when the power generation starts, will be considerable. No longer will the sound of the Lake Michigan's waves be present on a quiet night. Additionally, the plants security lights will light the night as if it were day. There will be no 'end of day' closedown, ever. With a seven day a week, twenty-four hour a day operation and the plants close proximity to the town; there will be no relief from the constant activity and noise associated with its operation. It should be noted that, in the United States, there are not many communities that would accept or allow a project of this magnitude with-in their city or town limits. The disruption to the quality of life would be too great.

The 400-foot smokestack will dominate the landscape and will be a constant source of a water vapor and other contaminants, which will be overwhelming during the winter months. With its aircraft warning lights, it will be a constant reminder of the Generator Plants location in town. While the polluting aspects of the discharge have been mostly disregarded, long-term aspects of the vapor cloud as well as the micro-particle pollution from the delivery and storage of the coal itself should be the concern of everyone who lives here. While the coal dust pollution has been greatly reduced with modern scrubbers and washers, it has not been eliminated. Additionally, there will be continuous discharge of treated material into Manistee Lake and an accumulative pollution cycle for the life of the plant. This pollution, whatever its magnitude will end up in Lake Michigan. There is also the subject of the elimination of heat or the warm water that will be discharged into the river and Lake Michigan. These discharges have caused algae plumes elsewhere and are destructive to the aquatic life cycle. A detailed study must be conducted in these areas, in the existing environment, prior to any permit approval by City Council to build this project.

There are planned deliveries of thirteen ships a month to feed the coal fuel requirements of the Power 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 are damaged or inoperable and the ships delivery of coal is interrupted, the continuous operation of the plant will remain paramount. It stands to reason that during winter months when the river is closed to ship traffic due to freezing, an alternate delivery system will have to be in place. The obvious method will be by train. A small generating plant needs three trains of 40 to 60 carloads of coal, three times a week, for its operation. A 425 Megawatt plant will require many more carloads and a railroad network in place to support those trains. I can find no existing network to deliver coal to the town or to the plants planned location via train coal cars. The plan is to store coal for a two-month absence of delivery during winter months, when the ship passage is blocked. This is an astonishing amount of coal (26 ship loads) to store on this 50-acre site. The site does not appear large enough to store this amount of coal. What if the freeze is three months long? It has happened in the past!

The picture of the planned generating plant shows a single existing power 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 required to deliver that amount of energy to the sub-station will change the towns' appearance in a way that has not been addressed to date. The location of this sub-station is unknown, but it will also have to be sizeable to handle the output of 425 Megawatts as well as contain the power distribution system of transformers and relay circuit breakers. The proposed solution to this item has not been addressed.

The existing tourist attractions will be altered and will negatively impact both the sport fishing and the Village Condominium attraction to the area. All businesses in the town will be negatively affected. The property values and value of homes in the town will greatly decrease in value. The town simply not be a desirable place to live. The river walk of this advertised 'Victorian Community' would certainly not be as it is today, after the Power Generating Plant is in place. These are but a few of the Power Generating Plant problems that must be considered, all of which will negatively impact this small community.

Considerable research must be accomplished and serious thought given to the serious ramifications this project will have on the entire community. All this must be done prior to issuing the variance and approval of the Power Generating Plant in its planned location.

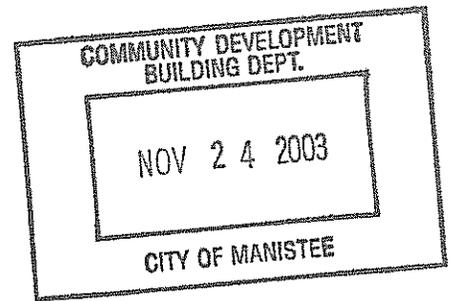
An obvious solution to all theses and other concerns would be to build the Power Generating Plant a distance outside of the town limits. All of the abovementioned problems are then solved. The present site can then be cleaned and used for tourist development and the town will retain its present character. There is no long term advantage to building the Power Generating Plant in the town except for the owners of the presently pollution property.

Respectfully Submitted:

William and Martha Day  
320 1<sup>st</sup> Avenue  
Manistee, MI 49660  
Phone: 231-723-8709



November 21, 2000



To: City of Manistee Planning Commission  
Attn: Mr. Jon Rose

From: Jim Nordlund Jr.

Re: Northern Lights Power Plant  
Public Hearing on 11/20/03

I had an opportunity to attend the Public Hearing for the proposed Northern Lights Power Plant held in the Manistee Junior High Library on 11/20/03. The meeting was very interesting, hearing all of the perspectives and point-of-views from people in the community. I felt that the planning commission did a very good job of letting the public comment, in what turned out to be a long hearing.

I believe that most of the pro-power plant and anti-power plant concerns were adequately discussed during the meeting, and at the time, I felt that the reasons why I would support the project, (i.e. good paying construction jobs, good paying power plant operating jobs, added tax base, and environmental clean-up of a blighted area) were more than adequately discussed by others in the community. At the time, I did not want re-iterate some of the points brought up during the hearing.

However, on my way home, I realized that there were a couple of items that were either inadequately addressed from both sides of the issue, or they were not brought up at all.

For some background, I am a Ludington Resident, but when the wind blows out of the north, I suppose that I will be down-wind of the stack. I own property in the City of Manistee, and operate a branch office of our firm on River Street. My wife, two children and I spend a considerable amount of time in the City of Manistee, where we keep our boat at Seng's Marina, on Manistee Lake. We fish in Manistee Lake, water-ski and enjoy boating activities in the lake.

#### Effect of the new plant on Tourism

1. There was an opinion expressed that the construction of the plant would adversely affect tourism. Since we spend a considerable amount of time and money in the tourism sector of the Manistee Economy (i.e. slip rental, restaurant, shopping) – I feel that I have some credibility as a tourist. I can assure you that the construction of the plant will have **absolutely no impact** on whether or not I will chose to keep my boat in Manistee. I have no concerns about my health or the health of my wife and two young daughters that will result from the construction and operation of this plant.

So, from the perspective of a bona-fide tourist, I will continue to keep my boat in Manistee – regardless of whether or not the plant is constructed.

**Effect of allowing the old plant to remain unattended**

2. I do have some comments regarding the structural condition of the old General Chemical Plant: Over the years, I have worked on several engineering projects in the plant's buildings. Part of the structure is a large wooden multi-story building – dating back to the 1910's. Other parts consist of a multi-story steel structure dating back to the 1940's – 1950's. Parts of the building were recently constructed when the plant was converted to calcium chloride production in 1997.

Many of the old buildings are covered with asbestos siding. There are several huge 50-100 ton evaporators in the building - supported approximately 100' above the ground. To the best of my knowledge, a majority of the building was constructed when the building was designed for the less corrosive sodium chloride (table salt) production. None of the pre-1997 structure was designed with the corrosive nature of calcium chloride taken into consideration.

Since 1997 – 2002, the plant produced calcium chloride. Calcium chloride destroys steel and concrete at an extremely rapid rate, and from what I recall a good portion of the structure has been exposed to calcium chloride dust and liquid. Any owner or operator of this building would be expected to spend a significant sum of money to maintain the building and keep the structure from being damaged by the exposure to calcium chloride. From what I can gather, it is doubtful that necessary maintenance is presently taking place.

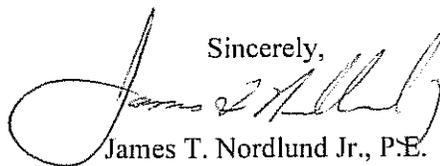
Sometime in the future, the combination of unchecked corrosion and heavy snow load/wind load is going to cause a structural failure inside the old chemical plant. The result of a failure could be limited, but it has the potential for some catastrophic results.

For example, the collapse of a portion of the old asbestos paneled building would release a cloud of asbestos, when the panels and asbestos insulation are crushed. This cloud would spew unchecked into the surrounding neighborhood.

Also, it is possible that if a portion of building collapses, fire could ignite the remaining structure. Local firefighters would respond – and in a structure of this size, there is a potential of injury or death. (The old wooden structure at the south end of the plant is a concern.)

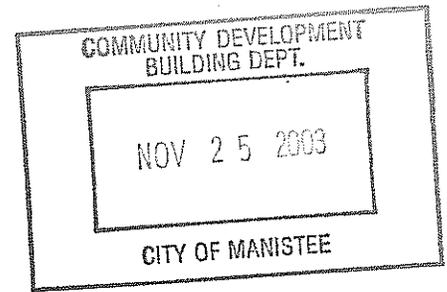
Please take the effect of what would happen if the building collapses due to corrosion into consideration when evaluating the project for it's effect on health, safety and the environment.

Sincerely,



James T. Nordlund Jr., P.E.  
Nordlund & Associates, Inc.

Judith Cunningham  
4466 Potter Road  
Bear Lake, MI 49614



November 24, 2003

Dear City of Manistee Planning Commission:

I am writing to you as a concerned citizen of Manistee County about the building of a coal-burning plant on Manistee Lake. I realize that you have a hard job and a difficult decision. I hope you will not rush to make this decision under pressure from the Tondou Corporation. Please take into consideration your responsibility to the welfare of the residents of this community who will be impacted by the plant. There seems to be a lot of missing information that you need to consider before you decide on the land use permit.

Please look into and consider the following concerns before approving the permit:

1. Are you sure this is the only way to clean up the General Chemical site? The Clean Michigan fund supplies money to local governments to clean up brownfield sites. I don't think we need Tondou to clean up the Gen. Chem site, all we need is the brownfield money. We may need a proposed use – but nothing definite or immediate.
2. I believe that your city master plan called for less industry and to work toward a more tourism based economy. A Tondou coal burning plant would definitely NOT be in alignment with this plan. This is going against the city's long-range goals of cleaning up and beautifying the city, lake and area. Have you been in contact with the tourism businesses such as Harbor View or fishing businesses to find out how they will be impacted? A coal plant will hurt steps that you have already taken and the businesses that are based on tourism. You also are endangering the chances for future outside business to come – who would want to locate where a coal plant is??
3. Although there may be quite a few jobs in the building phase – mostly labor jobs- they will be temporary. I don't think that the 60 jobs will all be new or be in Manistee. There may be 40 NEW jobs at the most. Many small businesses can supply this amount, and not do the damage to our health, long-term economic goals and degrade our natural resources.
4. Has someone determined exactly what and how much taxes Tondou will be paying to our city and county? Are there tax abatements or other things that would eliminate or reduce taxes for Tondou? There will be a lot of wear and tear on roads – 30 trucks a day- not to mention many other infrastructure costs like dredging, bridges, and many unknown costs. Have you talked to the local governments of other communities with coal plants? For a small community it seems important to know tax revenue from the project and projected long and short-term costs ahead of time. The city could take on all these infrastructure and repair costs and end up in debt. I also encourage you to look into the lawsuit that Tondou got into about taxes with our county.
5. I urge you to find out about the environmental impact, even if you consider this outside the scope of the land use permit. Who else will have the best welfare of our community in mind? A coal burning plant will be a health hazard to the citizens of your city and surrounding communities, and have a negative impact on air and water quality for everyone. Please don't ignore this in making your decision.

Thank you,

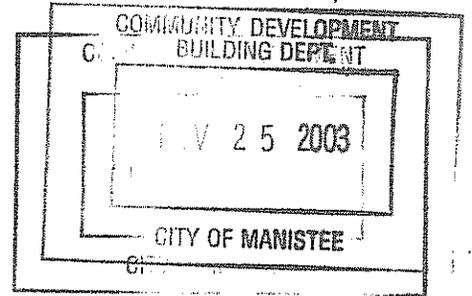
Judith Cunningham

*Judith Cunningham*

809-418600

Kristin Pennyl  
10030 Alkire Rd  
Bear Lake Mi  
49614

John Rose  
Planning Commission  
70 Maple St.  
Manistee Mi 49660



Dear Mr Rose and

As a Manistee County resident  
I was very upset to hear of the impending  
development of a Coal/Electric Plant in Manistee.  
Is this a wise choice for Manistee Lake  
considering the potential harm to the fish?  
Is this helpful in attracting tourism as well  
as residents to the area, considering the well  
known statistics of increased incidents of  
cancer and health problems associated with  
Coal/Electric Plants? Is this something we want  
our children to be exposed to? Are jobs  
more important than our health? As the  
entire county will be affected shouldn't this  
be considered by the entire county?  
Thank you for sharing your thoughts. Sincerely Kristin Pennyl

11/24/03

Good day,

I was at the planning committee mtg. on Thurs. Nov. 20th to learn more about the proposed Jandu Plant in Maristee. What I heard there concerned me greatly.

It seemed to me that MR. Jandu did not give the city enough information to allow this permit process to move forward at this time. Is it true, like your hired engineer stated, that you don't have a detailed site plan yet? Could you approve this plan without a detailed site plan? It would be good if the public could view it & have a comment time on the plan alone?

Also I didn't understand where the 30 truck loads of fly ash would be stored or how they would be disposed of. Would it go to our landfill? Is it licensed to take this amount of this kind of ash? Is it contaminated?

Do you feel <sup>that</sup> the working people of Maristee should have a vote on all of the judge openings that this plant will require? It sounds like an inconvenience for sure. Is the impact on the bridge considered in the cost to the city to have this plant? What about the tremendous wear & tear on our roads for all of the truck ~~to~~ traffic?

They talked a lot about the taxes that this plant would bring but I wonder the costs too.

Thank you for your time & consideration.  
Sincerely Jo Meller

To Whom it May Concern:

After the public meeting on November 20, 2003 I decided that I needed to express some concerns and questions about the proposed Northern Lights coal burning power plant.

One area of concern is how appropriate it is with regard to the Manistee Master Plan; while the consultant (community planner) you hired suggested that it was generally consistent, he expressed some concerns and I have some additional ones. Will you be specifically addressing his concerns about outside storage of coal, the effect on Manistee Lake (thermal and other emissions), and shoreline issues? Will you have language in your permit that will hold Tondur Corp. accountable for specific problems should they occur around these issues later, even after the plant is open?

He suggested that low sulfur coal, as specified in the proposal, could be made a specific condition of your approval. Given that the plant is designed around that specific type of coal, your approval should reflect that. What would happen if, in coming years, the price of low sulfur coal (or some other factor) tempts Tondur Corp. into using a grade of coal below the standards for which the plant is designed? Will you have the authority to require either low sulfur coal or scrubbing technology to compensate?

With regard to the fly ash, I am not satisfied that the issue has been adequately addressed. Is our landfill designed to take this type of and amount of waste? Are there other environmental or infrastructure (roads, dust, etc) implications? Both of your consultants covered this issue without leaving me satisfied that environmental and infrastructure implications were fully understood.

With regard to "welfare" of the city, your consultant referred to the 60 full time jobs that would be created. Are you satisfied that Manistee residents will be given preference in the hiring process? With a project of this size and duration, there should be time to recruit and train the personnel to staff the plant. Is there any way within the permit process to include assurances in this regard? The benefit of construction jobs in the area was also given much attention, but I was given to believe that these jobs would probably be imported ("these workers will be specially trained for this type of construction" was an assurance that quality work would be done, but provided little reason to believe that these qualifications were held by local workers).

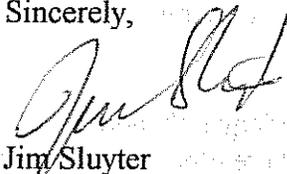
While I feel you must address these issues (as proposed by your consulting planner) I have more basic concerns about the scope of the project as a whole. Do you find that this massive project is consistent with a Master Plan that, as I understand it, suggests economic development from less heavy industry? Has there been any study of the impact it might have on other aspects of the Master Plan and its vision of the future of Manistee?

Furthermore, is it appropriate to grant even contingent approval to a project of this scope without the final detailed site plans? Your consulting engineer seemed unwilling to sign off on his concerns without more detailed plans.

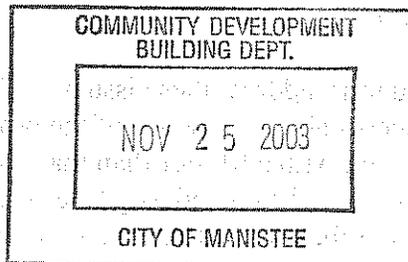
While your area of authority may not extend to the specific environmental issues surrounding air quality (stack emissions, for example), it may be within your authority to specify that EPA standards (under DEQ's permitting process) be fully met, if only to give area citizens some assurance that you share our air quality concerns. Without such assurances, can you be certain that if future health problems are traced to the power plant, this board will not share some of the liability? Likewise, while your authority may not extend to the economic issues (from the amorphous comments about investment in the community to comments on tax base and tax benefits to the community) it may be in your interest to have these issues examined by someone who can provide some assurance that there will indeed be greater economic benefit than monetary drain from the project. If this is indeed an economic boon to the community, the numbers to support that assertion—from inception through decommissioning—should be generated.

Well, I could go on. But it seems clear to me that there are many questions left with partial or no answers, too many to rush into approval. Do you as a board truly feel adequately prepared to provide your stamp of approval on the Northern Lights project at this point?

Sincerely,



Jim Sluyter  
3480 Potter Rd  
Bear Lake, MI 49614



**FAX**

Date **11/24/03**

Number of pages including cover sheet **2**

TO:

**MANISTEE  
PLANNING  
COMMISSION**

Phone

Fax Phone **231-723-1546**

FROM:

Frank J. Fahey  
274 Winthrop Ave.  
Elmhurst, Il. 60126

Phone

630-834-8072

CC:

Fax Phone

630-834-3380

REMARKS:  Urgent  For your review  Reply ASAP  Please Comment

*Questions For Planning Commission*



# Memorandum

**To:** The City of Manistee Planning Commission

**From:** Frank J. Fahey

**Date:** 11/25/03

**Re:** Questions concerning Tondu Corporation's Northern Lights Project

---

I own a residence and am a part-time resident of Manistee. I have a condominium and dock on the Manistee River. This residence is to be our retirement home. Thank you for giving me the opportunity to ask questions concerning Tondu Corporation's Northern Lights Project and the its effect on the future quality of life in Manistee.

My questions and observations are as follows:

A. Tondu Corporation's web site (<http://www.tonducorp.com/lights.htm>) for the Northern Lights Project contains the following warning:

**Disclaimer**

**The Northern Lights Project is in the early stages of development. Its size, location, technology, cost, emission controls, fuel source, number of employees, economic impacts, and other facts have not been finalized. The objective of the development effort is to answer these questions. Public input, regulatory review, engineering and economic analysis are involved in a complex iterative process to determine these answers. Until these answers are finalized over the next year, everything is subject to change.**

Tondu Corporation asks the people reading their site to "**keep in mind the disclaimer.**" This means the size, location, technology, cost, emission controls, fuel source, number of employees, economic impacts, and other facts are not finalized and can be changed. In addition, Tondu states their minimum return requirement is a 20% after tax return on the project equity. Tondu Corporation's responsibility to their investors supercedes any commitment they make to the Planning Commission, the State, or the residents of Manistee. Please "**keep in mind the disclaimer**" and Tondu's stated responsibility to their investors.

1. How can the Planning Commission approve a project when according to Tondu Corporation "**everything is subject to change?**"
2. What would the Planning Commission be approving if "**everything is subject to change?**"

November 25, 2003

3. Will the planning Commission give Tondu a blanket approval with no commitment and an allowance to achieve their 20% after tax return on the project equity?
4. Will the Planning Commission require Tondu to contractually commit to the size, location, technology, cost, emission controls, fuel source, number of employees, economic impacts, and other facts they are representing as true to the people of Manistee?
5. Does the Planning Commission understand Tondu will change whatever they have to in order to insure, over the life of the investment, a minimum return requirement of 20% after tax return on the project equity?
6. Will the contractual commitment by Tondu have associated financial penalties significant enough to ensure Tondu's continued to the promises made to the citizens of Manistee?

B. I have not heard any answers to answers to question concerning the effect of the project on Manistee Lake and the associated ecosystems.

1. Will the sediment on the bottom of Lake Manistee be disturbed during the construction?
2. Will dredging need to be done to accommodate freighter traffic?
3. Will sediment be removed?
4. Where will the sediment be taken? How will it be removed?
5. Do we know the pollutants present in this sediment?
6. What are the potential effects of disturbing the sediment Manistee Lake, Lake Michigan, and the Manistee River

C. Per their web page, Tondu does not understand the risks and solutions for mercury emissions from coal fueled power plants.

1. Will the Planning Commission delay their decision until Tondu and the community understands the risk and solutions of mercury emissions?

Thank you for taking the time to address my questions. I believe any project effecting the future of Manistee must exceed the "everything is subject to change" litmus test. We need to know with near certainty the financial, economic, tax, and environmental risks and benefits, now and in the future, associated with this project. If you have any questions, I may be contacted at 630-834-8072.

November 25, 2003

Manistee City Council  
Attn: Planning Department  
70 Maple St  
Manistee MI 49660

Dear Decision Makers of Manistee,

I am writing regarding the proposed coal burning power generation plant. I believe that alternatives such as wind or natural gas powered generation systems would be preferable to that of coal. This is because I moved to this area from Michigan City, Indiana where there is a coal powered electricity generation plant. Living beneath the shadow of that plant made me certain that this was not a good method for generating electricity. If you allow this plant to be located in Manistee citizens will experience pollution-related health problems (maybe it will you or your children), environmental damage, damage to the tourism base, damage to your property, and damage to the self-esteem of the town. I encourage you, as representatives of this population, to look hard at and ask hard questions of other, similar communities that have gone through what you are going through now. Michigan City, Indiana would be a good place to start because it is a Lake Michigan town that relies upon tourism/retail businesses and has within its limits a very obvious power plant.

The short- and long-term environmental degradation to Manistee and its waterways, as well as other communities (that may seem far removed from you at this time) should be of great concern. Please be sure to advocate for responsible stewardship of the ecosystem on behalf of us, our children, and future generations. You have a grave responsibility as public officials to make very wise decisions.

That said I have some specific questions for you.

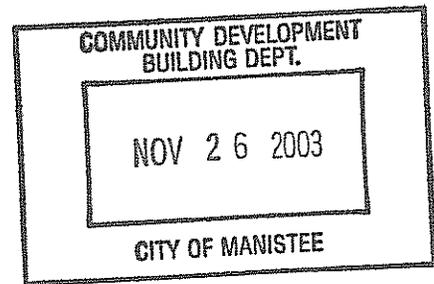
1. What impact will the increased river traffic (from coal transportation) have on emergency vehicle response times?
2. How will this increased river traffic affect risks of damage to recreational boats in nearby waterways?
3. How will coal dust from the coal stockpiling/unloading/loading affect ambient air quality? How will this coal dust affect the public's health?
4. How will nearby surface water and groundwater quality be affected by storm water runoff/percolation from the coal stockpiling and unloading areas?
5. What measures will be taken to assure that the existing ecosystem is not degraded by the power plant activity?

While it is confusing to weigh the costs and benefits of this proposal, we all can admit that there

are some factors that perhaps cannot be adequately evaluated. There are many intangible costs and benefits that play into decisions on many levels. One thing that is very clear is that coal is dirty and to burn it creates waste streams that must be managed responsibly. Looking back, even when we do our best by using standards, there is often a future generation that looks at the effort and says (with 20/20 vision) that mistakes were made and too much damage was done. Given that there are choices regarding types of power generation, why would we allow this type of power generation here? Why not permit only natural gas or wind turbine -- systems that are so much more healthy for us all? Please use good judgment as this decision is made, and do not let the short-term lure of jobs outweigh the long-term damage that a power plant like this can cause.

Sincerely,

  
Kurt Harvey  
17136 4<sup>th</sup> St  
Arcadia, Michigan





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

From: Bob and Beth Polidan  
377 Lighthouse Way So.  
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.

**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**

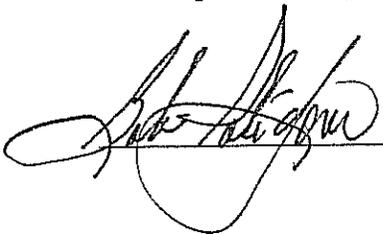
This 400 foot stack will become the "landmark" for Manistee.  
Ugly, Ugly, Ugly, Ugly, Ugly.

**P. Site Emissions**

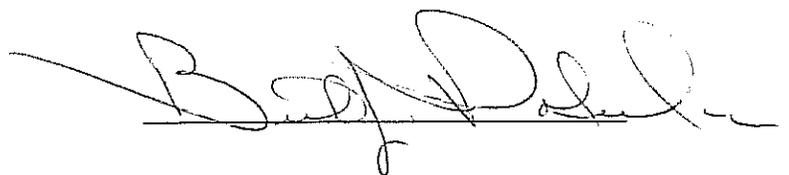
If we do not have a complete understanding of the possible hazards of these emissions, why approve the application? Even if we pretend to understand the site emissions, do we have 100% confidence in the EPA's enforcement of the site emission regulations?

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.

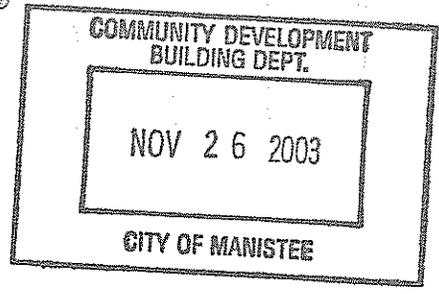
**Please do not approve the "Special Use Permit" for Manistee Saltworks Development Corporation.**



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11-26-03

2005 MERKEY ROAD  
MANISTEE, MI 49660

RE: NORTHERN LIGHTS PROJECT

CITY PLANNING COMMISSION:

- ① - DISTRICT 10 HEALTH DEPARTMENT STATISTICS INDICATE MANISTEE COUNTY HAS HIGHER RATES OF CANCER, HEART AND RESPIRATORY DISEASE THAN THE STATE AVERAGE. WILL PERMIT CONDITIONS BE IMPLEMENTED FOR TIGHTER AIR CONTROL EQUIPMENT AT THE NORTHERN LIGHTS FACILITY IF IT IS DETERMINED MANISTEE COUNTY IS, IN FACT CURRENTLY IN A NON-ATTAINMENT AREA? And,
- ② - IF NOT, HOW DOES THE CITY PROPOSE TO PROVIDE HEALTH PROTECTION FOR AREA RESIDENTS FROM THE SIGNIFICANT ADDITION OF VOC'S, TOXICS AND PARTICULATES < 10 MICRONS?
- ③ - WHEN WILL THE CITY CONSULTANTS STUDY THE PROPOSED AIR CONTROLS TO DETERMINE IF BACT HAS, IN FACT BEEN PROPOSED BY THE APPLICANT?
- ④ - WHEN WILL THE PLANNING COMMISSION BE MEETING TO REVIEW, IN DETAIL, THE VARIOUS ASPECTS OF THE ENVIRONMENTAL IMPACT STUDY?
- ⑤ - PLEASE PROVIDE THE LIST OF ALL QUESTIONS AND ANSWERS DETERMINED TO BE RELEVANT BY PLANNING COMMISSION MEMBERS ENABLING THE COMMISSIONS COMPREHENSIVE UNDERSTANDING OF THE E.I.S.
- ⑥ - WHEN WILL THE COMPLETE LAND USE APPLICATION DELINEATING ALL SPECIFICS BE SUBMITTED TO THE PLANNING COMMISSION FOR ITS REVIEW?
- ⑦ - WILL THE P.C. BE ISSUING A DETERMINATION PRIOR TO RECEIPT OF COMPLETE & SPECIFIC LAND USE APPLICATION, INCLUDING LOADING VALUES?
- ⑧ - WHAT IS THE REVISED LAND-FILL EXPECTANCY?

PLEASE RESPOND TO THE ABOVE QUESTIONS BY NOVEMBER 27, 2003

2005 Merkey

To the Manistee City Planning Commission:

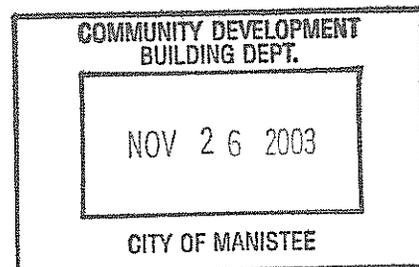
In regards to the proposed Northern Lights Power Plant, I have a few questions that, as a resident of the City of Manistee, I would respectfully request be answered to me in writing.

- 1) Are you willing to disclose all of the meetings that took place between any representatives of the Manistee Salt Works Development Corporation and any representatives of the City Planning Commission prior to the City Planning Commission Public Hearing on November 20, 2003?
- 2) If you are not willing to disclose these meetings, then what is the specific legal basis for your denial of such disclose?
- 3) If you are willing to disclose these meetings, I would also like to know:
  - Where did these meetings take place?
  - When did they take place?
  - Who was in attendance on behalf of the City Planning Commission and Manistee Salt Works Development Corporation?
  - What was the subject matter or content of any discussions or presentations that took place?
- 3) It is my understanding that under state law, the City Planning Commission can hire, at the expense of the Manistee Salt Works Development Corporations' expense, an independent expert to review the proposed project's impacts on the public health, safety & welfare, and give you objective advice about whether this project meets that standard in your ordinance. Are you willing to do this, and if not, why not?
- 4) Regarding the responses you prepare to this letter, or any letter you receive relative to the proposed Northern Lights Power Plant:
  - Will the responses you prepare be made available to the public?
  - If so, in what manner or media will they be made available?
  - If you do not intend to answer all questions you receive, then what will be your basis for discerning what questions you answer and what questions you don't answer?

Thank you for your time and consideration.



Mark Dougher  
266 Fremont Street  
Manistee, Michigan 49660  
231-723-6378



To the Manistee City Planning Commission:

Has the Planning Commission reviewed the documentation to assess the anticipated impact to air quality within the City of Manistee?

Has the City evaluated the accuracy of the model (if any) upon which Tondu's assessment of air quality impacts, including the projected deposition pattern for particulates and metals (including mercury and arsenic)?

What are the estimated amounts/location of deposition of particulates, mercury and arsenic within City limits?

What are the baseline levels of mercury and arsenic in the areas that would be impacted by additional deposition from the Northern Lights project?

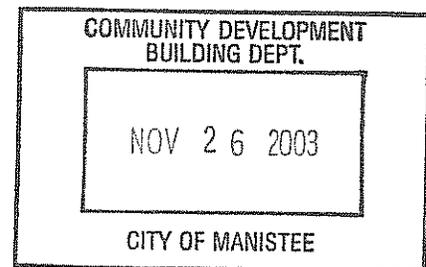
What financial guarantees has the applicant made to assure that all environmental conditions on the site, including required demolition and disposal of furnaces, scrubbers and stacks will be taken care of following plant's decommissioning?

Are there any fatal accident probability statistics to the reported 30 trips per day on Manistee Roads? Is this figure the total number of trips, or does it reflect 30 trips to and 30 trips from the site? If it is the latter, that would put the figure to 60 truck trips per day or an annual number of 21,900 trips made on our public roads carrying hazardous waste. What action plans or preventative measures will be taken to mitigate this health risk?

Thank you.

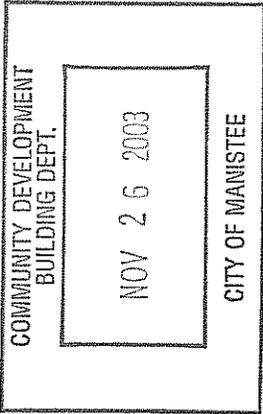
*Nancy N. McCaslin*

Nancy N. McCaslin  
613 Hopkins Street  
Manistee, Michigan 49660

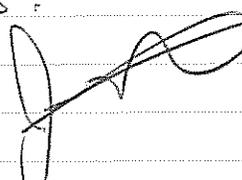


To Manistee Planning Commission

11-25-03



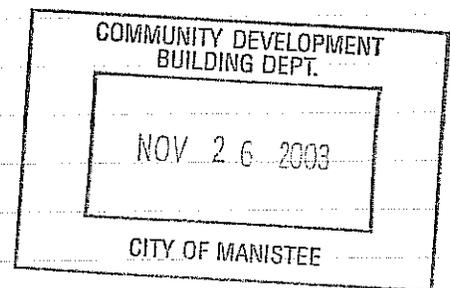
As planners of the community, have you taken into consideration, the quality of life, this area has to offer? Have you asked yourselves what impact your decision will have on the countless numbers of people, plants, fish and animals who live within the proposed plume the Tondra Coal Plant will shroud? Have you looked within your own hearts to weigh the truth of progress vs life, the life of your own children & grandchildren? These should be of foremost concern in this decision, not the promise of a few jobs ~~or~~ or taxes.

 Jimmie Mitchell  
8846 Coates  
Manistee, MI 49660

To the Manistee Planning Commission:

It is documented that in areas of higher concentrations of fine particulates there is an increased frequency of Emphysema, premature deaths and other conditions. Has the planning commission evaluated these risks? Does the planning commission understand these risks. Have any assessments been conducted to determine the health risks relative to the proposed Touden project? What are the local risks?

Marty Holtgren  
1308 East 25<sup>th</sup> Street  
Manistee, MI 49660

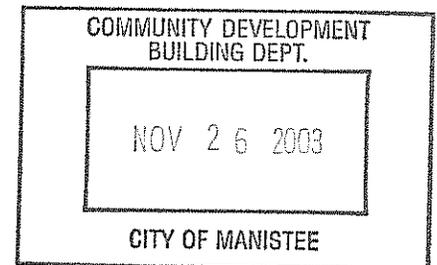


November 24, 2003

Some concerns about the 'Northern Lights Project' by: Tondu's Corporation and the 'Manistee's Saltwork's Development Corporation'.

Assumptions:

1. 425 Megawatt Power Coal Burning Generator Plant
2. \$700 Million Dollar Project
3. 13 Ships 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. Expenditure of 4.4 Million Dollars/Year on General Maintenance
8. Generating Plant Burns 1.8 Million Tons of Coal per Year



Concerns:

Several important issues have not been addressed or have been ignored by both the town council and the Tondu's Corporation. These issues will impact both the long-term health of its citizens and the 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 and its day-to-day activities. The daily requirement to keep the plant running, from the noise of truck activity, especially during the three year conduction phase, as well as from the plant itself when the power generation starts, will be considerable. No longer will the sound of the Lake Michigan's waves be present on a quiet night. Additionally, the plants security lights will light the night as if it were day. There will be no 'end of day' closedown, ever. With a seven day a week, twenty-four hour a day operation and the plants close proximity to the town; there will be no relief from the constant activity and noise associated with its operation. It should be noted that, in the United States, there are not many communities that would accept or allow a project of this magnitude with-in their city or town limits. The disruption to the quality of life would be too great.

The 400-foot smokestack will dominate the landscape and will be a constant source of a water vapor and other contaminants, which will be overwhelming during the winter months. With its aircraft warning lights, it will be a constant reminder of the Generator Plants location in town. While the polluting aspects of the discharge have been mostly disregarded, long-term aspects of the vapor cloud as well as the micro-particle pollution from the delivery and storage of the coal itself should be the concern of everyone who lives here. While the coal dust pollution has been greatly reduced with modern scrubbers and washers, it has not been eliminated. Additionally, there will be continuous discharge of treated material into Manistee Lake and an accumulative pollution cycle for the life of the plant. This pollution, whatever its magnitude will end up in Lake Michigan. There is also the subject of the elimination of thermal heat or the warm water that will be discharged into the river and Lake Michigan. These discharges are a form of pollution and have caused algae plumes elsewhere which are destructive to the aquatic life cycle. A detailed study must be conducted in these areas, in the existing environment as base data, prior to any permit approval by City Council to build this project.

There are planned deliveries of thirteen ships a month to feed the coal fuel requirements of the Power Generating Plant. There have been events in this past year where a 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 are damaged or inoperable and the ships delivery of coal is interrupted, the continuous operation of the plant will remain paramount. It stands to reason that during winter months when the river is closed to ship traffic due to freezing, an alternate delivery system will have to be in place. The obvious method will be by train. A small generating plant needs three trains of 40 to 60 carloads of coal, three times a week, for its operation. A 425 Megawatt plant will require many more carloads and a railroad network in place to support those trains. I can find no existing network to deliver coal to the town or to the plants planned location via train coal cars. The plan is to store coal for a two-month absence of delivery during winter months, when the ship passage is blocked. This is an astonishing amount of coal (26 ship loads) to store on only a small part this 50-acre site. The site as planned, does not appear large enough to store this amount of coal. What if the freeze is three months long? It has happened in the past!

The picture of the planned generating plant shows a single existing power 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 required to deliver that amount of energy to the sub-station will change the towns' appearance in a way that has not been addressed to date. The location of this sub-station is unknown, but it will also have to be sizeable to handle the output of 425 Megawatts as well as contain the power distribution system of transformers and relay circuit breakers. The proposed solution to this item has not been addressed.

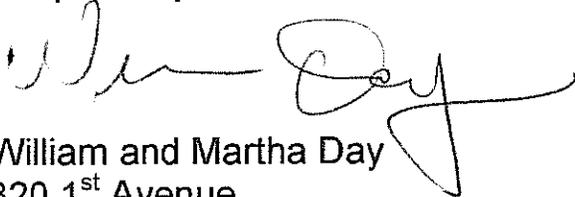
The existing tourist attractions will be altered and will negatively impact both the sport fishing and the Village Condominium attraction to the area. All businesses in the town will be negatively affected. The property values and value of homes in the town will greatly decrease in value. The town simply will not be a desirable place to live. The river walk of this advertised 'Victorian Community' would certainly not be as it is today, after the Power Generating Plant is in place. These are but a few of the Power Generating Plant problems that must be considered, all of which will negatively impact this small community.

Considerable research must be accomplished and serious thought given to the deadly ramifications this project will have on the entire community. All this research and testing must be done prior to issuing the variance and approval of the Power Generating Plant in its planned location.

An obvious solution to all theses and other concerns would be to build the Power Generating Plant a distance outside of the town limits. All of the abovementioned problems are then solved. The present site can then be cleaned and used for tourist development and the town will retain its present character.

There are no long term advantages to building the Power Generating Plant in the town except for the owners of the presently pollution property.

Respectfully Submitted:

A handwritten signature in black ink, appearing to read 'William and Martha Day', written in a cursive style.

William and Martha Day  
320 1<sup>st</sup> Avenue  
Manistee, MI 49660  
Phone: 231-723-8709

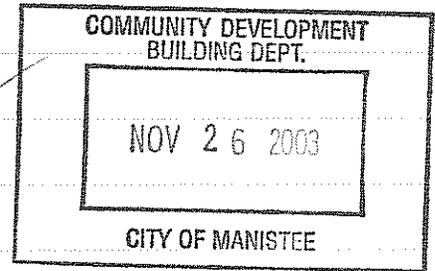
11/25/03

To the Manistee City Planning Commission

- ① What are the shared costs between the city + town? K/E for ~~other~~ potential water and waste water treatments?
- ② Are there any environmental justice concerns associated with the fact that the plant will most directly impact the low income housing directly adjacent to the site and Maxwell town neighborhood?
- ③ What is the expected life of the Northern Lights Power Plant?

Francis W. Johnston

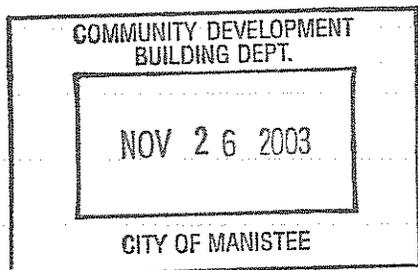
388 1st Street  
Manistee, Mich



To the Manistee City Planning Commission  
Regarding the Tordu Power Plant

Question:

In light of the potential health and other impacts associated with coal dust dispersion on the surrounding neighborhoods (and particularly in light of the documented problems in Filer City), has the City obtained an independent assessment of the adequacy of coal transfer, storage, and conveyance systems proposed by the applicant?



Mark Kree



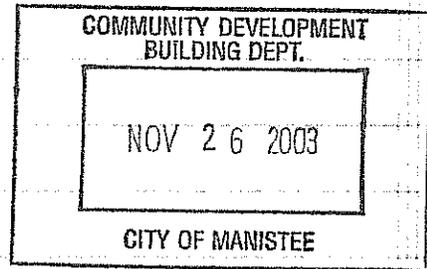
4290 North Sherman Road  
Ludington, MI  
49431  
(231) 845-3942

page 1 of 2

Mark Sanford  
260 E. Piney Rd  
Manistee MI 49660

November 25, 2003

City Planning Commission  
70 Maple Street  
Manistee, MI 49660



attn: Denise Blakesly

I attended the City Planning Commission meeting on Thursday November 20<sup>th</sup>. Although opportunity for public comment on the proposed Tonder Coal plant was offered, I believe that the structure of the meeting (i.e. Mr. Tonder speaking first and then the consultant hired by the commission) reduced the motivation of the public to speak out on this issue because an impression was created that the project will go forward regardless of the health and safety concerns of the public.

The statement by the representative of Manistee Township that the Township supports this project further reinforced this impression. I am a resident of

Mark Sanford  
attn. \*(over)\*

page 2 of 2

Manistee Township and I oppose this project.

However, if the project is slated to go forward in any case, I would ask the Commission to provide it's citizens with the following information:

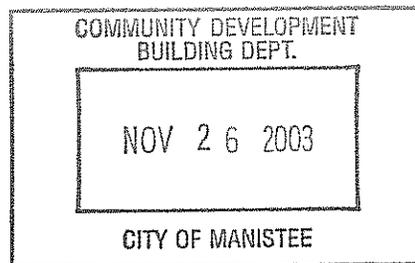
Has the applicant provided any financial guarantees or plans for what it will do with the plant and property after the life of the plant? Will the City have a 250 foot tall vacant industrial building to demolish and redevelop in 30-40 years? Has the Commission raised these questions with the applicant?

Has the applicant guaranteed that it will only burn low sulfur coal at the facility? What baseline levels exist measuring toxins produced by such proposed use so that the impact of the plant can be measured? Has the applicant set aside funds to assist citizens with medical costs associated with exposure to these toxins?

Sincerely,

Anna A. A. P. Smith

403 First Street  
Manistee, MI 49660  
November 25, 2003



To the Manistee City Planning Commission:

We respectfully submit the following questions with respect to the proposed Tondu power plant within the city of Manistee. We would like written answers to these questions and request as well that they be published and made part of the public record so that other concerned citizens might receive the information.

1. Will the city of Manistee require that adequate financial resources are set aside by the applicant to insure that all environmental conditions on the site, including demolition and disposal of furnaces, scrubbers and stacks, will be taken care of following the plant's decommissioning?
2. Will the city of Manistee require that adequate financial resources are set aside by the applicant to rehabilitate the site after the plant is closed, including demolition of buildings and all environmental issues, so that we don't have another "brownfield" issue to deal with?
3. It is our understanding that while the applicants have promoted their plan to burn low-sulfur coal in this facility, it is being built with the capability to burn other fuels. Will the city of Manistee require a written guarantee that low-sulfur coal will be the only fuel ever burned in this facility during its life?
4. Related to question #3, will the city of Manistee obtain and document a specific definition of this "low sulfur" coal and make it part of the requirement in #3, so that the residents of this area are not adversely affected by any future relaxing of environmental standards?
5. Have the negative economic impacts to Manistee and the surrounding area been studied as thoroughly and exhaustively as the positive benefits? For example, what are the expected negative impacts on property values? What are the expected negative impacts on tourism and the second home market? What are the expected negative impacts of people who will choose NOT to make their permanent home in the vicinity of a large coal power plant? What are the expected additional costs of health care, insurance, etc.? If the answers to these are not known, will the planning commission obtain these answers before ruling on the permit application?
6. Have the health effects of the proposed air emissions been evaluated (e.g., over 4000 tons of sulfur dioxide annually, 2000+ tons of nitrogen oxides annually, and hundreds of pounds of mercury, lead, and arsenic per year as well)? If not, will the planning commission obtain these answers before ruling on the application?
7. Have the negative impacts on local waters been determined – chemical, biological, thermal, etc.? If not, will the planning commission obtain these answers before ruling on the application?
8. Have the negative environmental impacts of leachates, dust from handling, and other solid environmental parameters been determined? If not, will the planning commission obtain these answers before ruling on the application?
9. Is there a plan to complete an overall environmental impact study for this project? If not, will the planning commission obtain these answers before ruling on the application?

Sincerely,

William R. Kracht  
403 First Street  
Manistee, MI 49660

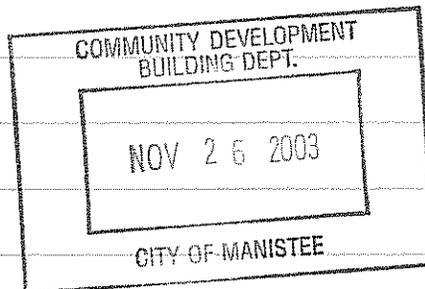
Mary L. Kracht  
403 First Street  
Manistee, MI 49660

April Saad  
2005 MerKey Rd  
Manistee MI. 49660

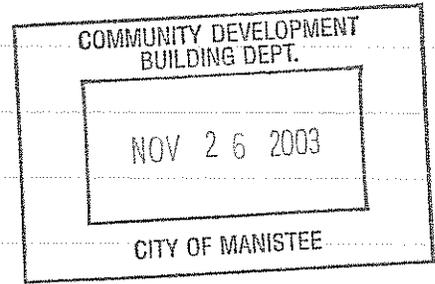
## Manistee Planning Commission—

When the 425 megawatt plant is complete and operating how many new employees are expected to be employed at the above plant.

April Saad



HELEN ANN VANIS  
444 THIRD STREET  
MANISTEE, MI 49660



DEAR MANISTEE PLANNING COMMISSION,

I AM NOT IN FAVOR OF THE NORTHERN LIGHTS PROJECT.

HOWEVER, IF YOU DO APPROVE THIS SPECIAL USE PERMIT I RECOMMEND THAT IT BE CONDITIONED AND YOU TAKE STEPS TO ENSURE THAT FINANCIAL GUARANTEES ARE PROVIDED FOR:

1 RECLAMATION AND RESTORATION OF THE SITE AFTER THE PLANT'S 30-45 YEAR LIFE.

AND

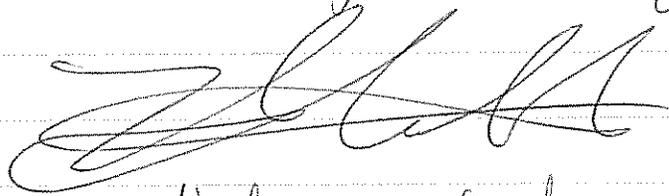
2. CATASTROPHIC EVENTS DURING THE LIFE OF THE SITE.

PLEASE EXPLAIN WHAT STEPS HAVE BEEN TAKEN IN REFERENCE TO THESE MATTERS. THANK YOU.

Helen Ann Vanis

To the Manistee City Planning Commission  
regarding proposed Tondw Coal Plant,

High numbers of non-native species  
have been introduced into the Great Lakes  
causing extensive harm to the ecosystem.  
How will the city monitor discharge  
ballast water from ships bringing coal  
to the proposed Tondw coal plant to  
prevent non-native species introduction,  
pollution, etc? Will strict standards be  
placed on discharge water quality?



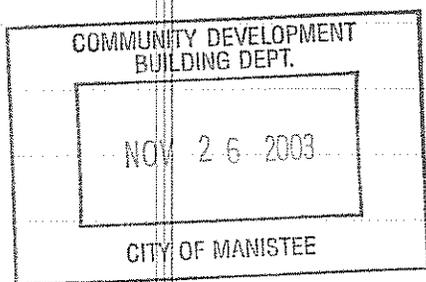
Nate Suoboda

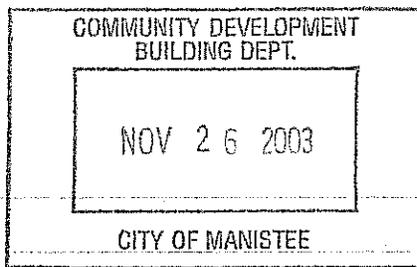
P.O. Box 735

Manistee, MI

49660

(231) 398-2033





2749 Old Stronach Rd  
Manistee, MI 49660  
November 25, 2003

Dear Members of the City Planning Commission:

I am writing to express my concern about the upcoming decision on the request for a Special Use Permit for the proposed "Northern Lights" coal burning facility. I sincerely believe that your decision on this permit is premature. I am not confident that you, or the members of the community, have answers to numerous questions about the potential hazards this plant bring to our area. It appears to me that all environmental concerns are only being glossed over by Mr. Tondy, and that no outside consulting has been conducted to agree with or dispute his findings.

Before you approve the Special Use Permit, I would ask you to please evaluate the potential air quality impacts of the proposed plant. Do you know the baseline air quality in Manistee? If not, will you please assess this before granting the permit. It seems to me that this is absolutely necessary in order to evaluate the effects on the local population, of additional deposits of particulates, metals and others pollutants.

Before you approve this permit, I would like the assurance of Mr Tondy, that my health, and the health of my children will not be

adversely impacted. I do not think that we should leave this to the DEQ. Mr Tondu is proposing this plant, he will benefit financially from this plant, he should be able to assure us that our health will not be compromised because of this plant.

In conclusion, my question to you is: Have you evaluated the accuracy of Mr Tondu's prediction of air quality? If not, why not?

I intend to be present at the December 4, 2003 meeting, and I am looking forward to hearing your answer to my question. I am sure that you are looking very thoroughly into this matter.

Sincerely

Tan Sapak

Juan M Sapak

Attn. Manistee City Planning Commission

11-26-03

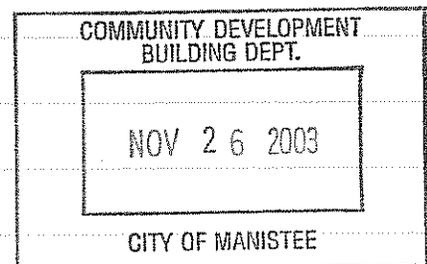
In reference to the proposed coal plant

Q # 1 What contaminants are now on the proposed site?

Q # 2 What contaminants will be left on the site when it is decommissioned or closed?

Q # 3 Who will be responsible for increased health problems related to the particulate matter released in the air of our community and beyond?  
Think of the children!

Patricia Didion  
88 Greenbush St.  
Manistee, MI 49660



To the Manistee City Planning  
Commission regarding proposed  
Tondu Coal Plant,

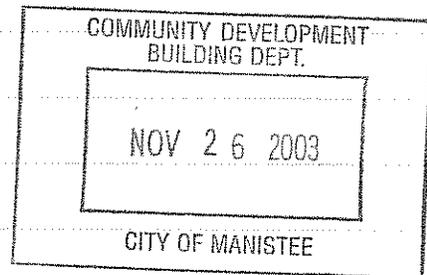
Regarding economic costs and benefits  
to the community, what are the  
expected additional fulltime payroll  
and tax revenue benefits to the  
area?

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?

Ellyn Niesen

Ellyn Niesen  
11003 Niesen Drive  
Manistee, MI 49660  
(231) 723-4464



Manistee City Planning Comm.  
20 Maple St  
Manistee MI

November 25, 2003

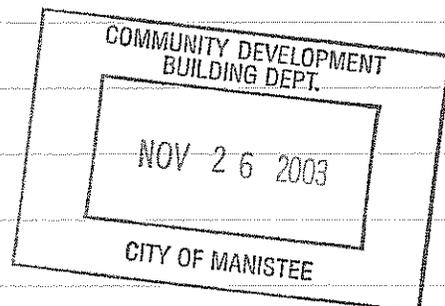
Dear Planning Commission,

It is my understanding that under state law, the Planning Commission can hire, at Mr. Tondu's expense, an independent expert to review this project's impacts on the public health, safety and welfare, and give you objective advice about whether this project meets the standards of <sup>(the power plant project)</sup> ~~the~~ the city's ordinances. Are you willing to hire such an expert, and if not, why not?

I am very concerned that if this project moves forth, the public health, safety and welfare may be overly degraded.

Sincerely,  
Kurt Harvey  
*Kurt Harvey*

Po Box 272  
17136 4th St  
Arcadia MI 49613



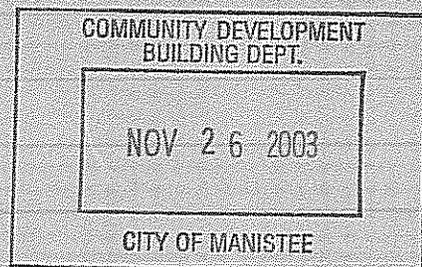
To: The City Planning Commission.  
Regarding the Tomdu Project

Have you as the Planning Commission requested artists' conceptions to assess the visual impact the 200-250 foot building and 400 foot stack will have on the city's profile from various points (i.e. boats on Lake Michigan? From U.S. 31? M-55?)

What is the expected impact on property values in the area? Also on the second home market in the area.

Submitted by

Shirley J. Kiera  
1307 24<sup>th</sup> St  
Manistee, MI  
49660



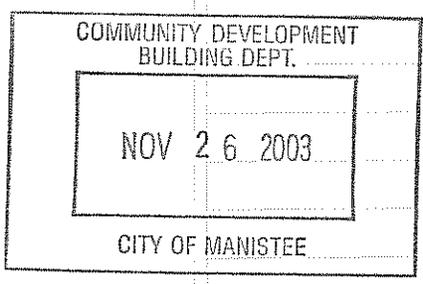
To the City Planning Commission  
regarding the Northern Lights  
project -

Is there a plan to complete  
an overall environmental  
impact study for this project?  
Does the City Planning Commission  
intend to render a decision  
without this study?

I understand the coal grinding  
and conveying operations could  
generate significant noise levels.  
Does the city plan to enforce  
rigid noise standards to  
minimize these levels and  
their impact on neighbors?

Respectfully submitted,

Carol Pasco  
610 Spruce St.  
Manistee MI 49660



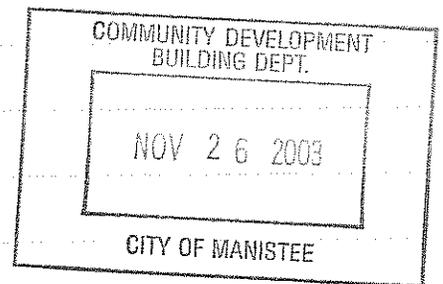
To The Manistee Planning Commission -

I have a question I would like answered at the Dec 6<sup>th</sup> 2003 meeting. My question is this - 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 standards to minimize these levels and there impact on the neighbors?

Roberta Szpliet  
2311 Filer City Road  
Manistee, Mi 49660  
723-9689

Thank you!

Roberta Szpliet



To: Manistee City Planning Commission

From: Gerard T. Grabowski 10040 Alkire Rd Bear Lake 49604

Re: Tondur Corporation Special Use Permit

I respectfully submit the following questions which directly relate to your review authority and consideration. This Special Use Permit from Tondur Corporation which the Planning Commission is reviewing is clearly greater than just a local concern. This Industrial Plan is unlike any plan ever proposed for the City of Manistee to consider. It is both wise and legally prudent to address the many issues in a careful and comprehensive manner.

Tondur Corp. is required to fulfill the requirements of Article 86 in your Zoning Ordinance. The reports obtained from the two consultants hired by the city revealed significant and compelling reasons to require a number of written agreements, economic and safety studies, and specific conditions be placed in the Special Use Permit before any recommendation is made regarding this permit.

2.

The primary function of this Special Use permit is to provide written commitments and agreed upon provisions and conditions. This process is gone through carefully to insure that any verbal promises are put into ink and all parties involved are clear on conditions and responsibilities. Will the Planning Commission put the following conditions into this Special Use Permit?

### 1. Fuel Source Guarantee

The data and specifications Tondv Corporation provided regarding this project are based on the use of low-sulfur coal as the fuel source. Mr. Tondv has publicly stated he will be burning low-sulfur coal so this will be a "cleaner utility." Has the City obtained written guarantees that this plant will burn only low-sulfur coal? This is an imperative condition in light of the fact that a current Tondv facility in Filer Township is burning not only the promised wood chips but also has burned waste tires, Industrial Waste Oils and ~~high~~ sulphur coal.

3

In addition, Tondv Corporations own Project Information material states clearly a Disclaimer that everything, including size location, emission controls and fuel source is subject to change. The Special Use permit you are crafting is the only tool to turn lofty well intentioned promises into concrete written guarantees and agreements.

## 2. Provisions for Public Safety & Transportation Issues.

What provisions in the Special Use permit address the many concerns the consultants and public have raised regarding Emergency Response, bridge openings increased by at least 50% percent, and Homeland Security preparations???

3. What provisions are there in the Special Use permit for enforcement of noise levels below the promised 65 dB? what monitoring methods will be agreed upon?

④ 4. Has Tondv Corp. received approval from the Michigan Public Service Commission for any and all Transmission Line Routes for this project?

4.

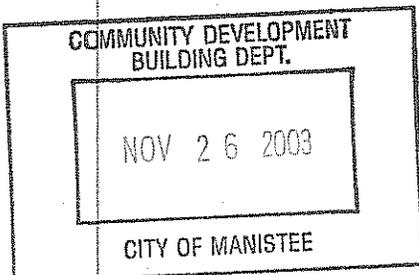
4. continued

Does the Special Use Permit include site plans and Transmission Line Routes? These plans are essential prior to consideration of this permit application. If Tondu Corp is denied the ability to route Transmission Lines across Manistee Lake as planned then the lines would run through city neighborhoods. These Transmission Line Routes must be submitted for public review prior to Special Use Permit approval.

I respectfully submit these questions and patiently await your full reply. Enclosed is a self addressed stamped envelope.

Thank You,

Gerard Grabowski  
Gerard Grabowski  
10040 Arkare Rd  
Bear Lake, MI  
49614



November 16, 2022

To the City of Manistee Planning Commission,

I appreciate the opportunity to speak at your public hearings. As I stated in the meeting I am concerned about mercury ~~emissions~~ <sup>emissions</sup>. In my nervousness speaking to the group I forgot to ask a question, so here it is,

Has the planning commission thoroughly reviewed the documentation to assess the anticipated impact to the air quality within the city of Manistee?

Air is the substance that embeds all of life. The statement, "that the solution to pollution is dilution." was used repeatedly at the hearing. This is a "sound bite" not "sound science". Any mercury emission is serious, as it accumulates in our bodies and in the environment.

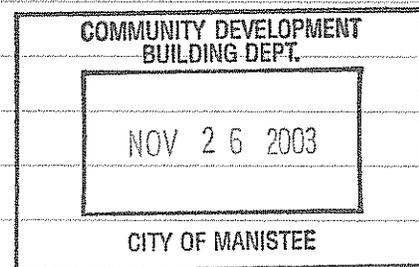
Your decision will carry impact beyond comprehension of my small mind. If the decision is to approve this facility then you have the responsibility to require the corporation to do everything it says it will do in this permit. It is imperative that you set the parameters and conditions that require the corporation

To be the model corporate citizen that it states it will be. Any thing less is a failure to your sworn duty as citizen planners.

Thank you again for this opportunity

Bernard Ware

Bernard Ware Jr.  
9094 Hixire Rd  
Bear Lake, MI 49614



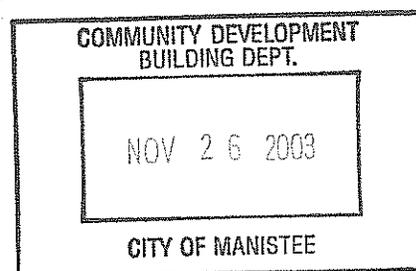
11/25/03  
To: Manistee City Planning Commission

From: Jan Shireman  
10040 Alkire Rd  
Bear Lake, MI 49614

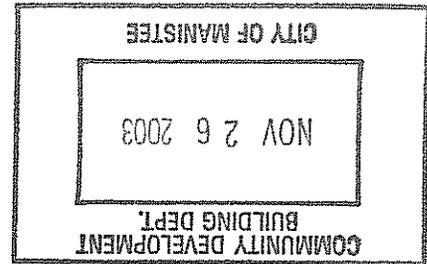
Dear Commissioners,  
Mr. Tondy has stated that his proposed "Northern Lights" project will burn "low sulfur" coal as fuel. What provisions are the City planners requiring of this project to guarantee that only "low sulfur" coal is burned?

Please send me a detailed answer regarding this question. I have enclosed a self-addressed stamped envelope for your convenience.

Sincerely,  
Jan Shireman



Sandee Ware  
9094 Alkire Road  
Bear Lake, MI 49614  
231 864 3242



Manistee Planning Commission  
70 Maple Street  
Manistee, MI 49660

Dear Commissioners:

This letter is in response to an issue in front of the board regarding the issuance of a permit to Manistee Salt works Development (Tondu Corp). I would first implore you to please slow down and study what the true implications of such a project are both economically and environmentally.

There are several questions I have that have not been addressed.

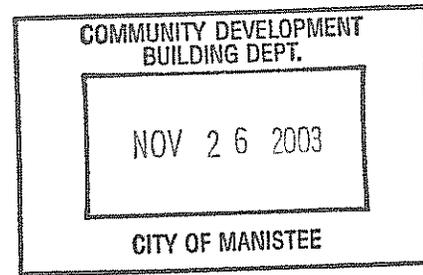
- 1) Can you please do air testing for one year to get a baseline?
- 2) What are the tax incentives to the applicant to build this plant?
- 3) In what year will the company begin paying full taxes?
- 4) What percentage of local Manistee people that will be employed to build this project compared to out of county and state?
- 5) What are the estimated amounts/location of deposition of particulate, mercury and arsenic, within the city limits?
- 6) What will be the chemical analysis of the fly ash? What heavy metals or amounts of sulfur does it contain?
- 7) How big are the trucks carrying fly ash? What volume do they hold?
- 8) Where will this ash be dumped? What route will they take?
- 9) If the ash is going to Manistees' landfill, how soon will it be full?
- 10) What are the prevailing winds for our area for each season?
- 11) Where will the emissions from the stack land with each wind direction? When it is raining?
- 12) When the sewer and water system need to be upgraded to comply with the applicant's needs, why would the City have to pay anything at all? Should this not be the responsibility of the applicant?
- 13) What company will do the 'Brownfield clean up'?
- 14) Why do you not have on file a serious study of the negative impacts of the proposed emissions?
- 15) Will you require financial guarantees by the applicant for future clean up of the site when it is no longer a viable facility? (Why trade one brownfield for another)
- 16) What amount of acid rain are you willing to live with?
- 17) How do I get answers to the above questions?

Thank you

Sandee Ware

11/25/03

City Of Manistee Planning Commission  
c/o: Denise Blakeslee, Administrative Assistant  
70 Maple Street  
Manistee, Michigan 49660



Dear Commission Members;

My reason for writing today is to provide citizen comment and to receive answers to some of the questions that are hopefully being asked by the Planning Commission of the proposed Northern Lights Project developers, on the Manistee Saltworks Development property on Main Street.

As a member of a newly formed environmental group, Citizens (For) Environmental Resource Preservation (CERP), I am deeply concerned over the lack of information available to the public in regards to the impacts this proposed project will have on the community and our environment. While the ideas and concepts portrayed by Joe Tondou in his presentation to the Planning Commission on November 20, 2003 are indeed grand in both scale and scope, I find them particularly lacking in substantive answers to the tough questions that have to be answered before your Commission can render a fully informed and educated decision on the issuance of the zoning permit. I sincerely hope that the Planning Commission will delay issuing the zoning permit until such time that all the answers to these questions are known and understood by your membership. I also hope that the answer to these questions will be disseminated to the public at large so that, they too, may make their feelings known and opinions heard on this matter.

The following questions are just a few of the many concerns that I have been asked to raise to the Planning Commission reference the Northern Lights Project:

- 1.) Has the Planning Commission determined the full economic and infrastructure impacts that this project will have on our environment and city services? Is so what kinds of studies have been conducted to support the findings? By whom?
- 2.) What are the impacts on the environment (air, land, water) and which areas of the community will be most significantly affected?
- 3.) Has there been any study to support the conclusion that the current road beds and utilities beneath them along the Old 31 truck route corridor through the city are sufficient to handle the increased traffic flows and weight loads that the Northern Lights Project will generate during all phases of its construction and operation? Who will pay for any of the required road work or utility repair as a result of this increased traffic loads over these roadways?
- 4.) Has there been any air quality studies done to determine a baseline for atmospheric pollution in our county in order to be able to make an accurate comparison study for the potential and actual affects that the Northern Lights Project will have on our air quality? If so who

Ned Atkins  
1870 Pine Ridge Dr.  
Manistee, MI 49660

Jon Rose  
Planning Commission  
70 Maple St.  
Manistee, MI 49660

Subject: Tondu

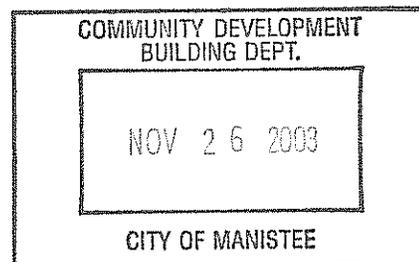
Dear Jon,

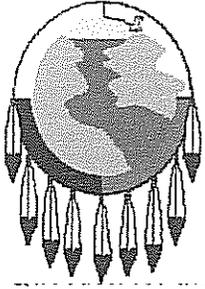
Manistee was indeed an industrial city when I first moved here in 1948. You had the Iron Works, Morton Salt, Hardy Salt, Great Lake Chemical, The Drop Forge. The Filer Mill, and Standard Lime and Stone. Now we're down to The Paper Mill, Morton Salt and Martin Marietta.

As I understand it, the two biggest tax payers are Lighthouse Landing and Harbor Village, both are upscale housing, which tells me Manistee's future lies in the direction of a retiree mecca. With so much to offer in the way lakes, streams, beaches, boating, fishing, hunting etc it seems a natural to me. With population growth comes service industry and the possibility of clean, tech industries.

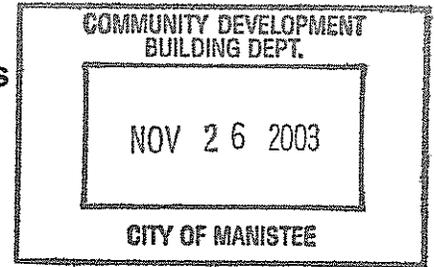
I know you well aware of this but I just want to add my vote for keeping a potential problem detracting from our unique environment.

Sincerely,  
  
Ned





**Little River Band of Ottawa Indians**  
375 River Street  
Manistee MI 49660



**City of Manistee's Planning Commission**

The Little River Band Of Ottawa Indians has entered into a Memorandum of Agreement with the City of Manistee (attached), that includes the following language:

**III. Fundamental Assumptions.** The City and the Tribe agree that this MOA is derived from the following fundamental assumptions and that the MOA shall be interpreted in accordance with them:

1. The parties share a common concern that the Manistee area has been subjected to concentrated levels of pollution from industry for over a century that has left scars that need to be cleaned up if we are to learn to live with the land.
2. The parties acknowledge that they share a common commitment, responsibility, and stewardship to improving the health and vitality of the Manistee Lake ecosystem.
3. The parties acknowledge that they share common goals for addressing environmental contamination in a manner that will help promote economic revitalization for the area.
4. In recognition of their common commitment and goals, the parties submitted mutual letters of support for their respective BDAP Grant applications to EPA; and that EPA conveyed that these letters of support were the critical factor in both parties being awarded these grants during the same funding round.
5. The parties acknowledge that the EPA has expressed their hope that the City and the Tribe might continue their cooperative relationship with their respective BDAP Projects, particularly given that both projects primarily center on a common environmental concern – contaminated property bordering Manistee Lake.

Does the Manistee Planning Commission believe that they have had adequate consultation with the Little River Band Of Ottawa Indians regarding the adverse impact on the Tribes Brownfield Demonstration Assessment Pilot?

Does the Manistee Planning Commission intend to comply with the intent of the Memorandum of Agreement with the Little River Band Of Ottawa Indians?

Has the Manistee Planning Commission conducted a comprehensive study of the short-term and long-term economic impact of economic activities on the City of Manistee's Brownfield Demonstration Assessment Pilot other than the proposed Coal Plant?

Can the Manistee Planning Commission, in the spirit of cooperation, schedule a time to meet with the Little River Band Of Ottawa Indians to discuss the issue of the Coal Plant proposal and before a decision is made regarding the Special Use permit?

Submitted Respectively,

Lee A. Sprague  
Ogema  
Little River Band Of Ottawa Indians

**Memorandum of Agreement**  
Between the  
City of Manistee, Michigan  
and the  
Little River Band of Ottawa Indians

This Memorandum of Agreement (MOA) is entered into between the City of Manistee (City), a Michigan Municipal Corporation, and the Little River Band of Ottawa Indians (Tribe), a sovereign and federally-recognized Tribal government.

I. **Purpose.** The purpose of this historic and unique document is to define a process whereby the City and the Tribe may mutually agree and collaborate in the selection of one or more qualified environmental consultant firm(s) to address the project specific objectives cited in their respective Brownfield Assessment Demonstration Pilot Projects. Collaborating in this manner may lead to a more comprehensive and coordinated approach to brownfield redevelopment in and around the Manistee community, whereby the City and the Tribe may more effectively address matters of common environmental concern.

II. **Parties.** The following entities may ratify this MOA in accordance with their respective applicable laws and procedures, and, upon proper ratification, shall be deemed a party to this MOA:

A. **City of Manistee**

The City of Manistee was incorporated in 1869. The City is an historic, rural, coastal community located between Lake Michigan and Manistee Lake in the western Lower Peninsula of Michigan. The Manistee River runs through the City providing an excellent deepwater harbor for commerce and recreation. The population in 2000 was 6,586.

The last five years have presented a crucial crossroads to the City of Manistee and it has forged ahead to establish a renewed economic base designed for long-term growth. This growth recognizes the need for balance between industry and Manistee as a premier community of destination.

In October 2002, the U.S. Environmental Protection Agency (EPA) awarded the City a Brownfield Demonstration Assessment Pilot (BDAP) Grant totaling \$200,000 with project duration of two years.

**Goal:** The goal of the City's BDAP Project is to employ a redevelopment strategy that provides for planned reuse of blighted and abandoned properties in a manner that will yield sustainable economic growth and development.

**Objectives:** The City's BDAP Project has the following objectives:

1. To identify, document, and analyze possible contamination at six properties within the City of Manistee:
  - a. Sites #1, #2, #3 in the Manistee Industrial Park
  - b. Manistee Waste Water Treatment Plant
  - c. Manistee Foundry (Iron Works Property)
  - d. Historic Boats Works (on Lake Manistee)
2. To develop clean-up plans for any contamination identified on the sites.
3. To develop preliminary plans for reuse of the properties.
4. To increase public stakeholder understanding and involvement in brownfield redevelopment, by consulting with the general public, civic groups, and other partners.

#### **B. Little River Band of Ottawa Indians**

The Tribe's status as a sovereign and Treaty-making power is confirmed in a myriad of treaties, from treaties with the initial colonial powers on this land, to various treaties with the United States, the most recent of which were the 1836 Treaty of Washington and the 1855 Treaty of Detroit. The federal government reaffirmed its government-to-government relationship with the Tribe in P.L. 103-324, enacted in 1994. The Tribe's governmental offices are headquartered in Manistee, Michigan. The Tribe's enrolled population is currently about 2,800.

Since 1994, the Tribe has worked to implement a strategy for rebuilding a sustainable Tribal community in the Manistee County area. Through the success of their economic development efforts, the Tribe has become Manistee County's largest employer. The expanded employment opportunities the Tribe is bringing to northwest Michigan are benefiting the local and regional economy, which has led to recent growth in the local population, creation of new businesses, expansion of existing ones, and a significant improvement in the area's unemployment rate.

The Tribe has recognized that economic self-sufficiency and cultural preservation are the keys to their long-term survival. As Tribal business ventures began to produce income, funds were allocated to purchase lands to address that commitment. In recent years, the Tribe has acquired approximately 2,600 acres within Manistee and Mason Counties, including lands for economic development, housing, cultural, and other governmental purposes.

In October 2002, the EPA awarded the Tribe a Brownfield Demonstration Assessment Pilot (BDAP) Grant totaling \$250,000 with project duration of two years.

**Goal:** The goal of the Tribe's BDAP Project is to promote community revitalization by addressing potential health risks on Tribal lands in a manner that will restore economic vitality to areas where brownfields exist.

**Objectives:** The Tribe's BDAP Project has the following objectives:

1. To identify, document, and analyze possible contamination at two Tribal properties: the East Lake site and Pow Wow Grounds;
2. To develop remedial plans for any contamination identified on the sites;
3. To develop preliminary plans for reuse of the properties;
4. To increase tribal, state, and public stakeholder understanding and involvement in brownfield redevelopment, by consulting with the tribal membership, other local governments, and public/private sector sources of redevelopment financing.

**III. Fundamental Assumptions.** The City and the Tribe agree that this MOA is derived from the following fundamental assumptions and that the MOA shall be interpreted in accordance with them:

1. The parties share a common concern that the Manistee area has been subjected to concentrated levels of pollution from industry for over a century that has left scars that need to be cleaned up if we are to learn to live with the land.
2. The parties acknowledge that they share a common commitment, responsibility, and stewardship to improving the health and vitality of the Manistee Lake ecosystem.
3. The parties acknowledge that they share common goals for addressing environmental contamination in a manner that will help promote economic revitalization for the area.
4. In recognition of their common commitment and goals, the parties submitted mutual letters of support for their respective BDAP Grant applications to EPA; and that EPA conveyed that these letters of support were the critical factor in both parties being awarded these grants during the same funding round.
5. The parties acknowledge that the EPA has expressed their hope that the City and the Tribe might continue their cooperative relationship with their respective BDAP Projects, particularly given that both projects primarily center on a common environmental concern – contaminated property bordering Manistee Lake.
6. The parties acknowledge that they intend to utilize the limited funds afforded both the parties in their respective BDAP Grants in a manner that will yield maximum impact and effectiveness.
7. The parties acknowledge that the Work Plans defined in their respective BDAP Projects each call for contracting with one or more qualified environmental consulting firm(s) to:
  - a. Coordinate the project and grant administration functions,
  - b. Perform the subcontracted tasks necessary to address the parties' respective project specific Objectives cited above.
8. The parties acknowledge their intention to collaborate in the selection of one or more contractor(s) who possess considerable experience in environmental investigations and brownfield redevelopment.

**IV. Operating Principles.** The City and the Tribe agree that this MOA is based upon the following operating principles and that the MOA shall be interpreted in accordance with them:

1. Both parties shall select an equal number of representatives (up to three each) to serve as part of a joint negotiation team (JNT).

2. The JNT shall determine when and how often they meet. The frequency of meetings shall be motivated by timelines that allow for each parties respective BDAP Project Work Plans to be substantially conducted and completed in 2003.
3. The JNT may collaborate to develop and adopt a Request for Qualifications (RFQ) for each party. Every attempt shall be made by the JNT to arrange for the concurrent publication of the parties' respective RFQ's and with the same sources of publication.
4. If the same prospective contractors bid on the RFQ's published by both parties, then the JNT shall collaborate to develop and adopt a process for collectively interviewing the RFQ bidders.
5. If the scenario outlined on IV. 4 is employed, then the JNT may collaborate to develop and adopt a process for collectively negotiating with and selecting a sole contractor who will be responsible for serving as project coordinator for each parties' BDAP Grants, subject to the terms and conditions relative to each parties approved BDAP Work Plans with the EPA, and subject to the ratification of each parties governing Councils.
6. Neither party shall be bound to the selection of the same contractor.
7. If the JNT succeeds in selecting a sole contractor for the function described in IV. 4-5, then the process outlined in IV. 1 through IV. 6 may be similarly applied in the solicitation, interview, and selection of subcontractors to perform the tasks defined in each party's approved work plans with the EPA.
8. The parties shall strive to reach consensus in all decisions, actions, and processes contemplated by the MOA.
9. Unless otherwise specifically provided in this MOA, the parties shall attempt to resolve any dispute arising under the MOA at the lowest possible level between properly authorized representatives of the parties who have the authority to resolve the dispute in question.

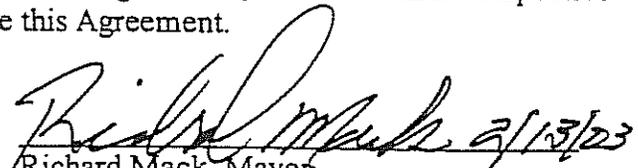
V. **Effective Date of MOA.** The MOA shall take effect on the date when Manistee City Council and the Little River Band of Ottawa Indians Tribal Council have properly ratified it in accordance with their respective governmental procedures.

VI. **Termination of MOA.** The MOA may be terminated by either party, for any reason, upon 30 days notice to the other party.

## Certification

The following elected officials who execute this Memorandum of Agreement, do certify that their respective governing councils have ratified this Agreement, and that their respective governing councils have authorized them to execute this Agreement.

 2/12/03  
 Jonnie J. Sam II, Ogéma  
 Little River Band of Ottawa Indians

 2/13/03  
 Richard Mack, Mayor  
 City of Manistee

**Items forwarded to the  
City of Manistee  
Planning Commission  
at their meeting of 12/4/03**

Handout for Public:

Answers to Questions asked during the Public Hearing November 20, 2003

Prepared by Jon Rose, Community Development Director

Response to questions from the Public Hearing compiled by Jay Kilpatrick, 11/20/03

Prepared by Manistee Saltworks Development Corporation

Additional Information for Planning Commission Members

Memo from Mitch Deisch, City Manager

Letter from Richard Mack, Mayor to Lee Sprague, Ogema, Little River Band of Ottawa Indians

Letter from Todd Harland, General Manager, Manistee County Landfill

Information submitted by Tondu:

Coal Fired Power Plants Truth Sheet

Response to Letters/Memos from Gavlinski et al, Dumanois, Albee, Yunis, and Skiera,

Memo from Meagan Kempf/Jim Tondu - Response to additional questions

Letters:

Dan Hornkohl, 1553 Lakeshore Road, Manistee

David R. Adams, Northwest Michigan Council of Governments, P.O. Box 506, Traverse City

John Caudell, NTH Consultants LTD

Dorothy Kerr, 486 Bryant Avenue, Manistee

## **Answers to Questions asked during the Public Hearing November 20, 2003**

1. How many wind generators would provide the same power output as the proposed coal fired plant?  
**See response from Manistee Saltworks Development Corporation**
2. What will be the projected increase in the temperature of Manistee Lake resulting from the discharge of treated process water?  
**See response from Manistee Saltworks Development Corporation**
3. Has the developer requested any tax abatements?  
**The developer has not requested any tax abatements at this time. It is likely that some or all of the plant will be owned by Tax Exempt Municipalities. The City intends to negotiate a community service fee or payment in lieu of taxes.**
4. What will be the effect of 30 truckloads per day of additional solid waste on the local landfill?  
**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.**
5. How will air emissions and water discharge impact Manistee Lake?  
**See response from Manistee Saltworks Development Corporation**
6. What will happen if there is a structural or mechanical failure at the plant?  
**See response from Manistee Saltworks Development Corporation**
7. What quantities of air pollution will be emitted?  
**See response from Manistee Saltworks Development Corporation**
8. What steps will be taken to prevent migration of existing on-site pollution to the lake or adjoining properties?  
**See response from Manistee Saltworks Development Corporation**
9. What will be the impact of thermal pollution on Manistee Lake?  
**See response from Manistee Saltworks Development Corporation**
10. If the emissions from the stack is so clean, why must the stack be so tall?  
**See response from Manistee Saltworks Development Corporation**

11. Will there be air monitoring stations around the site?  
**See response from Manistee Saltworks Development Corporation**
12. How will the 425 megawatts from the plant be transmitted?  
**See response from Manistee Saltworks Development Corporation**
13. How much tax revenue will the plant generate?  
**To the degree the plant is owned in part or all by Tax Exempt Municipalities the facility will be tax exempt. The City intends to negotiate a community service fee or payment in lieu of taxes.**
14. How many jobs will be provided for existing Manistee residents?  
**See response from Manistee Saltworks Development Corporation**

*Planning Commission Member Bob Davis asked that a few more questions be added to the list as follows:*

15. What are the safety implications of the proximity of the railroad lines carrying chemicals to the plant to the coal piles?  
**See response from Manistee Saltworks Development Corporation**
16. Of current bridge openings, how many are freighters versus sailboats and what will be the percentage increase in freighter openings?  
**In the most recent complete season (2002) there were 316 freighter openings. The proposed 260 additional freighters would increase this number by 82%. The average opening time for all vessels in 2002 was 7.47 minutes.**
17. What will be the quantities of particulate emissions (including mercury) from the facility and what are the radiation impacts?  
**See response from Manistee Saltworks Development Corporation**

Prepared by:  
Jon Rose  
Community Development Director  
12/04/03

**Response to questions from the Public Hearing compiled by Jay Kilpatrick, 11/20/03**

During the public hearing held November 20<sup>th</sup>, citizens voiced several concerns and questions. Jay Kilpatrick, of Williams and Works, compiled several questions. The following attempts to address those questions.

1. The Northern Lights Plant is a 425 megawatt facility, producing 3,351 gigawatt hours of electricity per year running at 90% capacity. Wind turbines vary in size and generating capacity, but the industry average is each windmill generates 1 megawatt of electricity. In Michigan, the wind blows an average of 25% of the time. In theory, it would take 1,530 windmills to generate the same power as the Northern Lights Plant. This is equivalent to dedicating as much as 76,500 acres of land, according to data available from the American Wind Energy Association. In practice, the entire installed windmill capacity in the State of California produces less electricity annually than the Northern Lights Plant will.
2. It is unknown at this time the exact temperature effect the Northern Lights Plant will have on Lake Manistee, but this will be governed under the water permit.
3. The Northern Lights Plant will bring additional income to the city and county, although the final amount is unknown.
4. The Shoreline Landfill has adequate capacity to handle the ash from the Northern Lights Plant and from current sources.
5. All issues regarding airborne emissions, including composition, quantity, dispersion, concentration, and potential health impacts are being studied and regulated by the Federal Environmental Protection Agency ("EPA") and the Michigan Department of Environmental Quality ("MDEQ"). Manistee Salt Works Development Company submitted an Air Permit Application for the Northern Lights Plant to the MDEQ on September 10, 2003. The MDEQ, with oversight by the EPA, will spend several months evaluating the air emissions from the Northern Lights Plant and determine if the emission levels will comply with state and federal standards. The original permit application contains a demonstration that the project will meet all of these standards. They will then issue their findings to the public and conduct a public hearing in Manistee to listen to and answer the concerns of the community.
6. The facility will be required by the Air Permit to develop and maintain a Preventative Maintenance Plan to minimize the opportunity for failure of the emission control systems. In the unlikely event a failure or malfunction occurs, the equipment will be repaired as quickly as possible, and the event will be reported to the MDEQ.
7. All issues regarding emissions, including composition, quantity, dispersion, concentration, and potential health impacts are being studied and regulated by the EPA and MDEQ. Manistee Salt Works Development Company submitted an Air Permit Application to the MDEQ on September 10, 2003. The Air Permit filed with the MDEQ is requesting maximum allowable emissions for the following:

<u>Pollutant</u>	<u>Tons/year</u>
Particulate Matter	737
NO <sub>x</sub>	2,693
SO <sub>2</sub>	4,444
CO	2,684

These emission estimates are maximized by assuming the plant could operate at full load for every hour of the year. A detailed dispersion modeling study contained in the permit application demonstrates that all of these emission levels will easily comply with the Federal ambient air standards.

8. Assuming this question relates to existing, on-site, General Chemical pollution, then the Northern Lights Plant construction will begin with a full site remediation.
9. It is unknown at this time the exact temperature effect the Northern Lights Plant will have on Lake Manistee, but this will be governed under the water permit.
10. The stack height is determined by emissions modeling as part of the Air Permit requirements.
11. The facility has submitted a demonstration within the Air Permit application that addresses this issue. The project's predicted ambient impacts are less than federal requirements to perform pre-or post-construction ambient monitoring.
12. All electricity generated by the Northern Lights Plant will be transmitted via a 1.8 mile transmission line from the site to a 345kv main line.
13. The Northern Lights Plant will bring additional income to the city and county, although the final amount is unknown.
14. It is unknown how many jobs will be filled by Manistee residents. However, the projected annual budget for the Northern Lights Plant calls for approximately 60 jobs and \$4 million in payroll and \$11 million in third party services. These services include trucking, landfill payments, suppliers, contract maintenance workers, equipment purchases, and general plant expenses, most of which will stay in Manistee. Our on-site labor budget is over \$100 million. Those wages and benefits will be paid over three years to the workers building the plant.

**Response to questions by Planning Commission member Bob Davis**

After the Public Meeting on November 20<sup>th</sup>, Planning Commission member Bob Davis added three questions to the compiled list of public questions. The following attempts to address those questions.

1. There are no safety implications regarding the railroad carrying chemicals to the Northern Lights Plant because the railroad will not be carrying chemicals to the Northern Lights Plant.
2. Whether or not there will be an increase from current freighter traffic is highly dependent on the usage rate in 2008. Boat traffic has varied greatly over the last seven years. The following chart depicts the number of freighters versus sailboats from January, 1997 thru October, 2003.

Year	Total Boats	Sailboats	% Sailboats	Freighters	% Freighters
1997	376	280	74%	96	26%
1998	431	245	57%	186	43%
1999	365	218	60%	147	40%
2000	245	130	53%	113	46%
2001	481	165	34%	316	66%
2002	554	193	35%	361	65%
2003*	395	151	38%	244	62%

\* Data includes only January thru October 2003

3. The estimated annual emission of PM<sub>10</sub> from all on site sources is 737 tons per year. This annual rate assumes full year/full load operation and has been demonstrated via the dispersion modeling study to result in acceptable ambient impacts.

The Federal Environmental Protection Agency (“EPA”) and Michigan Department of Environmental Quality (“MDEQ”) have recently been monitoring mercury levels in various locations in Michigan. Preliminary results indicate much higher levels of ambient mercury in large, metropolitan areas such as Detroit and Grand Rapids. The monitoring sites located closest to Manistee yield much lower concentrations of ambient mercury. More research must be completed for a better explanation, but preliminary findings indicate that higher vehicular traffic levels may contribute significantly to elevated mercury background levels.

MEMO TO: Jon Rose, Community Development Officer  
FROM: Mitch Deisch, City Manager    
DATE: December 1, 2003  
SUBJECT: Northern Lights Project Special Use Permit City Manager's Office

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Like you, I have read each of the letters submitted by residents in the City, residents around the greater Manistee Lake area, and residents in the out County area that have been received on the Northern Lights Project. It is nice to see citizens engaged on this issue, whether in support or in opposition.

Several points are made over and over, which center around specific conditions for approving the Special Use Permit. Some of my initial thoughts would be as follows:

1. Require a fund to be established which requires annual payments that will be used to clean up and for demolition after the plant is no longer operational. We should also consider Brownfield implications. This would be an exit strategy that would provide the ground ready for future redevelopment whether 30 to 40, or to 50 years in the future.
2. Require that no Great Lakes freighters discharge ballast water in the Manistee River Channel or in Manistee Lake.
3. The Northern Lights Project will pay the bridge opening fee to the City of Manistee.
4. The Northern Lights Project will agree to research and commit to if possible the placement of a peregrine falcon nesting box on the smoke stack.
5. Guarantee that they will burn only low sulfur coal.
6. Guarantee noise levels are at or below the 65 decibel level. Testing should be taken weekly with results sent monthly to the City. Any complaints on noise issues will be researched by the Northern Lights Project and the City of Manistee. The Northern Lights Project will purchase decibel testing equipment for the City of Manistee.

Several questions that have been asked and that I have not seen or heard responded to, are as follows:

1. Require a letter from Shoreline Waste discussing the fly-ash and that the landfill is permitted to accept it. Require the landfill permit specially allowing the fly-ash to be submitted with this letter. The letter should also state the life expectancy of this facility.
2. Require the Northern Lights Project to show on a map where exactly the transmission lines will go. I realize where the lines will be going across, but they should show this on a map to be presented to the public.
3. Do we have any baseline air quality results for Manistee County? It's possible that this information is included in the Northern Lights air quality permit application. But is there anything that could be made available to the public in an easy discernable format?

Jon, these are but a few of the conditions that came to mind over last weekend. The Special Use Permit should be very thoroughly researched as to which conditions should be placed on the Northern Lights Project if positive approval is to be granted.

MDD:cl

cc. Manistee City Council  
Manistee City Planning Commission



70 Maple Street • P.O. Box 358 • Manistee, Michigan 49660

231-723-2558  
FAX 231-723-1546

December 3, 2003

Mr. Lee Sprague, Ogema  
Little River Band of Ottawa Indians  
375 River Street  
Manistee, Michigan 49660

Dear Ogema Sprague:

This letter is in response to your letter to the Manistee City Planning Commission received on November 26, 2003. Normally I would not respond to this letter, but under these circumstances I thought it important to address several of your comments. Your letter gave the impression that the City of Manistee, specifically the Planning Commission was not honoring the Memorandum of Agreement (MOA). Since you were not directly involved in the MOA, I feel it is important to stress that the City Council approved this document, not the Planning Commission.

More than anything, the MOA was a document that committed the Tribe and the City to work cooperatively toward the betterment of the community and environment that we both share. In no way has the City of Manistee violated this MOA.

The Manistee City Planning Commission is reviewing a Special Use Permit application for the possible siting of a coal burning power plant at the former General Chemical site. Unlike the vast majority of vocal opponents, the City of Manistee cannot review this project based upon one or two specific issues. Rather, this application has to be reviewed as a whole. Yes, the environment is vitally important to the area, but so are jobs, economy, tourism, etc. Each has to be looked at to evaluate the entire project.

Clearly, the City of Manistee disagrees with the Tribe's belief that our area should move entirely toward tourism and resort destinations. It is our belief that tourism is an integral part of our economy's stability that also includes commercial, industrial and quality affordable housing. If one of these parts falters, the stability of Manistee's economy falters. We fully understand that the Tribe's economical interest revolves around tourism and resort destinations. The City does not have this same luxury. Our need is to diversify as much as possible in order to survive these difficult financial times in the State of Michigan.

As to our Pilot Grant, the City's final results have not been received. Thus, a comprehensive review of the short term and long term economic impacts associated with the Brownfield Grant have not been completed. What we can tell you is that the future land use map and a the recently adopted Master Plan identify the General Chemical site as industrial. Planning Commissioners gave a tremendous amount of effort in discussing this very issue and determined that industry was the best fit for this area.

If the Tribe has completed it's Brownfield Pilot Grant, this information has not been shared with the City, which makes it impossible for the City to review economic impacts. Adequate consultation goes two ways. Mr. Mark Dougher has regular meetings with City Staff. At any of these meetings the perceived or possibly real adverse impacts could have been shared with the City.

Planning Commission meeting agendas always allow for public comments. The Tribe is welcome and encouraged to address the Planning Commission at this time.

Please be assured that the Planning Commission and City Council have received all of the information supplied by the Tribe and other residents. The goal of the Planning Commission is to make an educated and informed decision, as is the same goal for the City Council. We look forward to continuing to work with the Little River Band of Ottawa Indians on other mutually beneficial projects. If you have any specific questions, please contact City Manager Mitch Deisch at 231-723-2558.

Sincerely,

CITY OF MANISTEE

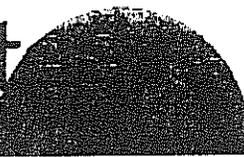
A handwritten signature in black ink, appearing to read "Richard Mack", written over the typed name.

Richard Mack Mayor

RM:cl

cc. Manistee City Council  
Manistee Planning Commission

# Manistee County Landfill



December 4, 2003

Roger Yoder- Chairman  
City of Manistee Planning Commission  
70 Maple Street  
Manistee, Michigan 49660

Dear Mr. Yoder

The Manistee County Landfill (MCL) is located at 3890 Camp Rd. in Stronach Township, Manistee County, and is a type II facility licensed by the MDEQ. The landfill currently accepts material from the Tondy Energy Systems and has accepted material from that site regularly since 1998. The proposed Northern Lights Expansion would increase the volume of ash disposed of at the site but the characteristics of the ash would not impact the operation any differently than the material disposed of at the site presently.

The site has recently received an expansion and has the capacity to adequately provide waste disposal services to its current customer base along with accommodating the proposed Northern Lights Expansion waste volumes within the current permitted area. The facility owns land which has the potential to be expanded upon for further waste disposal needs and with the potential expansion could provide waste disposal services to its current customer base along with the additional volume from the proposed Northern Lights Expansion for a period in excess of 60 years.

The MCL accepts, residential, commercial, and industrial wastes, and does not accept hazardous wastes. All wastes accepted at the facility are subject to a screening process, which includes sampling and analysis of the proposed waste stream. A qualified third party laboratory firm completes this process.

The MCL is engineered and designed to protect the environment by forming an impermeable layer of synthetic materials, which captures all liquids and precipitation that come in contact with the waste disposal columns. These liquids, known as leachate, are collected and transported to an approved treatment facility. The MCL disposes of waste material in a fill sequence approved by the MDEQ. This fill sequence allows the landfill to cap the waste with synthetic material, which then reduces the amount of leachate needing treatment.

The facility also has a secondary leachate collection system, which is pumped weekly to ensure the primary leachate collection system is intact and is operating as designed. Both

# Manistee County Landfill



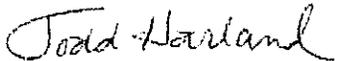
the primary and secondary leachate collection systems are sampled and analyzed quarterly and submitted to the MDEQ per the MCL operating license.

Another safeguard to the environment and the groundwater at the site are monitoring wells, which are sampled up gradient to determine water quality. Monitoring wells down gradient are sampled and compared to up gradient wells to ensure the water quality is consistent with the up gradient wells. This data is collected by a third party firm and is submitted to the MDEQ for review quarterly through out the year.

As you can see protecting the environment and the water quality at the site and the surrounding area is at the forefront of the daily operation of the MCL and is closely monitored by qualified firms and the MDEQ. This allows for an environmentally safe waste disposal alternative for citizens, business and industry located in Manistee and surrounding counties.

If you or any interested parties would like further information regarding the MCL operation, please contact me at 1-800-968-4143 for a tour of our facility.

Regards



Todd Harland  
General Manager

# COAL FIRED POWER PLANTS TRUTH SHEET

At the November 6, 2003 Planning Commission Meeting, Steve Klein gave the Commission a five page handout entitled "Coal Fired Power Plants Fact Sheet." While the document did, in fact, contain certain facts, its purpose was to persuade the City to prevent the permitting and/or construction of the Northern Lights Plant proposed for Manistee.

In attempting to persuade the City, these statements were often untrue, misrepresented, misquoted, and occasionally unsubstantiated.

Tondu Corporation welcomes public comment. It gives us an opportunity to inform the citizens of the benefits of the Northern Lights Plant. In an effort to educate both Mr. Klein and other citizens with his concerns, Tondu Corporation has prepared the following response to his original document, listing each claim and source, and responding to it using verified data.

- Claims that are questionable, misleading, or unsubstantiated are colored in blue.
- False statements are shown in red.
- True statements are shown in green.

## SPECIAL NOTE ON "DEATH, DISEASE & DIRTY POWER"

Mr. Klein frequently quotes from an article titled "Death, Disease & Dirty Power." The citation Mr. Klein uses implies that the report was authored by John Spengler at the Harvard School of Public Health. This is false. Dr. Spengler authored the report's foreword but the report was written by Conrad Schneider of the Clean Air Task Force. The report was not endorsed, conducted, or authored by the Harvard School of Public Health. Instead, it was published by the Clean Air Task Force, a small but vocal environmental group in Boston. The original paper can be found at [http://www.catf.us/publications/reports/Death Disease Dirty Power.pdf](http://www.catf.us/publications/reports/Death_Disease_Dirty_Power.pdf)

The Clean Air Task Force blurs the lines between "early death" and "killing people." The paper attempts to link air pollution to a shorter lifespan. The unscientific conclusion is that air pollution takes weeks, months, and maybe years off of your life. This is weak science that attempts to conclude the following, for example: that a 91-year old man could have lived to be 92 if there had been less air pollution. There are too many unknown factors to make these kinds of specific conclusions. The Clean Air Task Force further weakens the logic by allocating a certain percentage of the air pollution to coal-fired power plants, then linking a certain amount of "lost life" to the power plant air pollution allocation. The Clean Air Task Force then makes statements about coal plants "killing people." Nothing could be further from the truth.

Mr. Klein also fails to share the action recommended by the Clean Air Task Force: "the oldest, dirtiest, coal-burning power plants...must be made to comply with modern emissions control standards." Tondu Corporation agrees with this conclusion. The Northern Lights Plant will comply with the ever tightening emission standards for new coal power plants, making Northern Lights one of the cleanest coal-fired power facilities in the U.S. For example, some of the older eastern plants emit as much as 25 times the SO<sub>2</sub> that the Northern Lights Plant will emit. This is because the Northern Lights Plant will be burning low sulfur coal and will be installing scrubbers. In fact, the Northern Lights Plant will spend approximately \$200 million on emissions control equipment.

1. Coal is the number one source of total US electricity production (54%). (Energy Information Administration, *Annual Energy Outlook*, 1998).

The combustion of coal is the number one source of electricity in the United States, but coal's contribution has changed in recent years. In the last decade, hundreds of gas-fired plants have been built, and very few coal plants. Already, coal-fired power plants are down to 37.0% of capacity. However, due to the instability in the gas markets, and rising gas prices, many gas-fired power plants sit idle, making coal-fired power 50.9% of generation in 2001. Source: *Energy Information Administration, Electric Power Annual 2001*, [http://www.eia.doe.gov/cneaf/electricity/epa/epa\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html)

2. Out of the entire US electric industry, coal-fired power plants contribute 96% of sulfur dioxide emissions (SO<sub>2</sub>), 93% of nitrogen oxide emissions (NO<sub>x</sub>), 88% of carbon dioxide emission (CO<sub>2</sub>) and 99% of mercury emissions. (Clean the Air, "Power Plant Air Pollution Problem," Fact Sheet)

Mr. Klein does not include a date with the citation, but as the industry has changed, these figures have come down. In 2001, coal-fired power plants contributed 94.5% of sulfur dioxide emissions, 90.1% of nitrogen oxide emissions, and 85.6% of carbon dioxide emissions. Mercury emissions are not included as part of the EPA's emissions scorecard because these emissions are not currently regulated. Source: *EPA Emissions Scorecard 2001*, <http://www.epa.gov/airmarkets/emissions/score01/index.html>

3. Coal-fired power plants are the single largest source of mercury pollution in the US. (U.S. EPA, Office of Water, "Air Pollution and Water Quality, Atmospheric Deposition Initiative: Where is the Air Pollution Coming From?")

This quote was accurately pulled from the EPA paper, but is misleading. The industry acknowledges that coal-fired power plants are the largest man-made source of elemental mercury emissions, at 33% of all man-made emissions. However, according to the EPA's *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units*, several different studies "indicate that between 40 and 75 percent of the current atmospheric mercury concentrations are the result of anthropogenic [man-made] releases." This would mean that it is possible for nature to emit between 25 and 60 percent of mercury emissions, which, on average (42.5%), would make natural emissions greater than emissions from coal-fired power.

In addition, while coal-fired power plants are implicated, power plants in the United States are not the primary source of mercury deposition. See number 5, below. Source: *EPA, Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units*, <http://www.epa.gov/ttn/oarpg/t3/reports/eurtc1.pdf>

4. A single 100 megawatt (MW) coal-fired power plant emits approximately 25 pounds of mercury a year. (National Wildlife Federation, "Clean The Rain, Clean the Lakes: Mercury in Rain is Polluting the Great Lakes, September, 1999).

The National Wildlife Federation opinion piece cited does not contain a source for this data. It is entirely speculative, because every power plant has different emissions based on design, age, technology, size, and fuel.

5. 50% of the mercury emitted from coal-fired power plants can travel up to 600 miles from the power plant. (Center for Clean Air Policy, *Power Plant Emissions and Water Quality*, October 1997, Part 1)

This erroneously understates the ability of elemental mercury to travel when airborne. According to the United Nations' *Global Mercury Assessment*, "The atmospheric residence time of elemental mercury is in the range of months to roughly one year. This makes transport on a hemispherical scale possible and emissions in any continent can thus contribute to the deposition in other continents. For example, according to the modeling of the inter-continental mercury transport...up to 50 percent of anthropogenic [man-made] mercury deposited to North America is from external sources."

And the EPA's *Study of Hazardous Air Pollutant Emissions* states, "U.S. anthropogenic [man-made] mercury emissions are estimated to account for roughly 3 percent of the global total, and U.S. utilities are estimated to account for roughly 1 percent of total global emissions." Source: *United Nations' "Global Mercury Assessment"*, <http://www.unep.org/GoverningBodies/GC22/Document/UNEP-GC22-INF3.pdf> and U.S. EPA "Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units -- Final Report to Congress Volume 1". <http://www.epa.gov/ttn/oarpg/t3/reports/eurtc1.pdf>

6. In 1994, mercury emissions by coal plants in the US reached 51 tons. (U.S. EPA "Electric Utility Steam Generating Units Hazardous Air Pollutant Emission Study, Feb. 24, 1998).

This figure is an accurate quotation from the source, however, the authors do not share that this figure was an estimate on the part of the EPA, as mercury monitoring does not exist for all point sources.

7. According to NWF, as little as 1/70th of a teaspoon of mercury can contaminate a 25 acre lake to the point where fish are unsafe to eat. (National Wildlife Federation, "Clean the Rain, Clean the Lakes, Mercury in Rain is Polluting the Great Lakes"; September 1999)

This quote has circulated in numerous press releases and internet articles since the National Wildlife Federation stated it in 1999. It is a classic case of misrepresentation and improper citation. And in this case, Mr. Klein has added to the cycle of misrepresentation.

The NWF "Clean the Rain" article stated "it could take the addition of only .002 pounds of mercury -- 1/70th of a teaspoon - to contaminate a 25 acre lake to the point that the fish in that lake are unsafe to eat." The article credits this statistic to a 1991 article by Janet Raloff in Science News. The quotation by the NWF was incorrect on three counts.

Raloff, in the 1991 article, wrote "0.3 gram of mercury a year to a 25-acre lake...is more than enough to account for all the mercury that we're seeing in fish and other biota." The NWF's first error is that 0.3 grams translates into 0.00066 pounds, not 0.002 pounds. Second, 0.3 grams translates into 1/16<sup>th</sup> of a teaspoon, not 1/70<sup>th</sup> of a teaspoon. Third, and most importantly, the Raloff quote states that this level would "account for all the mercury," and does not claim whether or not those levels would make the fish unsafe to eat. In fact, the point of Raloff's article is that the pH levels of lakes are the dominant reason why some lakes transform elemental mercury into methylmercury and some do not. Source: Raloff, Janet, "Mercurial Risks from Acid's Reign," *Science News*, 1999, Vol 139, page 152.

8. Methylmercury contamination in food sources as low as one part per million has been shown to cause death in some animals. (Fact Sheet, Great Waters Program, National Wildlife Federation).

The NWF paper cited fails to quote a source for their data, nor does it detail what animals were used and under what circumstances the mercury was administered. However, the implication in this statement is that very low amounts of methylmercury could be life-threatening to humans. This is not entirely true. The National Academy of Sciences determined in 1999 that consumption of 0.1 micrograms of methylmercury per kilogram of body weight per day "is the level at which most people could be exposed to methylmercury without the risk of health problems." Source: U.S. EPA, [http://www.epa.gov/ttn/oarpgt3/fact\\_sheets/fs\\_util.pdf](http://www.epa.gov/ttn/oarpgt3/fact_sheets/fs_util.pdf).

9. In 1997, pollution controls from power plants to reduce acid rain cost approximately \$100 per ton. ("Heavy Breathing", National Journal, January 4, 1997).

This article could not be located, and therefore we cannot comment on the accuracy of the statement. However, this "fact" has no bearing on the construction of the Northern Lights Plant, as the Northern Lights Plant will install the best available control technologies available for the limitation of air emissions.

10. Every year, nearly 600 coal and oil-fired power plants produce over 100 million tons of sludge waste. (Citizens Coal Council, Hoosier Environmental Council, Clean Air Task Force, "Laid to Waste: The Dirty Secret of Combustion Waste from America's Power Plants," February 2000, p. 1-3)

The original article cited contains no backup information or scientific studies to prove this claim, but it is possible the paper was referring to the wet scrubber sludge generated by some power plants. This sludge is often sold and recycled into other useful products.

11. Forty percent of the coals waste landfills and 80 percent of the coal waste surface impoundments do not have liners and less than half the landfills and only 1 percent of impoundment have groundwater monitors. ("Fast Facts on Air, 'A Sourcebook for the Clean Air Advocate, Clean Air Network, 2000).

The Clean Air Network does not have an accessible website ([www.cleanair.net](http://www.cleanair.net) is password protected), and the publication quoted is not available to the public. It is likely that Mr. Klein took this from other publications without ever reading the original publication from the Clean Air Network. Even if this was a fact, it is immaterial to the Northern Lights Project, as the coal pile will be fully impounded and lined to capture all runoff.

12. Most of the coal used in the United States today is burned by aging power plants for the production of electricity. Coal-burning power plants outstrip all other polluters as the largest source of sulfate air pollution in the U.S. (U-S. EPA, 'Air Quality Criteria for Particulate Matter' 1995).

This true statement still contains the unnecessary comment of "aging power plants" in an attempt to describe them as outdated. Everything is "aging" in this world. Even a brand new power plant is an "aging power plant."

13. Coal-burning power plants account for nearly 90 percent of the SO<sub>2</sub> emitted by all power plants. (U.S. EPA, Acid Rain Program, "National Summary Percent Contribution by Unit Fuel Type")

This fact was already clarified in Number 2, above.

14. In 1998, power plants were responsible for 67 percent-a full two thirds-of the annual total sulfur dioxide (SO<sub>2</sub>) and over a quarter of the nitrogen oxides (NO<sub>x</sub>) emitted in the U.S. (V.S. EPA, "National Air Quality and Emissions Trends Report; p. 125, March 2000)

Coal fired power plants accounted for 64.2% of nationwide annual SO<sub>2</sub> emissions. This figure is from the March 2000 Air Trends report, but 2002 data will be updated next month that shows: "SO<sub>2</sub> emissions decreased approximately 33 percent from 1983 to 2002." Source: EPA, 2002 Air Quality and Emission Trends Report, <http://www.epa.gov/airtrends/highlights.html>.

15. Numerous studies over the years have linked fine particles to a variety of health damages, from increased asthma attacks to hospital visits to death. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants-, Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. This is another example of erroneously linking health complications from air pollution to death caused by power plants.

16. Researchers at the Harvard School of Public Health have estimated that power plants are responsible for approximately 15,000 deaths per year (i.e. one quarter of an assumed 60,000 fine particle related deaths per year). (Wilson and Spengler, "Particles in Our Air: Concentrations and Health Effects, 1999, p. 212)

See "SPECIAL NOTE" on page 1. This is another example of erroneously linking health complications from air pollution to death caused by power plants.

17. A recent Harvard School of Public Health study of two coal-fired power plants in Massachusetts found that the fine particle pollution from these plants may be associated with over 100 deaths annually. (Levy and Spengler, "Estimated Health Impacts of Criteria Pollutant Air Emissions from the Salem Harbor and Brayton Point Power Plants, Harvard School of Public Health, May 2000)

See "SPECIAL NOTE" on page 1. This is another example of erroneously linking health complications from air pollution to death caused by power plants.

18. Fine particle emissions (soot) from U.S. coal-fired power plants are responsible for an estimated 30,000 deaths each year. Hundreds of thousands of Americans suffer from asthma attacks, cardiac problems and upper and lower respiratory ailments associated with fine particles from power plants. The estimated coal power plant health impacts are reflected the following table: [ table not included in this response ] (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants-, Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. This is another example of erroneously linking health complications from air pollution to death caused by power plants.

19. Metropolitan areas with large populations near coal-fired power plants feel their impacts most acutely. In large metropolitan areas, many hundreds of lives are shortened each year. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants-, Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. Power plants cannot be directly linked to shortened life spans.

20. While all of us are at risk from exposure to fine particles, the elderly people with respiratory disease and children are at greatest risk. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants-, Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. This is a true statement, however, it lacks significance. The elderly and children are at greatest risk of contracting most common illnesses and experiencing harmful accidents. Any risk that might involve the general population is always heightened in the elderly and in children.

21. Tens of thousands of elderly people die each year from exposure to ambient levels of fine particles. Breathing fine particles can hurt them with heart or lung disease, emphysema and chronic bronchitis. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants-, Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. While it is true that prolonged exposure to high levels of particulates can result in the illnesses listed, the Northern Lights Plant's emissions will result in Manistee County remaining well below the EPA's guidelines for acceptable air quality.

22. Infants in high pollution areas were 40 percent more likely to die of respiratory causes. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants", Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. This comment in the report is sourced to an article in Environmental Health Perspectives that studied overall air pollution's effect on infant health. It did not implicate any source for pollution.

23. Excluded from these estimates are the health effects from other power plant pollutants, such as air emissions that result in ozone smog, air toxics, and the impacts from the consumption of fish contaminated by power plant mercury emissions. (Spengler, "Death, Disease and Dirty Power Mortality and Health Damage Due to Air Pollution from Power Plants", Harvard School of Public Health, Sept. 2000).

See "SPECIAL NOTE" on page 1. We are unsure why this quote was taken from the report; the report has no data and makes no conclusions as to the health effects from other pollutants.

24. Michigan Department of Public Health has issued an advisory to restrict consumption of various species of fish taken from all inland lakes in the state, including Manistee Lake, because of mercury contamination.

MDPH made this blanket statement concerning the intake levels of fish from inland lakes due to mercury. This was done after testing for mercury in only 200 of the 11,000 lakes in Michigan. And, nearly every tested lake tested positive for high levels of PCBs, not mercury. [http://www.michigan.gov/documents/FishAdvisory03\\_67354\\_7.pdf](http://www.michigan.gov/documents/FishAdvisory03_67354_7.pdf)

25. Very few species of fish, including northern fish, catfish, and sucker, in Manistee Lake have been tested for contaminants.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. The MDPH handout on lake advisories list Black Crappie, Bluegill, Large and Smallmouth Bass, and Walleye, but do not state whether these specific fish have been tested. Source: [http://www.michigan.gov/documents/FishAdvisory03\\_67354\\_7.pdf](http://www.michigan.gov/documents/FishAdvisory03_67354_7.pdf)

26. Tests of Lake Sturgeon, an Odawa clan species, taken from Manistee Lake, have been shown to be higher in mercury than sturgeon taken from any other area in the State of Michigan.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. But this may be because lake sturgeon live longer than other species.

27. Manistee Lake currently is on the State of Michigan's 303D list of impaired waters due to elevated levels of mercury, PCBs, and pathogens. The State has reported no potential sources of these pollutants to the EPA.

This is true, listed at [http://www.deq.state.mi.us/documents/deq-swq-gleas-303\\_d\\_Rpt2002b.pdf](http://www.deq.state.mi.us/documents/deq-swq-gleas-303_d_Rpt2002b.pdf)

28. Fully 77% (940 acres) of Manistee Lake is within the Tribe's 1836 Reservation Boundaries.

Tondu Corporation is an American company and cannot comment on Tribal claims.

29. Over the next 20 years, the carbon dioxide emissions that cause global warming will increase by at least 400% in the electrical sector alone under the Bush energy plan.

Mr. Klein cites no source for his claim. However, there are numerous scientific papers that disprove the theory of global warming. This is why the EPA does not regulate this emission from power plants. Sources: Robinson, Arthur, "Environmental Effects of Increased Atmospheric Carbon Dioxide," January 1998;

30. Coal plant mercury emissions are expected to increase 33% by 2010, and yet they are the only major sources of mercury that remain unregulated.

Because Mr. Klein does not quote a source or a location, no part of this claim can be substantiated. This increase is not possible in the U.S., however. For coal plant mercury emissions to increase by this much, 33% more coal fired power must be built. This would mean over 130,000 MW of new or expanded coal-fired capacity would need to be operation seven years from now. Considering the slow growth in the power sector, the overbuilding of gas capacity, and the improved scrubbing technologies that all new plants are required to install, this figure is technically impossible to achieve.

31. Michigan already ranks 9th in the U.S. in coal plant emissions.

In 2001 Michigan ranked 12<sup>th</sup> in SO<sub>2</sub> emissions from coal power plants, 12<sup>th</sup> in CO<sub>2</sub> emissions from coal power plants, and 14<sup>th</sup> in NO<sub>x</sub> emissions from power plants. The aggregate total put Michigan 12<sup>th</sup> in terms of emissions from coal fired power, compared to Michigan ranking as the 9<sup>th</sup> largest state in population. Sources: <http://eire.census.gov/popest/data/states/tables/ST-EST2002-01.php> and <http://www.epa.gov/airmarkets/emissions/score01/score01b3.xls>

32. Although mercury is present naturally in the environment human activity contributes the majority of mercury releases.

This claim might be true, but there are studies that disagree. As mentioned in Number 3, above, this claim is in question. According to the EPA's *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units*, several different studies "indicate that between 40 and 75 percent of the current atmospheric mercury concentrations are the result of anthropogenic [man-made] releases." This would mean that it is possible for natural emissions to be between 25 and 60% of the mercury emissions. Source: EPA, *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units*, <http://www.epa.gov/ttn/oarpg/t3/reports/eurtc1.pdf>

33. In 1990, coal-fired power plants emitted 46 tons of mercury; by 1994 emissions jumped 10% to 51 tons; and are expected to climb another 33%, to 60 tons, by 2010.

Because Mr. Klein does not quote a source, this claim cannot be substantiated.

34. Fish in more than 50,000 bodies of water in 40 states contain such high levels of mercury that health agencies have warned people against eating the fish.

Because Mr. Klein does not quote a source, this claim cannot be substantiated.

35. Michigan is one of 10 states that have issued mercury advisories for all of its lakes and streams. For Michigan, that is 11,000 lakes.

This is a half-truth. Michigan has issued an advisory for all inland lakes – not all inland streams. Source: [http://www.michigan.gov/documents/FishAdvisory03\\_67354\\_7.pdf](http://www.michigan.gov/documents/FishAdvisory03_67354_7.pdf)

36. The EPA has determined that mercury emissions from power plants pose significant hazards to public health and must be reduced; The Agency plans to propose regulations by 2003, and issue final regulations by 2004.

These dates are correct; the EPA does plan on issuing final regulations by 2004. However, we have been unable to substantiate his claim that the EPA believes that "mercury emissions pose a significant hazard to public health". Instead, the EPA has chosen to proactively "reduce the risk mercury poses to people's health." Source: U.S. EPA, [http://www.epa.gov/ttn/oarpg/t3/fact\\_sheets/fs\\_util.pdf](http://www.epa.gov/ttn/oarpg/t3/fact_sheets/fs_util.pdf)

37. Once mercury enters water, biological processes can transform it into methylmercury, a highly toxic form of mercury that builds up in animal and human tissues.

Mercury has been shown to accumulate in and transformed into methylmercury through biological processes. However, this statement implies that the mere existence of methylmercury in an animal or human is toxic. Instead, there are acceptable levels of methylmercury, see the National Academy of Sciences quotation in number 8, above.

38. Exposure to mercury has been associated with serious neurological and developmental damage to humans. Depending on the dose, the effects range from subtle losses of sensory or cognitive ability, delays in developmental milestones - e.g., walking, talking - to birth defects, tremors, convulsions, and even death. U.S. EPA, "Mercury Report to Congress"

This quote is technically true, but out of context. Any chemical substance can harm humans at some level. In this case, Mr. Klein used this quote to attempt to show harmful effects of mercury. In fact, this quote is from page 3-24 of the report; a section that describes the horrific mercury poisoning that occurred in Minimata, Japan in 1956. In this instance, a chemical factory dumped approximately 200 tons of mercury directly into the harbor over several years. The residents of Minimata were consuming on average 300 grams of fish per week (35 times the U.S. average). The fish they were consuming had several orders of magnitude higher concentrations of methylmercury than is found in the U.S. The results, over time, did include the effects listed above.

39. Mercury contamination is responsible for 60% of state fish advisories and is the most frequent reason for issuing advisories.

Because Mr. Klein does not quote a source, this claim cannot be substantiated.

40. In addition to the adverse human health impacts, mercury exposure also harms wildlife, with fish-eating birds and mammals receiving the highest exposures. Documented adverse effects in birds and mammals include reduced reproductive success, impaired growth and development, behavior abnormalities, and even death. U.S. EPA, "Mercury Report to Congress"

This is an accurate quote from the EPA. There have been documented cases of higher mercury levels in some fish and mammals near some of the largest mercury emitting sources. However, there are no definite, documented cases of mercury exposure being the sole cause for any of the factors listed above.

41. If care is not taken to dispose of coal ash, runoff water may drain into surface or ground waters and pollute the waters with carcinogenic heavy metals.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. However, the vast majority of coal ash does not contain leachable carcinogenic material.

42. The U.S. EPA has issued National Ambient Air Quality Standards for "fine particles known as PM2.5, and defined as particles smaller than 2.5 microns - 1 millionth of a meter in diameter - e.g. less than 1/100th the width of a human hair. EPA has estimated that attaining the annual fine particles levels required by the new standard would prevent 15,000 deaths per year.

The EPA has issued PM2.5 standards, and Mr. Klein's definition of PM2.5 is accurate. However, this statement does not reveal that "Between 1993 and 2002, average PM<sub>10</sub> concentrations decreased 13 percent, while direct PM<sub>10</sub> emissions decreased 22 percent." And "direct PM<sub>2.5</sub> emissions from man-made sources decreased 17 percent nationally between 1993 and 2002." The 15,000 prevented deaths per year is a misrepresentation. Like the **SPECIAL NOTE** on "Death, Disease...", these are deaths that supposedly happened prematurely because of air pollution. Source: U.S. EPA, <http://www.epa.gov/airtrends/pm.html>

43. The U.S. EPA has acknowledged that the science underlying the PM2.5 standard indicates that deaths occur even at levels below the established PM2.5 standard.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. It is very illogical, however to make this assumption because the monitoring of particles less than 2.5 microns in size is very difficult with current technology, making these kinds of conclusions very suspect.

44. Deaths from coal plant pollution are on a par with the death toll from other causes commonly understood to be major public policy priorities. For example, drunk driving causes nearly 16,000 deaths per year, and there are 17,000 homicides in the U.S. each year. The 18,000 (fix) deaths avoided by clean up of the dinosaurs is 3x the number of automobile fatalities avoided each year by the use of seat belts.

This is another quote from the "Death, Disease, and Dirty Power" paper. See **SPECIAL NOTE**, above. This is possibly the most egregious statement made by the authors of the paper and Mr. Klein.

To compare the operation of the nation's power sources to murder and drunk driving is cruel and illogical. Mr. Klein is putting thousands of power industry employees on the same level as drunk drivers and crazed murderers. These are men and women, union and non-union, who have worked for years to generate something we all need: power. They are not making bad choices like drunk drivers or out of their minds like murderers, and they do not deserve to be characterized in this way.

The numbers from the paper are not people that power plants have killed, but lives that shortened in later years from air pollution. When a drunk driver gets behind the wheel and kills someone, it is 100% his fault. When a killer uses a gun to shoot his neighbor, it is 100% his fault. No scientific paper has been able to directly link power plant emissions to killing people in this fashion.

45. The death toll attributable to fine particle pollution from coal plants is rivaled only by the deaths due to the fine particle pollutions from the Combined total of all diesel trucks, buses, locomotives, and construction equipment in the U.S.

This is another quote from the "Death, Disease, and Dirty Power" paper. See **SPECIAL NOTE**, and the response to Number 44, above.

46. Coal stockpiles have the potential to release contaminants, usually heavy metals such as arsenic, copper, nickel, lead, and zinc. These contaminants are mobilized in rainwater runoff. - As a result, the pH of coal pile runoff is acidic, and may be similar in composition to acid mine drainage.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. However, it is immaterial to the Northern Lights Project. The Northern Lights Plant will have a state-of-the-art coal pile water runoff capture and land liner.

47. 1999 report documented that mercury was showing up in Chicago rainfall at levels 42 times greater than what federal standards considered safe. Mercury levels in rain were reported to be even higher in Detroit and Duluth, MN.

Although no source is quoted, this claim probably stems from a National Wildlife Federation report entitled "Clean the Rain, Clean the Lakes." The NWF quotes a study it conducted that reported what they characterized as high mercury levels in rainwater. Even assuming that this is true, the EPA set guidelines for water concentration because of the conversion to, and accumulation of, methylmercury. These supposedly high levels of elemental mercury in rainwater do not pose a threat to human health. Only if this mercury is transformed into methylmercury and only if an individual consumes higher than average levels of Methylmercury does it pose a threat to health.

48. No pollution control system on the market today reduces mercury emissions uniformly across the full spectrum of power plant configurations and the effectiveness can range from 90 percent to virtually zero.

The statement is true only because every power plant is different in size, age, technology, fuel, and configuration. Pollution control methods, like the multi-step and multi-pollutant approach to be used at Northern Lights, are chosen specifically for the plant in question.

49. The National Academy of Science estimates that 60,000 U.S. children are born each year in the U.S. with a risk of nervous system damage from mercury exposure in the womb.

The report issued by the NAS mentioned above did quote this figure, but by taking this figure out of its original, 368-page context, misleads the reader. The NAS, and many other agencies investigating mercury, were unable to document a single case of mercury poisoning in the U.S. that could be linked to mercury air emissions. The science behind the study made several leaps from mercury affects in lab animals, the Minimata mercury poisoning in the '50s, the current concentrations of mercury in U.S. fish, and estimated mercury emissions from industry.

Their conclusion was that 60,000 children are born at risk and "the majority of Americans are at low risk for adverse health effects." The NAS uses a strict definition of "risk". These 60,000 are at risk of mercury poisoning in the same way 250 million Americans are at risk of being struck by a meteorite – it is technically possible that harm could come them. However, it does not mean that 60,000 children every year are born with adverse health effects. The NAS was unable to find a single child that experienced a direct harm from power plant mercury emissions.

What is more important is that 98.5% of all children born are at no risk for mercury exposure. With the claims that most environmentalists make about the ubiquity of mercury, this is a startling figure. *Source: National Academies of Science, "Toxicological Effects of Methylmercury," 2000, and associated press release.*  
<http://www4.nas.edu/news.nsf/isbn/0309071402?OpenDocument>

50. Michigan's Department of Community Health has issued advisories for all of the state's inland lakes since 1988.

Because Mr. Klein does not quote a source, this claim cannot be substantiated. Whether or not the Department of Community Health has issued advisories and how long they have been doing it does not comment on the viability or acceptability of the Northern Lights Project.

## Response to the Memo from Paul Gavlinski, et al, 11/17/03

Paul and Jan Gavlinski, William and Mary Kracht, Shirley Galloway, Jane Reynolds, and Sharon Lapp issued a memorandum to the Planning Commission with seven points/questions. The follow answers correspond to their original points.

1. All issues regarding airborne emissions, including composition, quantity, dispersion, concentration, and potential health impacts are being studied and regulated by the Federal Environmental Protection Agency ("EPA") and the Michigan Department of Environmental Quality ("MDEQ"). Manistee Saltworks Development Company submitted an Air Permit Application for the Northern Lights Plant to the MDEQ on September 10, 2003. The MDEQ, with oversight by the EPA, will spend several months evaluating the air emissions from the Northern Lights Plant and determine if the emission levels will comply with state and federal standards. The original permit application contains a demonstration that the project will meet all of these standards. They will then issue their findings to the public and conduct a public hearing in Manistee to listen to and answer the concerns of the community.
2. See answer to Number 1, above.
3. The Northern Lights Plant will comply will all city, county, state, and federal regulations, including noise limits.
4. The projected annual budget for the Northern Lights Plant calls for \$4 million in payroll and \$11 million in third party services. These services include trucking, landfill payments, suppliers, contract maintenance workers, equipment purchases, and general plant expenses, most of which will stay in Manistee. Our on-site labor budget is over \$100 million. Those wages and benefits will be paid over three years to the people building the plant. If our experience with the construction of the TES Plant is a guide, some of the construction workers who do not live in Manistee will stay and buy homes, in addition to the operating staff, which should increase property values in the area.

The Northern Lights Plant will have little or no negative impact on tourism in Manistee County. In fact, the Plant should have a positive impact on tourism with the increased number of on-site labor and additional income in the area.

5. The Northern Lights Plant will file for a water permit application with MDEQ. The Plant will comply will all city, county, state, and federal regulations, including water regulations.
6. Tondu Corporation expects no significant leachates from disposing the Plant's ash in a licensed landfill approved by the MDEQ to receive waste of this type. Sufficient landfill space is available for the Northern Lights Plant and community requirements. The Northern Lights Plant will be equipped with modern dust suppression equipment.

The roads leading into and from the proposed Plant are designed for this type of traffic. The roads that the trucks will use are designated truck routes. A majority of the truck traffic servicing the plant will travel through a small portion of the City and then into outlying areas.

The Plant will have less truck traffic than General Chemical did during its production time. In addition, the Fugitive Dust Control Plan contained in the air permit application will minimize the potential for fugitive emissions from all on site roadways.

7. Tondu Corporation cannot comment on the procedures of the Planning Commission. However, all environmental issues will be studied and regulated by the EPA and MDEQ. The Northern Lights Plant will comply will all city, county, state, and federal environmental regulations.

## Response to the Memo from Charles Dumanois, undated

Dr. Charles Dumanois issued a memorandum to the Planning Commission with nine points/questions. The following answers correspond to his original points.

1. Tondu Corporation cannot comment on the instructions the Planning Commission gave to the consultants they hired.
2. The federal Health and Welfare Related Standards for PM10 is 50 micrograms per cubic meter (annual standard) and 150 micrograms per cubic meter (24-hour standard). A dispersion modeling analysis contained in the Air Permit application demonstrates that the project easily complies with both of these standards.

Neither the Federal Environmental Protection Agency ("EPA") nor the Michigan Department of Environmental Quality ("MDEQ") currently regulate mercury or radioactive matter emissions from coal-fired power plants.

Radioactive matter is not regulated because coal-fired power plants are considered very low emitters and do not emit any more radioactive material than what exists in nature. The EPA has determined that this level of radiation has no effect on human health or wildlife.

3. Mercury emissions are being extensively studied by the EPA, and are developing Maximum Achievable Control Technology ("MACT") standards applicable to the project are expected to be issued in early 2004. The project will comply with the soon to be released MACT standard.
4. The Air Permit filed with the MDEQ is requesting maximum allowable emissions for particulate matter (PM10) of 737 tons per year based on full load/full year operation. The project will also comply with the MACT emission limitation for mercury as soon as the standard is finalized by the EPA. MACT standards are developed by the EPA to protect public health and welfare. Also, the Northern Lights Plant will not generate radiation levels above what exists in nature.
5. If the Northern Lights Plant receives an approved Air Permit from the MDEQ, it would mean the EPA and the MDEQ believe that the air emissions from the Northern Lights Plant would not significantly deteriorate the quality of human health and welfare in Manistee County, and that the maximum ground level concentrations of regulated pollutants would still be within acceptable limits.
6. The Northern Lights Plant will comply with all mandated city, county, state, and federal emissions regulations. It will achieve this through the use of a multi-pollutant, multi-step pollution control system, detailed compliance monitoring, recordkeeping, and reporting systems.
7. Fugitive dust from the coal pile will be minimized through the use of sprayers, covered conveyors, and constant coal pile management, consistent with the Fugitive Dust Control

Plan contained in the permit application, which was developed from observations of other similar Powder River Basin coal storage facilities currently operating within Michigan.

The coal pile will be on a lined site, and all runoff from the pile will be captured and either reused or directed into a wastewater treatment system. Tondue Corporation expects no surface or groundwater contamination occurring under normal operating conditions.

8. The MDEQ and EPA have the authority to investigate water issues in the State of Michigan. Any citizen can contact either agency to file a complaint or research an issue.
9. Tondue Corporation cannot comment on the Planning Commission's ability to require bonds. However, the emissions in question will not be excessive or unhealthy, will comply with all state and federal standards, and therefore a bond is unnecessary.

## Response to Memo from Richard and Linda Albee, 11/12/03

Richard and Linda Albee issued a memorandum to the Planning Commission with several points/questions. They were broken into two sections. First, a list of comments on why they believed the permit should be turned down, and second, a list of questions stemming from the Special Use Permit application. The follow answers correspond to their original points.

### *Reasons to turn down the permit*

1. Tightening environmental restrictions and improved technologies make modern coal-fired power plants significantly cleaner than those built in the past. The Northern Lights Plant will generate power with less air emissions than the vast majority of the power plants in the United States. In addition, as newer, cleaner plants are built, some older plants will be shut down.
2. Tondu Corporation cannot comment on the Albee's personal view of the EPA or MDEQ. However, the Northern Lights Plant will comply will all city, county, state, and federal regulations.
3. The Northern Lights Plant will not result in lost jobs in the tourism industry. Also, the additional jobs during construction and operation of the Plant should result in more people moving into Manistee.
4. Prior to construction of the Northern Lights Plant, the General Chemical site will be remediated. The new plant will probably be the cleanest coal fired power plant in Michigan, as it will be required to install state-of-the-art Best Available Control Technology ("BACT") emissions control technologies.
5. An expensive coal-fired power plant has a very low probability of being abandoned by its owners. If the plant gets built, it will have long-term power purchase contracts matched with long term financing. Such a plant has no concerns about foreign competition. The plant will also have insurance to cover catastrophic events, mechanical failure, and short term problems.
6. Tondu Corporation cannot comment on the Planning Commission's cost/benefit analysis. The Northern Lights Plant will bring additional income to the city and county, although the final amount is unknown. The projected annual budget for the Northern Lights Plant calls for \$4 million in payroll and \$11 million in third party services. These services include trucking, landfill payments, suppliers, contract maintenance workers, equipment purchases, and general plant expenses, most of which will stay in Manistee. Our on-site labor budget is over \$100 million. Those wages and benefits will be paid over three years to the workers building the plant.

### *Questions stemming from the Special Permit Application*

1. After verification from the Planning Commission, Manistee Saltworks Development Company believes it has answered questions 2, 8, 9, 10, 11, 18, and 20 correctly.
2. No hazardous substances will be stored, used, or handled near storm drains which will discharge to lakes, streams, or wetlands. Any runoff from the site will be captured and treated prior to discharge. Any discharge to the lake will be required to meet Michigan Department of Environmental Quality ("MDEQ") criteria and will include frequent outfall sampling procedures.
3. The MDEQ and the Federal Environmental Protection Agency ("EPA") have the authority to investigate water issues in the State of Michigan. Any citizen can contact either agency to file a complaint or research an issue.
4. Regardless of the method of wastewater and stormwater treatment, the Northern Lights Plant will comply with all mandated city, county, state, and federal water treatment regulations.
5. The system retention volume, including the collection ditch system, can handle 5.07" of rainfall in any 24-hour period. Manistee County receives 3.9" of rainfall in a 24-hour period (on average) once every 25 years. A 5.07" rainfall or higher occurs even less frequently.
6. Fugitive dust from the coal pile will be minimized through the use of sprayers, covered conveyors, baghouse control systems, and constant coal pile management. The coal pile will be on a lined site, with all runoff from the pile directed into a wastewater treatment system. Tondu Corporation expects no surface or groundwater contamination occurring in normal operating conditions.
7. The Shoreline Landfill has adequate capacity to handle the ash from the Northern Lights Plant.
8. In 2002, there were 193 sailboats and 361 freighters that caused the Highway 31 Bridge to open. In 2000, prior to General Chemical resuming shipping of brine from the site, there were only 113 freighters that raised the bridge. At its current level, General Chemical is responsible for between 175 and 200 freighters loads per year. The Northern Lights Plant will only require 130 freighters of coal per year, reducing the overall load on local water traffic.
9. Tondu Corporation does not expect to utilize the railroad for transporting inbound or outbound materials during operation.
10. The Northern Lights Plant will comply with all city, county, state, and federal regulations, including noise limits.
11. The stack height is determined by emissions modeling as part of the Air Permit requirements.

12. Tondu Corporation cannot comment on the Albee's personal view of the EPA or MDEQ. However, Northern Lights Plant will comply will all city, county, state, and federal regulations.

Response to the Letter from Helen Ann Yunis, 11/12/03

Helen Ann Yunis issued a letter to the Planning Commission with three points/questions. The following answers correspond to her original points.

1. Current water and air emissions by the companies surrounding Manistee Lake are under the monitoring authority of the Federal Environmental Protection Agency ("EPA"). Concerned citizens can contact the EPA for emissions data. If the Northern Lights Plant receives air and water permits, it would mean the EPA and the Michigan Department of Environmental Quality ("MDEQ") believe that the emissions from the Northern Lights Plant would not significantly deteriorate the quality of human health in Manistee County, and the concentrations of regulated pollutants would still be within acceptable limits.
2. The MDEQ, under supervision of the EPA, will spend several months evaluating the emissions from the Northern Lights Plant, including comparisons to other areas, and determine if the emissions are acceptable under current guidelines. The results of their evaluation will be available to the public.
3. The EPA, MDEQ, private industry, and independent scientists have been researching the effects of mercury in the environment for decades. This information is being studied by the EPA and mercury standards are expected to be issued in 2004. The project will be required to meet the new mercury emission standard.

Response to the memo from Shirley Skiera, undated

Shirley Skiera issued a memorandum to the Planning Commission that addressed several points. Although not numbered in her memorandum, the following attempts to address her points in order.

1. The Air Permit filed with the Michigan Department of Environmental Quality ("MDEQ") is requesting maximum allowable emissions for the following:

<u>Pollutant</u>	<u>Tons/year</u>
Particulate Matter	737
NOx	2,693
SO2	4,444
CO	2,684

These emission estimates are maximized by assuming the plant could operate at full load for every hour of the year. A detailed dispersion modeling study contained in the Air Permit application demonstrates that all of these emission levels will easily comply with federal ambient air standards.

2. The Federal Environmental Protection Agency ("EPA"), MDEQ, private industry, and independent scientists have been researching the effects of mercury in the environment for decades. This information is being studied by the EPA and mercury standards are expected to be issued in 2004.
3. Tondu is not suggesting the use of uranium traps. Radioactive matter is not regulated by the EPA because coal-fired power plants do not emit any more radioactive material than exists in nature. The EPA has determined that this level of radiation has no effect on human health or wildlife. This is further supported by the Nuclear Regulatory Commission ("NRC") consistent decision to not regulate radioactive emissions from coal-fired utilities.
4. The Northern Lights Plant will require approximately 13 freighter loads of coal per month during the ten month shipping season, or 130 freighters per year, not the 156 freighters that Ms. Skiera claims.
5. The 130 freighters per year will be less than the 175 freighters per year than General Chemical Plant used when in operation. 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 beyond our control.
6. The roads leading into and from the proposed plant are designed for this type of traffic. The roads that the trucks will use are designated truck routes. A majority of the truck traffic servicing the plant will travel through a small portion of the City and then into

outlying areas. The Northern Lights Plant will have less truck traffic than General Chemical during its production time.

December 1, 2003

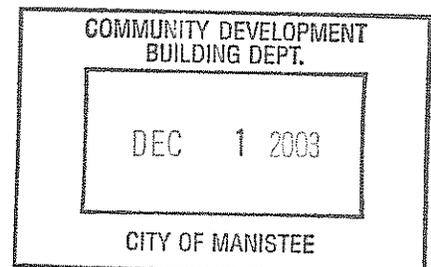
Planning commission board,

In regards to the proposed coal plant, I have done some of my own research on coal fired power plants and not to bog the commission down with facts and figures which I hope you already have, they don't burn clean and never will. "State of the art" is only where we are now with technology as it was one hundred years ago. I am concerned about the immediate neighborhood impact; noise, trucks thru the residential areas, and especially the massive power poles and lines which will radiate EMF's along the route to tie into the grid. EMF's are a proven cause of cancer. Coal's byproduct, ash is heavily laden with heavy metals that can't be properly disposed of even with "state of the art" liners. Liners leak and what does not, needs to be pumped. . My employment has me traveling back and forth thru the city five days a week and up to a dozen times a day. The aggravation of the bridge going up this many more times coupled with the train will reach critical mass and the tourists will quickly tire of this as well, and will find a bypass on their trip farther north. Manistee county and surrounding counties are doing our part to contribute power to the grid; coal fired, hydro, pump storage. A new plant is not the answer right now. Our country needs an energy plan; a plan which calls for conservation as a first step which was not in the bill that the senate thankfully didn't pass. Manistee is doing just fine, don't feel obligated to big business, it will only give Manistee a BLACK eye.

Sincerely,



Dan Hornkohl  
1553 LakeShore Rd  
Manistee, MI 49660





# Northwest Michigan Council of Governments

Let Our Resources Work For You!  
• Employment • Business • Community

Chairman: Larry C. Inman  
Workforce Development  
Board Chairman: David R. Adams  
Director: Alton M. Shipstead

November 26, 2003

Mr. Jon Rose, Planner/Zoning Administrator  
Manistee City Planning Department  
70 Maple Street  
Manistee, MI 49660

Dear Mr. Rose:

I understand there has been some discussion concerning a proposal to close Manistee's deepwater port. For economic reasons it's imperative that the deepwater port remain open.

The Northwest Michigan Workforce Development Board is currently working on the problem of declining manufacturing employment in our ten-county service area. From 1998 to 2002 manufacturing employment declined by 11% in our entire region, but Manistee County's loss of 350 manufacturing jobs means its manufacturing employment declined by 20% in the same time period. As you know, manufacturing employment means higher wages for workers than jobs in the retail or service industries which is why retention of manufacturing is crucial to the economic well-being of a community.

Since Manistee is the only Lake Michigan commercial deepwater port operating in northern lower Michigan, retaining the port is a location/relocation incentive for certain types of businesses that can't be matched by any other northern lower Michigan location except for Rogers City on Lake Huron. Those existing Manistee firms that are dependent upon deepwater shipping capability would likely have to relocate were the port to be closed resulting in additional job loss for the area. In addition, most of the county road commissions in northern lower Michigan depend on salt delivered to Manistee for winter road maintenance. Tight road commission budgets couldn't tolerate cost increases for salt if the product couldn't be delivered as closely to its ultimate destinations.

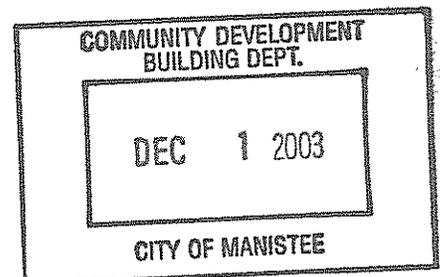
Manistee currently maintains an ideal balance of residential/recreational waterfront and commercially-viable waterfront. While we understand the value of the residential/recreational applications, we strongly support maintenance of the current commercial configuration. We hope you and the City of Manistee agree.

If you have any questions, please don't hesitate to contact me.

Sincerely,

David R. Adams  
Workforce Development Board Chair

DRA:cs



December 2, 2003

Mr. Dave Barber, Editor  
Manistee News Advocate  
75 Maple Street  
Manistee, MI 49660



Dear Mr. Barber:

As an experienced member of the project team responsible for development of the (air) permit application, I am compelled to respond to several significant inaccuracies contained in the letter published November 19, 2003 from the Ogema of the Little River Band of Ottawa Indians.

As background to this response, the air permit application was developed by senior members of NTH Consultants, Ltd., which was retained by Tondu Corporation to develop and submit an Air Use (construction) permit application for the new Manistee Salt Works project. The Manistee Salt Works Development Corporation (MSDWC) permit application was developed primarily by four (4) senior members of NTH with a combined 90+ years of air quality permitting experience. The permit application demonstrates that all applicable State and federal air quality regulations will be met.

The excerpts from the Tribal letter are noted in bold print and my responses directly follow -

- ***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.***

There is no basis for this claim. The existing site will be cleaned up to prevent coal / coke pile runoff that currently enters Lake Manistee directly. The federal and State governments have developed acceptable ambient impact criteria for pollutants like particulate, SO<sub>2</sub>, NO<sub>x</sub>, CO, Lead and Volatile Organic Compounds (VOC) and an extensive listing of potential air toxics. These ambient impact limitations are designed to protect the primary AND secondary health standards. The air permit application contains supporting information that demonstrates the project will comply with all of these requirements. To claim that the plant will emit harmful levels of air contaminants is not supported by science and/or state and federal regulations.

- ***BACT legally means the best technology that is affordable – not the best technology period.***

This too is an inaccurate assessment. The federal BACT requirements not only evaluate the costs associated with a control technology – environment impacts and benefits are also equally considered. BACT essentially considers the cost-benefit of more stringent emission control measures versus the benefits to the environment. The regulatory definition of BACT can be found in 40CFR Part 52.21 and has been in effect nationally for the past 25 years.

With respect to Mercury control, the federal government will be proposing a MACT (Maximum Achievable Control Technology) standard for this compound within the next few months for this industrial source category. The federal MACT standards (for new sources) are based on the government's evaluation of the *best-proven* emission control technologies and supports a national strategy to reduce the ambient levels of air toxics. The MSWDC project will have to demonstrate compliance with this soon to be released federal MACT standard.

- ***The truth is that there is no known evidence to document that the air quality in Manistee has ever been tested.***

This statement is incorrect. In the late 1970's the DEQ had a particulate monitoring station located in Manistee and removed the monitoring station in the late 1980's as the monitored readings supported that the area complied with the federal PM standards.

In the mid 1980's an SO2 monitoring project was located at the PCA wastewater treatment plant to measure the actual background readings prior to construction of the TES Filer City plant. Previous dispersion modeling studies estimated SO2 levels at twice the federal standard at this location. The actual monitored maximum SO2 reading at this site was only 10% of the federal standard.

- ***There are ozone monitoring stations in Benzie and Mason County. Both of those counties are designated "non-attainment" for ozone.***

This statement is incorrect. The two counties mentioned are currently considered as ATTAINMENT areas. Recent ozone monitoring data is currently being evaluated by EPA and no decision to re-classify these counties to non-attainment for Ozone has been made to date, as the highest ozone monitored levels in these two counties indicate that ozone levels in these two counties are primarily a result of long-range transport from sources located farther west, outside of the State of Michigan.

- ***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.***

As noted previously, there are short and long-term federal air quality standards for particulate matter that ARE designed to protect human health and welfare. The plant will easily comply with these standards as demonstrated in the air permit application.

- *Any amount of Mercury is too much.*

This statement is not supported by scientific research. Mercury is considered a global issue and remains the subject of much scientific research. As noted previously, the MSWDC will comply with the new federal MACT standard for Mercury. The MACT standards are developed to reduce the loading of air toxics into the environment and minimize the potential impacts upon human health. The project is proposing to use western PRB coal, which is inherently low in Mercury, Sulfur and Chlorine content(s). The result is that the vast majority of Mercury emitted will be of the “elemental” variety, which has been demonstrated by research studies to contribute to a non-measurable localized impact, because elemental Mercury becomes part of the global mix – not a local deposition issue.

Currently available fish monitoring data collected by the MDEQ in the 1990’s demonstrated that the mean mercury concentrations were one half or less of the fish contaminant advisory level for mercury. The analyzed fish tissue samples (edible portions – fillet, skin on) were collected for several species between 1991 and 1995; mean concentrations of mercury ranged from 0.14 to 0.27 ppm as compared to the fish advisory level of 0.50 ppm.

- *Another element of concern is the mining of coal..... There is no way that Joe Tondu can acceptably understate the destructive effect that strip mining has on the environment. Suffice to say that millions of years of ecosystem development are wiped away by this activity.*

As noted previously, the western (PRB) coal selected for this project is inherently lower in Sulfur, Mercury and Chlorine content as compared to eastern coals. A substantial amount of the PRB coal mines are located within the tribal lands of the western United States and are subject to strict environmental regulations.

Respectfully submitted by: John F. Caudell, NTH Consultants Ltd.

**The December 4, 2003  
City of Manistee  
Planning Commission Meeting**

**will be held at 7:00 p.m.**

**in the Library at the**

**Manistee Middle School**

**550 Maple Street**

**Manistee, Michigan**

Dec. 4 '03

JMS

To : City Planning Commission

Excuse my pun — but the intention  
is to "rake you over the coals" —

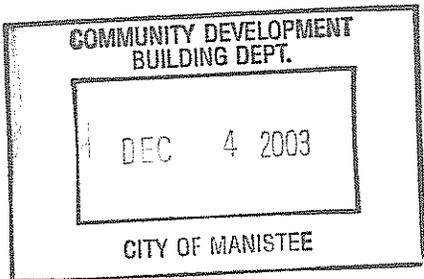
The fact you as our city representatives  
have joined the Tonda coalition is not  
in our best interests regarding our health  
and that of our children and grandchildren.

The facts stated explain the BAD far  
outweighs the good. Hopefully and  
prayerfully this is not a done deal. —

Too often your decisions are poor —

Do your homework —

God willing this factory never  
comes to be —



Sincerely  
Dorothy M. Kerr



Dorothy Kerr  
486 Bryant Ave  
Manistee MI 49660-1837

## CURRENT AUTOMOTIVE EXHAUST ALONG U.S. 31 IN DOWNTOWN MANISTEE CREATES AIR CONCENTRATIONS SIMILAR TO THE NORTHERN LIGHTS PLANT

The Michigan Department of Transportation reports that there were 17,200 vehicles that traveled every day along the main, 3 mile stretch of U.S. 31 in Manistee<sup>5</sup>. This is an annual average that includes summer tourist traffic and casino traffic. This means that, on average, there are 51,600 vehicle miles traveled in the center of the City of Manistee.

According to the EPA's Office of Transportation and Air Quality's publication "Average Annual Emissions and Fuel Consumption for Passenger Cars", the average car on the road today emits the following through tailpipe emissions:

Unburned hydrocarbons: 2.8 grams/mile  
Carbon Monoxide: 20.9 grams/mile  
NOx: 1.39 grams/mile  
Carbon Dioxide: 415.5 grams/mile

For particulate matter, we will make the assumption that the average car complies with the current Clean Air Act automobile standard:

Particulate Matter: 0.2 grams/mile

With the 51,600 vehicle miles traveled in downtown Manistee each day, this equals:

Unburned hydrocarbons: 52,743 kilograms/year  
Carbon Monoxide: 393,470 kilograms/year  
NOx: 26,171 kilograms/year  
Carbon Dioxide: 7,825,600 kilograms/year  
Particulate Matter: 3,760 kilograms/year

Because of the nature of tailpipe emissions, all of this stays in Manistee County.

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Now we need to convert this to CONCENTRATION levels, instead of EMISSION levels. This compares it to the power plant, which disperses its emissions. NTH has given us an EPA model (simplified) to use to compare the data above with our concentration levels.

Pollutant	Annual average ground level concentration from Northern Lights Plant (milligrams/cubic foot)	Annual average ground level concentration from Current Traffic (milligrams/cubic foot)
Unburned Hydrocarbons	0	239
Carbon Monoxide	71	691
Nitrogen Oxide	1.86	1.21
Carbon Dioxide	Not modeled	13,732
Particulate Matter	0.50	0.17

<sup>5</sup> Michigan Department of Transportation website, 2003, "2002 Average Daily Traffic Map."

## SMOKING IS SIGNIFICANTLY MORE HAZARDOUS THAN LIVING NEAR A COAL-FIRED POWER PLANT

In a study of the nation's 426 coal-fired power plants it was determined that individuals living near the *single worst* emitting coal-fired power plant in the U.S. had a 0.0003% higher chance than the overall population of developing cancer. It was also found that the average power plant emissions increase the risk of cancer by 0.00003%. This level is considered by the EPA to be "negligible." The study also found that no single power plant produced airborne hazardous chemical concentrations above acceptable levels.<sup>1</sup>

By contrast, more people die prematurely from smoking than die from automobile accidents, drug abuse, AIDS, and alcohol combined. U.S. Public Health Service reports have uniformly identified smoking as a major cause of cancers of the lung, larynx, oral cavity, and esophagus. Of the 514,000 cancer deaths in the United States in 2001, slightly over 164,000, or nearly one-third, are directly linked to cigarette smoking. For male cigarette smokers the risk of lung cancer is more than 2,000% higher than among male nonsmokers.<sup>2</sup>

Nonsmokers who live or work with smokers experience a 30 to 50 percent elevated risk for lung cancer. An estimated 3,000 to 6,000 nonsmoker lung cancer deaths annually are attributed to second-hand smoke<sup>3</sup>. While the number of second-hand smoke related lung cancer deaths may seem small when compared to the number attributed to active smoking, the number is actually quite large when compared to other indoor and outdoor environmental pollutants, many of which are regulated by the U.S. Environmental Protection Agency.

By way of comparison, two British scientists have estimated that exposure to asbestos fibers among people who live or work in asbestos-containing buildings carries an annual risk of lung cancer of less than 1 in 1 million (Doll and Peto, 1986). Notwithstanding this small risk, great efforts are made to remove asbestos from buildings because the risks are deemed to be "unacceptable." Yet, according to these same investigators, the relative risk for lung cancer due to second-hand smoke "is more than 100 times higher than the estimated effects of 20 years' exposure to the amount of asbestos normally found in asbestos-containing buildings" (Peto and Doll, 1986).<sup>4</sup>

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<sup>1</sup> Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units – Final Report to Congress. Volumes 1 and 2. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. February 1998.

<sup>2</sup> Shopland, Donald. Smoking and Tobacco Control Program, Division of Cancer Prevention and Control, National Cancer Institute, Bethesda, Maryland, 2001.

<sup>3</sup> Environmental Protection Agency website, data from 1993.

<sup>4</sup> Shopland, Donald. Smoking and Tobacco Control Program, Division of Cancer Prevention and Control, National Cancer Institute, Bethesda, Maryland.

**THERE IS NO SUBSTANTIATED LINK BETWEEN INDUSTRIAL EMISSIONS AND DISEASE RATES IN MANISTEE COUNTY**

In general, Manistee County has poorer health than most of Michigan.<sup>8</sup> This assertion, made in 1997 by a Manistee County community health task force, is proved more recently by the following death rates (# of deaths per 100,000 in the population) in 2001<sup>9</sup>:

	Manistee County	Michigan Average	Wayne County
Cancer	274.7	199.0	209.0
Heart Disease	342.3	271.4	324.0
Chronic Respiratory Disease	67.6	41.9	34.7
Smoking Rate (overall population)	46%	25%	

Manistee's higher numbers are statistically significant, meaning there must be a cause or combination of causes that would result in death rates higher than the state average. Some claim the industrial emissions from T.E.S. Filer City, PCA, Morton Salt, and other companies are to blame.

However, the EPA monitored 5,000 tons of industrial emissions in Wayne County in 2001 and only 270 tons of industrial emissions in Manistee County for the same time period<sup>10</sup>. If the industrial emissions in Manistee County are even partly to blame for the increased death rates, Wayne County should experience death rates greater than Manistee County. Instead, the citizens of Wayne County are, overall, less prone die from cancer, heart disease, and chronic respiratory disease than the citizens of Manistee County.

What could be the cause of Manistee's higher cancer, heart disease, and respiratory illness rates? The strongest link, according to numerous studies, might lie with the fact that 46% of the population of Manistee County smokes tobacco, compared to only 25% of the overall state<sup>11</sup>. Numerous studies have found a direct link between tobacco smoke and cancer, heart disease and chronic respiratory disease.<sup>12</sup>

<sup>8</sup> Moving Toward a Healthy 2000 and Beyond, Report to the Community, Community Health Assessment Task Force, Manistee County, Fall 1997.

<sup>9</sup> Michigan Department of Health web site, 2003.

<sup>10</sup> EPA AirData Net, EPA Website, 2003

<sup>11</sup> Moving Toward a Health 2000 and Beyond, Report to the Community, Community Health Assessment Task Force, Manistee County, Fall 1997.

<sup>12</sup> Shopland, Donald. Smoking and Tobacco Control Program, Division of Cancer Prevention and Control, National Cancer Institute, Bethesda, Maryland, 2001.



## **Our Responses to Environmental Questions Received by the Planning Commission**

### **What will be the level, and impact, of mercury emissions?**

Although mercury emissions from power plants are not regulated by the State of Michigan or the Federal Governments, mercury emissions are being extensively studied by the EPA. The EPA is developing Maximum Achievable Control Technology ("MACT") standards applicable to the project that are expected to be issued in early 2004. No one knows the specifics of these standards, but the project will comply.

*As with all environmental questions, these issues are being studied and will be regulated by the EPA and the MDEQ. Manistee Saltworks Development Company submitted an Air Permit Application for the Northern Lights Plant to the MDEQ on September 10, 2003. The MDEQ, with oversight by the EPA, will spend several months evaluating air emissions from the Northern Lights Plant and determine if the emission levels will comply with state and federal standards. They will then issue their findings to the public and conduct a public hearing in Manistee to listen to and answer the concerns of the community.*

### **What will be the level, and impact, of particulate matter emissions?**

The estimated annual emission of PM10 from all on site sources is 737 tons per year. This annual rate assumes full year/full load operation and has been demonstrated via the dispersion modeling study to result in acceptable ambient impacts.

*As with all environmental questions, these issues are being studied and will be regulated by the EPA and the MDEQ. Manistee Saltworks Development Corporation submitted an Air Permit Application for the Northern Lights Plant to the MDEQ on September 10, 2003. The MDEQ, with oversight by the EPA, will spend several months evaluating air emissions from the Northern Lights Plant and determine if the emission levels will comply with state and federal standards. They will then issue their findings to the public and conduct a public hearing in Manistee to listen to and answer the concerns of the community.*

### **Are there controls on the disposal of the ash?**

Tondu Corporation expects no significant leachates from disposing the Plant's ash in a licensed landfill approved by the MDEQ to receive waste of this type.

### **Will there be radioactive emissions?**

Coal contains very scant amounts of radiological material, but radioactive matter is not regulated because coal-fired power plants do not emit any more radioactive material than what exists in nature. The EPA has determined that this level of radiation has no effect on human health or wildlife.

### **What is the effect of water runoff from the site?**

The coal pile will be on a lined site, and all runoff from the pile will be captured and either reused or directed into a wastewater treatment system. Tondu Corporation expects no surface or groundwater contamination occurring under normal operating conditions.

## **Operational Questions Received by the Planning Commission**

### **What will be the noise levels at the Plant?**

The Northern Lights Plant will comply with all applicable regulations, including the city's 65 decibel limitation



11/18/03

RECEIVED

DEC 01 2003

DNR DISTRICT 6  
CADILLAC

FOR IMMEDIATE RELEASE

Carol Swinehart

517-353-9723

or

Chuck Pistis

616-846-8250

[www.miseagrant.umich.edu](http://www.miseagrant.umich.edu)

## **MICHIGAN'S CHARTER FISHING INDUSTRY BOUNCES BACK: GREATER REVENUES, LARGER BOATS BUT FEWER CAPTAINS**

EAST LANSING, Mich. -- Michigan's charter fishing industry is generating greater revenues than it did eight years ago, despite having fewer captains, according to a report recently released by Michigan Sea Grant and produced by the Great Lakes Sea Grant Network.

The state's 468 charter captains received an estimated total of \$10.1 million in fees in 2002, compared with an inflation-adjusted estimated \$6.7 million for 543 captains in 1994.

The 274 Lake Michigan-based charter fishing firms had the largest estimated total sales at \$5.1 million, followed by lakes Erie/St. Clair, Lake Huron and Lake Superior.

Salmonids -- lake trout, salmon and steelhead (rainbow trout) -- were the most popular species sought in 2002, the targets of 21,399 trips.

"The Great Lakes sport fishery has rebounded from its low point in the early 1990s when disease was rampant in salmonids," says Chuck Pistis, Sea Grant Extension agent and co-author of the report. "The economic investments in and contributions of the charter fishing industry mirror the recovery in the Great Lakes fishery during that time."

Pistis says that charter fishing clients also contributed significantly to the economies of Michigan's coastal communities in 2002, spending an estimated \$19.8 million on food, lodging and other local purchases in Michigan's Great Lakes ports.

(over)

Nineteen percent of the captains responding to the survey rely on charter fishing as their primary livelihood, up from 13 percent in 1994, and 52 percent rated it as a secondary source of income in 2002, down from 66.5 percent in 1994. Almost 60 percent of captains plan to increase the number of trips they make over the next five years, but 18 percent plan to quit the business during that time.

Responding captains indicated that the most important concerns facing their industry are the economy, the impacts of exotic species, boating equipment/operating costs and the lack of fish/reduced fish abundance.

The Michigan industry compares well with those in other Great Lakes states. Michigan generated almost 30 percent of the total \$34.5 million charter fishing revenue in the U.S. Great Lakes region, and the value of its charter boats and equipment was \$49.1 million, almost 28 percent of the \$178 million regional total. The average boat is longer by 1 foot than the average in 1994.

The state's charter fishing fleet of 468 operations is the second largest in the Great Lakes to Ohio's 794, followed by New York (305), Wisconsin (258), Illinois/Indiana (64), Minnesota (44) and Pennsylvania (28).

"The survey is a great asset to all charter boat captains and the ports that they work out of," said Frank English, president of the Michigan Charter Boat Association. "The information is invaluable."

The complete report, *Michigan's Great Lakes Charter Fishing Industry in 2002*, is available on the Michigan Sea Grant Web site at <http://www.miseagrant.umich.edu/fisheries/>.

Michigan Sea Grant is a collaborative effort of Michigan State University and the University of Michigan in Great Lakes research, education and outreach. It is one of 30 Sea Grant programs in coastal states, supported by the National Sea Grant College Program of the National Oceanic and Atmospheric Administration (NOAA). For additional information about Michigan Sea Grant, visit [www.miseagrant.umich.edu](http://www.miseagrant.umich.edu).

Thursday, December 04, 2003

Manistee City Planning Commission:

I would like to thank the planning commission for this opportunity to speak. Tonight I will address you not as a farmer but as a citizen planner. Planners must process information to make our decisions. As citizen planners we must always ask ourselves – when; what; where; and how has the information come to us. We have to attempt to ask all the right questions.

I, like Mr Tondu, am a student of history. The industrial revolution has many influences in our lives. I am not going to play association games about what has come because of industry. I want to site two concrete manifestations of the industrial revolution.

The first manifestation is the corporation. Remember the corporation is not a person; it is an entity. Its life goes beyond all of us; it has to grow; it has to make money.

Ask yourself What is the local record of this company?

The corporation has to hire people to speak for it. This brings me to the next enterprise spawned by the industrial revolution; the public relations industry. It is imperative to ask yourself "Are you basing your decision on a public relations campaign?"

Public relations employs the art of manipulation. It uses catchy phrases such as:

Win win situation

The solution to pollution is dilution

Sound science

Clean coal

This sort of manipulation does not entail lies of commission, but entails lies of omission. Public relations attempts to disguise the identity of the client whose message has been planted in someone else's mouth. This third party technique tends to corrupt any entity it touches, be it science, journalism or government. Using lies of omission rather than lies of commission enables people who participate in front groups to rationalize that they are not doing anything wrong. This type of rationalization has led us to many difficulties including problems associated with free trade and corporate responsibility.

The marriage of corporations and public relations could be called reasoned insanity.

Clean Coal

Sound science

Sound byte

Your duty as a planning commission is to find if the application is complete. Does it contain lies of commission or lies of omission?

Any way you look at it --- to make an informed democratic decision you need complete information. Are you satisfied with your information?

Thank you,

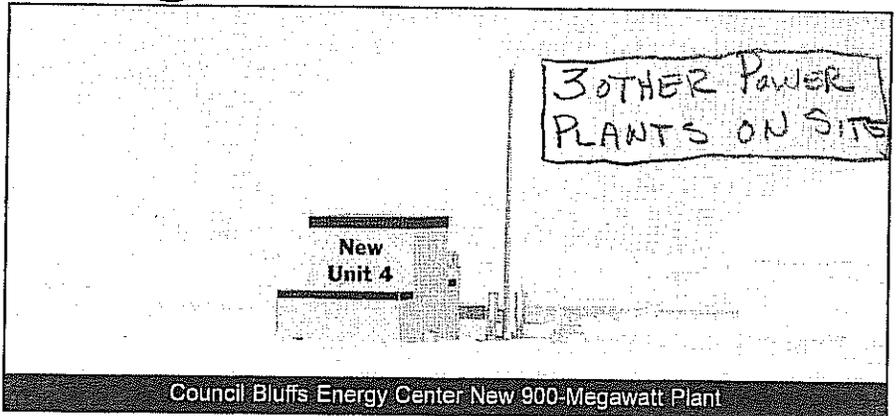
Bernard Ware Jr

# UNDER CONSTRUCTION AT THIS JUST THE FACTS TIME

## Council Bluffs Energy Center New 900-Megawatt Plant

### Background

To ensure a long-term positive impact on Iowa's economy and a secure supply of electricity, MidAmerican Energy will construct a new 900-megawatt coal-fueled electric generating plant at the existing Council Bluffs Energy Center. When the additional generation is added, the Council Bluffs Energy Center will be capable of producing 1,700 megawatts of electricity per hour.



The proposed \$1.4 billion facility will be the largest electric generation construction project in Iowa. It is projected to come online during spring 2007.

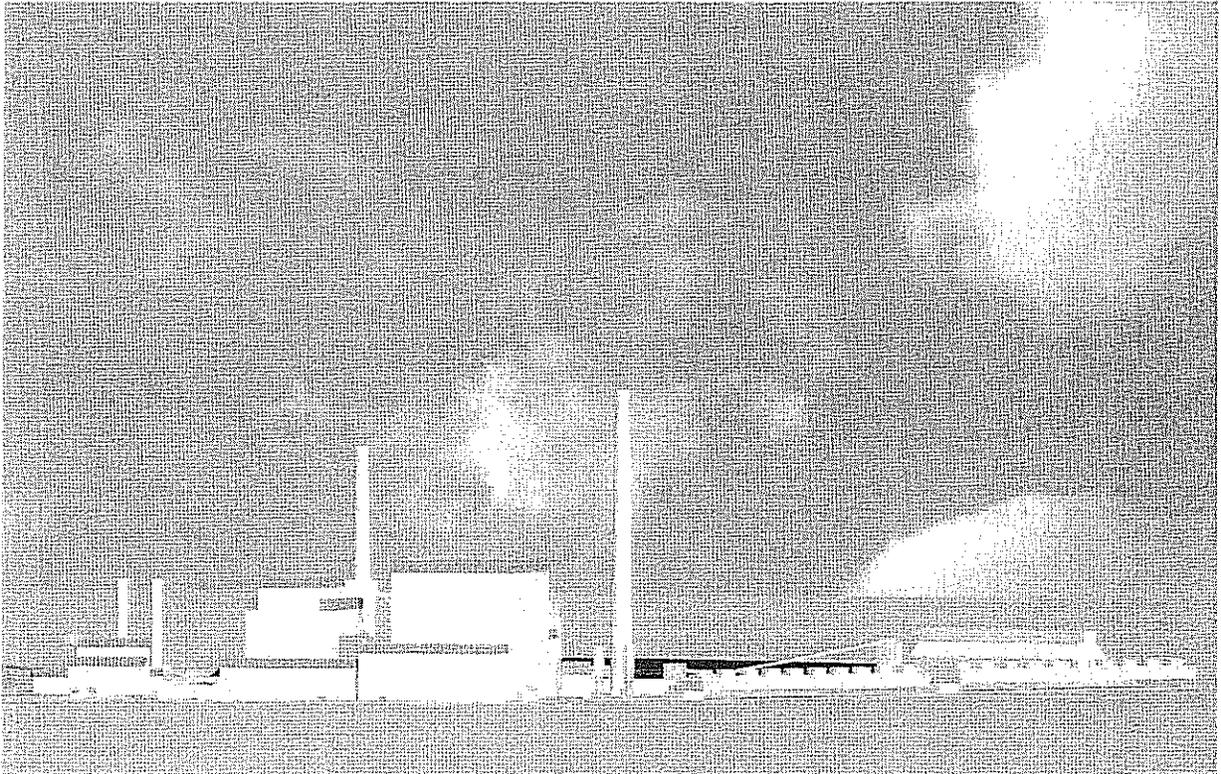
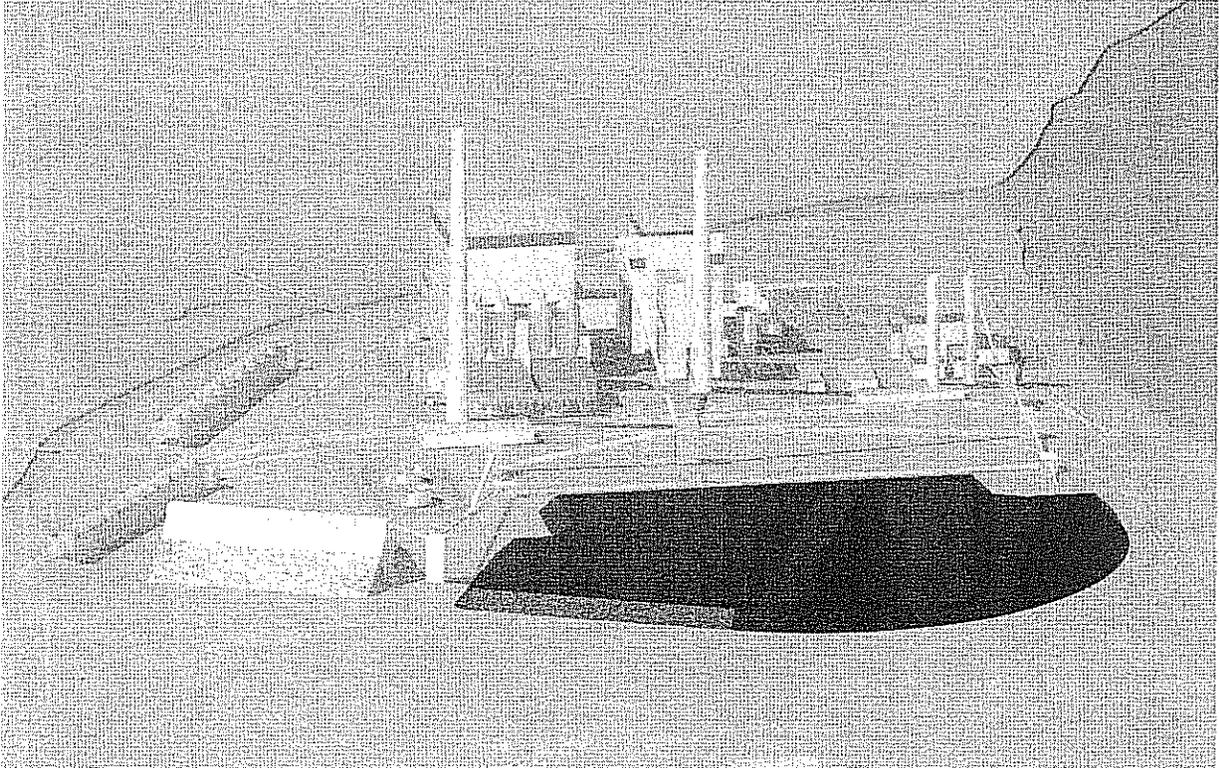
- MidAmerican will be the developer and operator of the project. Several other power industry partners also will be involved in ownership.
- Employment during construction is expected to peak at more than 1,000 workers, with an estimated \$300 million in construction payroll.
- The expansion is projected to require 77 operations employees at the plant, with a combined annual payroll of \$4.8 million. Currently, Council Bluffs Energy Center employs 146 people.

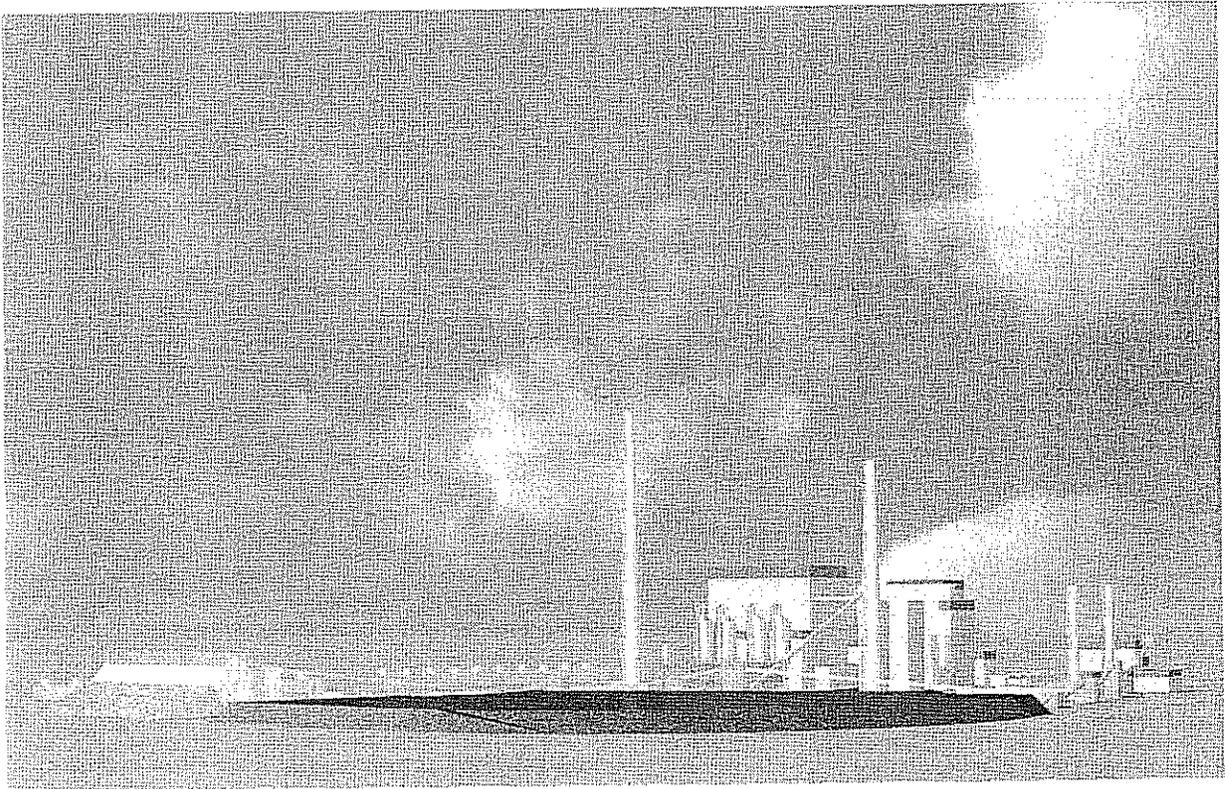
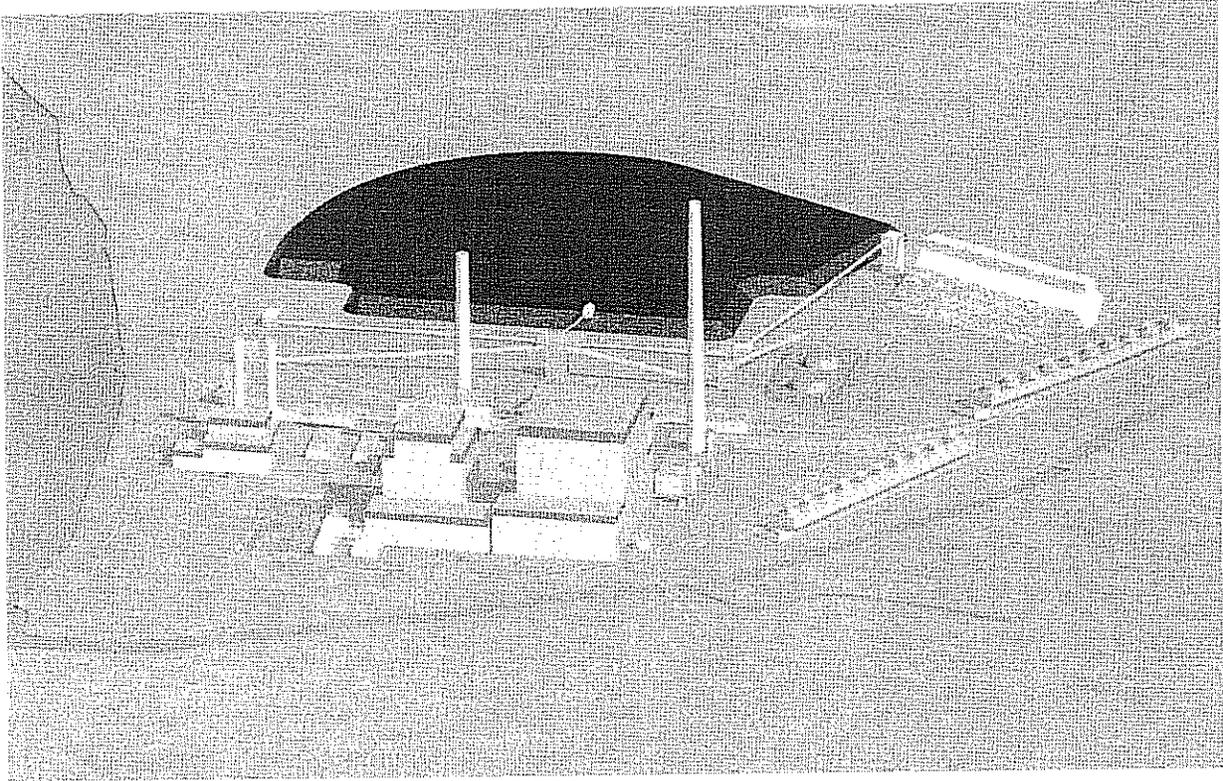
### Environmental Considerations

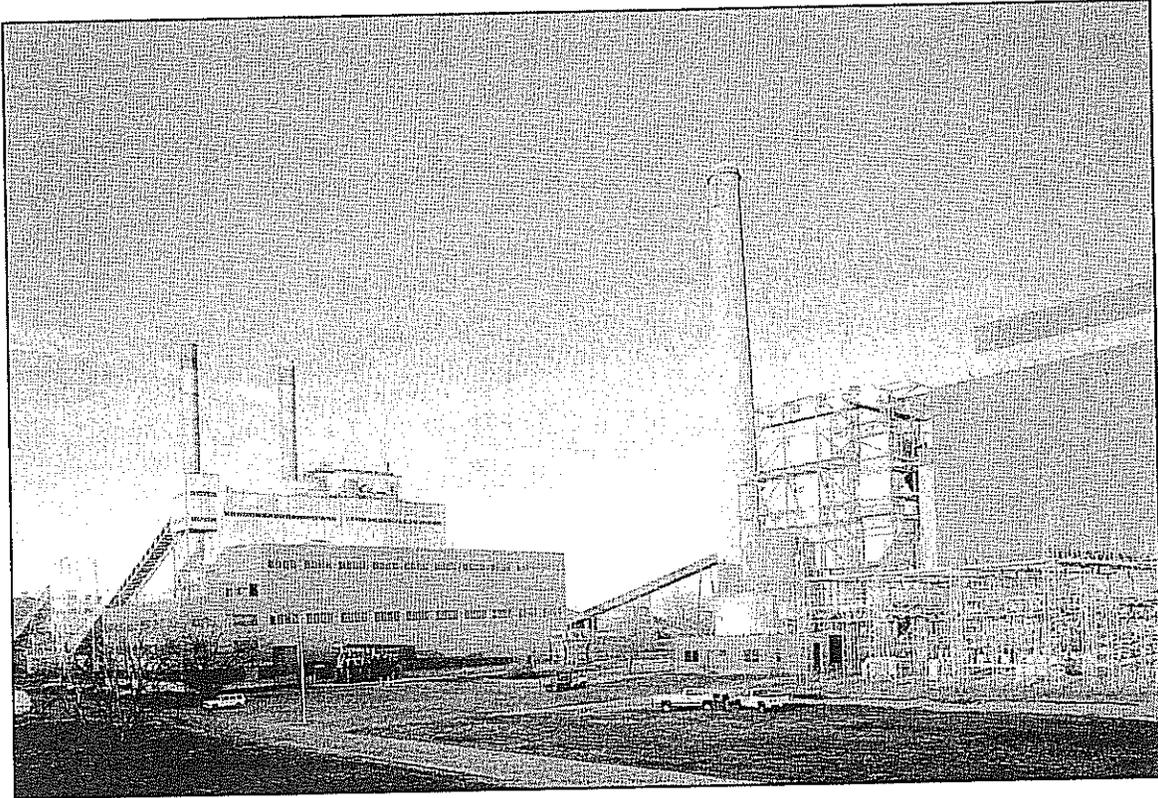
Consistent with MidAmerican's environmental commitment, the company will operate the plant in an environmentally responsible manner. MidAmerican will employ best available control technology to control air emissions, and will meet or exceed all required environmental standards for a new, coal-fueled generation plant. Necessary permits will be filed and the review and approval process will begin later this year.

### Transmission of Electricity

The transmission system moves electricity from the power plant to the points where it is distributed to customers. New transmission lines and substations will likely be required to strengthen the existing transmission system to enable the delivery of the new electric supply. The type and locations of these electrical facilities is currently under study. All new transmission lines will be sited and constructed under the rules of the appropriate state utility regulatory authority.







Council Bluffs Energy Center

EXISTING POWER PLANTS

**Manistee Chamber of Commerce**

---

**From:** "edo" <edo@manistee.com>  
**To:** <chamber@manistee.com>  
**Sent:** Tuesday, December 02, 2003 10:47 AM  
**Attach:** MidAmerican Plant Info.pdf; CBEC Images.pdf  
**Subject:** Fw: Council Bluffs Infor

----- Original Message -----

**From:** Matt Buchanan  
**To:** edo@manistee.com  
**Sent:** Tuesday, December 02, 2003 7:18 AM  
**Subject:** Council Bluffs Infor

Matt Buchanan  
Vice President of Economic Development  
Council Bluffs Area Chamber of Commerce  
7 North Sixth Street  
P.O. Box 1565  
Council Bluffs, IA 51502  
(712) 325-1000  
Fax (712) 322-5698



# Iowa's Leading Edge. Our Community

**W**e've told you reasons why Council Bluffs – "Iowa's Leading Edge" – is a wonderful community in which to live, and now here's the proof.

Every day, people contact the Council Bluffs Area Chamber of Commerce requesting information about our city. The following sections are an attempt to answer some of the more-frequently-asked questions about our community.

You will find facts about our low cost of living, growing populations and other demographic information. Also included is information about the government in Council Bluffs and surrounding areas, our economic environment and more.

All these factors combined make Council Bluffs a great place to live ...

## Cost of Living

The cost of living in the Council Bluffs-Omaha metropolitan area is well below the national average. In the First Quarter 2002 City-to-City Cost-of-Living Comparison, the area was 8.1 percent below the national average, and in housing it was 15.5 percent below the national average.\*

\*Source: ACCRA Cost of Living Index

## Climate

The weather in Council Bluffs will allow you to experience the beauty of the four seasons: spring, summer, fall and winter.

The summers are typically warm and humid, and the winters are seasonably cold.

Most precipitation occurs March through September in the form of showers and thunderstorms. The average winter temperature is 24.8 degrees F, while the average summer temperature is 73.8 degrees F.

For the most current weather update, visit the National Weather Service web site at [www.nws.noaa.gov](http://www.nws.noaa.gov)

## Geography

Council Bluffs is located in southwest Iowa on the banks of the Missouri River. The city, located in Pottawattamie County, extends from the banks of the river to the scenic Loess Hills, among the nation's most scenic byways.

The elevation of the city is 1,289 feet above sea level. Council Bluffs surrounds a centralized business district.

Interstates 80 and 29 intersect in the southern portion of the city, which is served by two regional shopping areas, Mall of the Bluffs and the Manawa Power Centre.

The city limits of Council Bluffs cover more than 42 square miles.

## Population

The population of the city of Council Bluffs is 58,268, a 7 percent increase over 1990, while Pottawattamie County has a population of 87,704, a 6.1 percent increase.

The state of Iowa has a population of 2,862,447. Both Council Bluffs and Pottawattamie County had stronger growth rates than the state of Iowa, which had a 5.4 percent growth rate.

The city is part of a five-county metropolitan area, including Cass, Douglas, Sarpy and Washington counties in Nebraska and Pottawattamie County in Iowa.

The city of Omaha has a population of 390,007. The metro area has a population of 716,998, with more than 1 million people living within 50 miles of Council Bluffs.

## Average Household Size

Council Bluffs: 2.49  
Metropolitan Area: 2.5

## 2001 Median Home Value

Council Bluffs: \$78,200

## Average Income

The average household income for the city of Council Bluffs is \$36,221 and \$40,089 for Pottawattamie County.

Average household income is the estimated average amount per household of total income received during the calendar year for all persons residing in a jurisdiction.

## Median Age of Adults

The median age of residents living in Council Bluffs is 34.6 years old and within Pottawattamie County is 36.5.

## Taxes

■ **Income Taxes:** The state of Iowa taxes wages and compensation that are subject to federal withholding and subject to Iowa withholding. For more information regarding rate of taxation for income, contact the Iowa Department of Revenue and Finance at (800) 367-3388.

■ **Property Tax:** Property in Iowa is assessed every year on real property such as buildings and land. Residential property receives a state mandated roll back on assessed valuations, which fluctuates between 54–59 percent of the actual value.

In the city of Council Bluffs in the Council Bluffs School District, the tax rate is \$37.97 per \$1,000 of the roll back value. Homestead tax credits and military exemptions are also available.

For more information regarding other tax districts, contact the county auditor's office at 227 S. Sixth St., or call (712) 328-5700.

■ **Sales Tax:** Iowa's sales tax applies to all goods and services (except food and medicine and other certain items), which are taxed 5 percent. The city of Council Bluffs and Pottawattamie County Schools each have a 1 percent local sales tax. Total sales tax is 7 percent.



# Iowa's Leading Edge. Our Community

## Government

**City:** The city of Council Bluffs is operated under a nonpartisan mayor/council form, with the mayor and five council members elected at-large by a popular vote.

To be eligible for election, residents must be 18 years of age and an eligible/qualified voter in the city of Council Bluffs.

The mayor is responsible for the day-to-day operation of the city, and it is the responsibility of the city council to establish city policy and certify the budget.

The council meets the second and fourth Monday of every month at 7 p.m. at City Hall, 209 Pearl St., Second Floor. During December, the council meets once.

For further information, call the city clerk at (712) 328-4616.

### ■ Mayor:

Thomas P. Hanafan, 2006

### City Council:

- Scott Belt, 2006
- Emil Pavich, 2004
- Chad Primmer, 2004
- David Tobias, 2006
- Matt Walsh, 2004

### County:

Pottawattamie County is operated under a five-member board of supervisors elected at-large. To be eligible to be elected, a candidate must be 18 years of age and a resident of the county.

The board of supervisors meets every Monday and Wednesday at 9 a.m. at the Pottawattamie County Courthouse, 227 S. Sixth St., Second Floor, Board of Supervisors Hearing Room.

Also elected are the county attorney, auditor, recorder, sheriff and treasurer. For further information, call (712) 328-5644.

## Pottawattamie County

### Board of Supervisors:

- Betty Moats, 2006
- Lynn Leaders, 2006
- Delbert King, 2004
- Melvyn Houser, 2004
- Loren Knauss, 2006

## Pottawattamie County

### Elected Officials:

- Sheriff - Jeff Danker, 2004
- Treasurer - Judy Miller, 2006
- Attorney - Matt Wilber, 2006
- Recorder - John Sciortino, 2006
- Auditor - Marilyn Drake, 2004

## Media

### Daily Newspapers & Publications:

- The Daily Nonpareil  
117 Pearl St.  
Council Bluffs, IA 51503  
(712) 328-1811
- The Des Moines Register  
715 Locust St.  
Des Moines, IA 50309  
(515) 284-8000
- The Omaha World-Herald  
1334 Dodge St.  
Omaha, NE 68102  
(402) 444-1000

### Weekly Publications:

- The Bulletin  
152 Vine St.  
Council Bluffs, IA 51503  
(712) 323-1898
- Midlands Business Journal  
1279 S. 120th St.  
Omaha, NE 68144  
(402) 330-1760
- Thrifty Nickel Want Ads  
42nd and Center, Suite 202  
Omaha, NE 68106  
(402) 347-4426

## Radio Stations:

There are more than 22 radio stations within the metropolitan area. Formats range from rock to classical, country, Christian, easy-listening, jazz, blues, all-news formats and Hispanic-speaking.

## Television Stations:

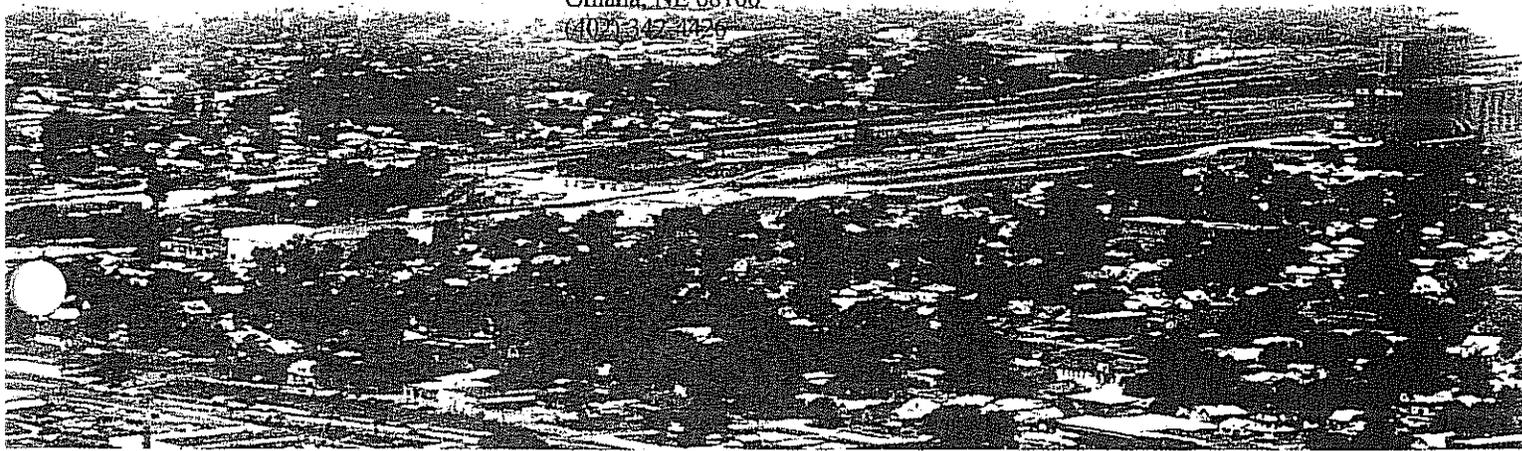
There are eight broadcast stations in the metropolitan area:

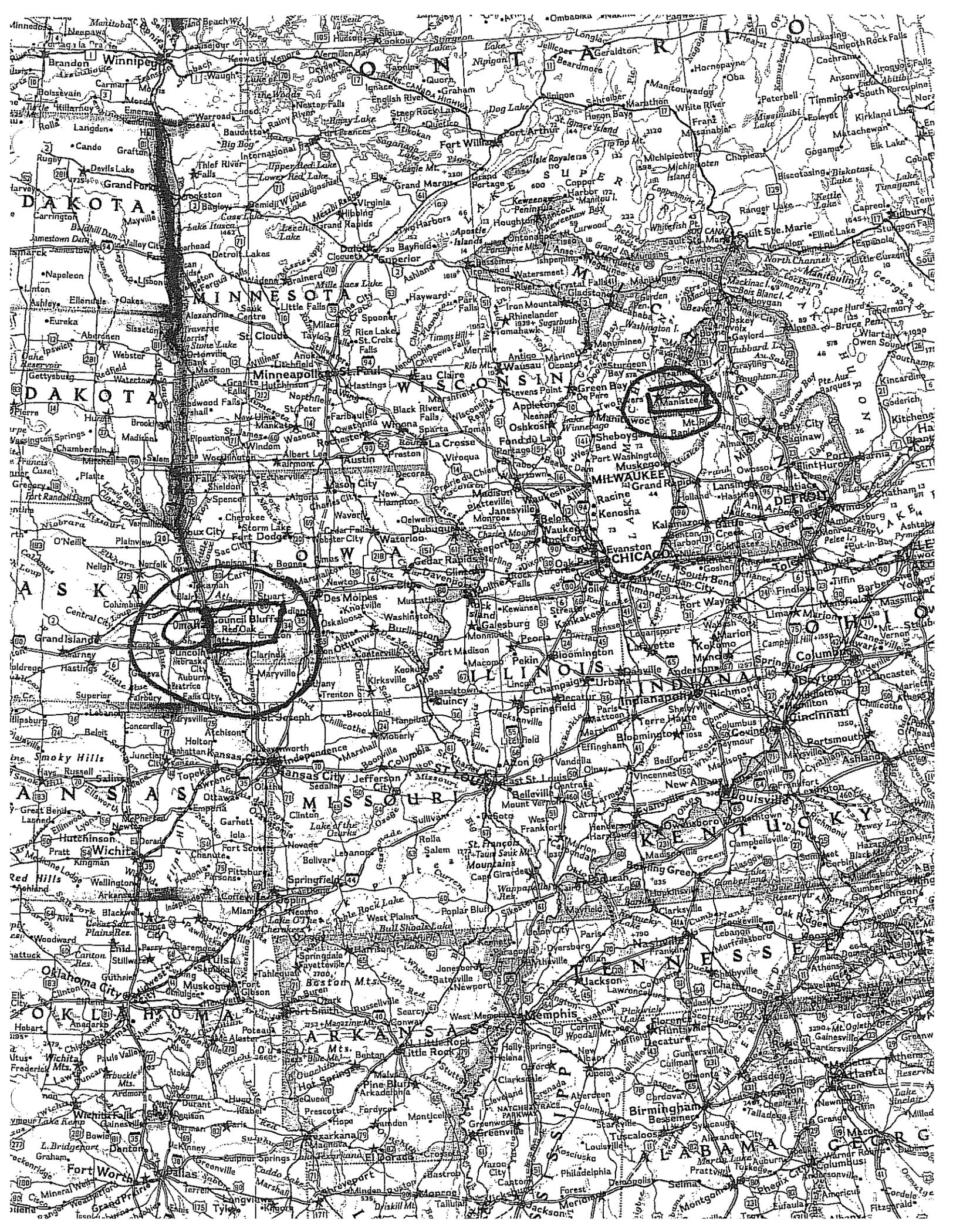
- KBIN, Iowa PBS affiliate, Channel 32 (Cox, Channel 13)
- KETV, ABC affiliate, Channel 7 (Cox, Channel 9)
- KMTV, CBS affiliate, Channel 3 (Cox, Channel 5)
- KPTM, Fox affiliate, Channel 42 (Cox, Channel 10)
- KXVO, independent, Channel 15 (Cox, Channel 11)
- KYNE, Nebraska PBS affiliate, Channel 26 (Cox, Channel 12)
- WOWT, NBC affiliate, Channel 6 (Cox, Channel 8)
- CBTV, independent, Channel 17 (Cox, Channel 17)

Council Bluffs is also served by four local cable stations: Cox Channels 17, 18, 22 and 23. Cable television service is available from Cox Communications at (402) 933-3000.

## Area Communities

Other communities in Pottawattamie County include: Avoca, Carson, Carter Lake, Crescent, Hancock, Macedonia, McClelland, Minden, Neola, Oakland, Treynor, Underwood and Walnut.





My name is Jan Shireman  
and I live in Pleasanton Township.

First, I would like to make some  
general remarks and then some  
specific comments and questions.  
I would expect you <sup>your selves</sup> to want  
these questions answered prior  
to issuing a Special Use permit.

↳ regarding the special use permit  
application for the proposed  
Tondy plant.

I'm here because I am a  
long-term resident homeowner  
and business owner who is  
concerned about the economic and  
environmental impacts of the  
proposed Tondy Coal plant on  
our community. I am also here  
because I have an 8 year old  
son and a 10 yr. old daughter  
(who has asthma) and I want  
you to know that your decisions  
about this proposed coal plant  
will affect their lives.

If - Mr. Tondu had proposed to build a giant bubble over the coal plant, thereby stopping the thousand of pounds of hazardous pollutants from spreading across our county and region I would have no reason to be here. But of course, he hasn't proposed building a bubble and so citizens comment from the broader community are relevant.

I am not opposed to industry per se. In Pleasanton Township we have a large gravel pit and a large industrial concrete plant as well as extensive gas+oil production facilities. I have lived as neighbors with these industries.

I am opposed to a 425 Megawatt coal burning plant in Manistee. It is not an appropriate industry for our area.

More Specifically, I would like to address my concerns about the Special Use permit application.

On page 6, Titled Environmental Checklist, question number 8 asks: Will the project involve the generation of hazardous waste? Mr. Tondou has circled a no answer to that question. I ask, aren't <sup>the</sup> 420 pounds of mercury and the 832 pounds of lead that the plant is projected to generate considered hazardous waste?

Also on page 6 of the Environmental Checklist question number 9 asks: "Will the project involve the on-site treatment, storage or disposal of hazardous waste?" Mr. Tondou has answered no. This answer seems inconsistent with answers he gave on page 8 under the Title, Hazardous Substances Reporting Form for Site Plan Review. Here, Mr. Tondou says "yes" the proposed facility will store, use or generate hazardous substances as defined in the Zoning Ordinance. I ask - why the inconsistent answers to these questions and what is the truth?

Continuing with the Special Use Permit Application on page 8 under the Hazardous Substance Reporting form question number two asks: "Will hazardous substances or polluting materials be reused or recycled on site?" Mr. Tondy has answered no. But if you look on Page 3 of Attachment A Section E it states the "4 trucks of bottom ash per day will be recycled. I ask, Is bottom ash not considered a hazardous substance? This needs clarification.

Finally, there have not been been studies done to adequately answer concerns about the increased bridges openings that this proposed project will require. (And now you have some \$ from the Tribe to conduct those studies) Attachment A, page 4, section F, titled Freighter Traffic states that due to unpredictable weather and lake conditions, Mr Tondy can not guarantee that bridge openings will be restricted to low use hours. This issue needs much more investigation by the city

before the special use permit application is considered complete.

I would like to leave you with a small reality-check illustration.

I have here a regular household thermometer for human use. It contains somewhere between  $\frac{1}{10}$  and  $\frac{1}{20}$  of a teaspoon of mercury. According to the National Wildlife Federation it takes  $\frac{1}{20}$  of a teaspoon to contaminate an entire 25 acre lake to the point that the fish are unsafe to eat.

If you or I smashed this thermometer on the floor right now scattered this hazardous material everywhere endangering all the folks in this room, we would get in very deep trouble = possibly go to jail. — Mr. Tonde proposes to spread 420 pounds of mercury across our county every year, while he collects from his actions. Just something to think about.

Thank you for your time,  
Jan Shireman, Jan Shireman,

Original URL: <http://www.jsonline.com/bym/news/nov02/93168.asp>

## Norquist joins with opponents of coal-fired power plants

By LEE HAWKINS JR.  
[lhawkins@journalsentinel.com](mailto:lhawkins@journalsentinel.com)

*Last Updated: Nov. 4, 2002*

Milwaukee Mayor John O. Norquist is siding with an environmental group against Wisconsin Energy Corp.'s plans for coal-fired power plants in Oak Creek, arguing that the plants should use natural gas to produce power.

Norquist last week sent a letter to S.C. Johnson & Son Inc. Chairman Emeritus Samuel C. Johnson, saying the massive expansion, proposed at the site of an existing Oak Creek plant, could worsen pollution in Racine County.

S.C. Johnson and several environmental, religious and other business interests late last month formed a group called RESET - Responsible Energy For Southeastern Wisconsin's Tomorrow - to challenge Wisconsin Energy's plan.

The Oak Creek project, which involves construction of three coal-fired plants, is part of Wisconsin Energy's 10-year, \$7 billion "Power to the Future" plan to bring needed additional electricity to state customers. RESET is the first organized opposition to emerge to the plan.

A proposal from Wisconsin Public Service Corp. and Minnesota Power Inc. to bring a 210-mile power line across northern Wisconsin has run into opposition from local governments and landowners, and it faces cost overruns.

In the letter, Norquist praises natural gas as a cleaner-burning fuel than coal. It "has virtually no mercury emissions, and the reductions in sulfur dioxide, nitrogen oxides and particulate matter are significant," he says.

In an interview Monday, Norquist said he wants Wisconsin Energy and concerned citizens to do a thorough cost-benefit analysis of the pros and cons of coal plants vs. natural gas plants.

Wisconsin Energy acknowledged that natural gas burns cleaner than coal, but said gas prices can be volatile and can lead to higher energy bills.

Too much natural gas in Wisconsin Energy's generation mix "could have a big impact on people in Milwaukee, particularly those on fixed incomes," spokesman Mike John said.

The coalition opposing the plants includes officials from the Town of Caledonia, which would be near the plant site. It has said the plants would lower surrounding property values and create problems.

S.C. Johnson has said the plants might also make it harder to attract and retain businesses.

Norquist agreed.

"These coal-fired plants have the potential to make our region less attractive to businesses, especially when we use valuable lakefront property and threaten Lake Michigan by building three coal-fired plants so close to the water's edge," he said.

At the least, the public should receive more information about the benefits of natural gas as opposed to coal, Norquist said.

Wisconsin Energy has said the new plants would produce less carbon dioxide than older coal-fired plants and would have cleaner emissions. The new plants would remove 70% of mercury, 95% of sulfur dioxide and 90% of nitrogen oxides from emissions, the company has said.

Wisconsin Energy and S.C. Johnson representatives have met several times over the past year to discuss the dispute, but have not been able to reach an agreement. Those fruitless talks have prompted Wisconsin Energy executives to travel the state to ease the concerns of businesses, community groups and others about Power to the Future.

A version of this story appeared in the Milwaukee Journal Sentinel on Nov. 5, 2002.

To The Editor;

The contrasting views presented by industry and environmental advocates regarding the proposed coal fired electric generating plant is an unquestionable paradox. Whether one prefers viewing the world through data or visceral perception, both of their views are equally relevant to all of us.

Approving the Northern Lights Power plant is certainly a difficult decision to make. Cleaning up the toxic brownfield left by General Chemical and providing employment to the area is a positive. Yet it's myopic to believe that a plant of such magnitude would have limited environmental impact.

Central to the issue is the future direction of the city itself, primarily in terms of its economic configuration. We seem to be presented a dichotomy. Some would argue a vision of a balance among industry, tourism, and agriculture. Still others would like to return to the days of Manistee as an industrial community, but in the world economy, that is probably just a distant memory. If industry is to come to Manistee, its imperative to the area that past environmental impacts are not repeated becoming the Achilles heel of the future.

Each person who commented on the issue, and each published article, offers generally valid and compelling rationale. Whether factual or emotional the appeal, the common thread is what's best for the citizens of the area today and into the future. Mr. Tondu's depiction of our life and life span since the industrial revolution is at best an effort trying to justify the past as a criterion for the future. Certainly, the need for electricity and employment are two given constraints. But no less vital are the requirements of superior air quality and the protection of the area watershed. With natural resources abundant in Manistee, the imperative is to protect them, not spend them down.

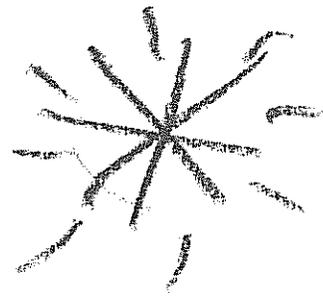
Perhaps a future vision that needs close examination is Manistee as a retirement vista. In addition to agriculture, light industry, and tourism, Northern Michigan is increasingly becoming a retirement destination. With a large sector of our population entering retirement age (AKA baby boomers), Manistee could be a prime location. Conversely, if environmental conditions are viewed negatively in the community, the retirement population and others now living here will choose to ignore or leave the area with negative economic consequences the result. With all the natural resources in the area, due caution needs to be exercised or the consequences will have far greater negative impact to the area than any realized gains.

Contrary to opinions that only industry provides higher a standard of living, the need for professional services and skilled trades would far exceed jobs provided by industry at equally or higher standards. Servicing retirees could attract residents who earn more and spend more than industrial workers.

For everyone today, and for generations that will follow, allow yourself to envision an idealistic Manistee and a relatively pristine deep-water port of Manistee Lake. With housing a real possibility in areas on Manistee Lake, don't allow yourself to believe that neither is obtainable. The *real* price of 60 jobs today might be a community where nobody wants to live tomorrow. Without faith progress cannot be had.

Chuck Patten  
Manistee, Michigan

I will make this brief.



I only have a few statements to make about this proposed coal burning power plant.

1. From reading letters and listening to previous comments I think this special use permit is VERY incomplete. Before this permit is given you ~~definitely~~ need more info.

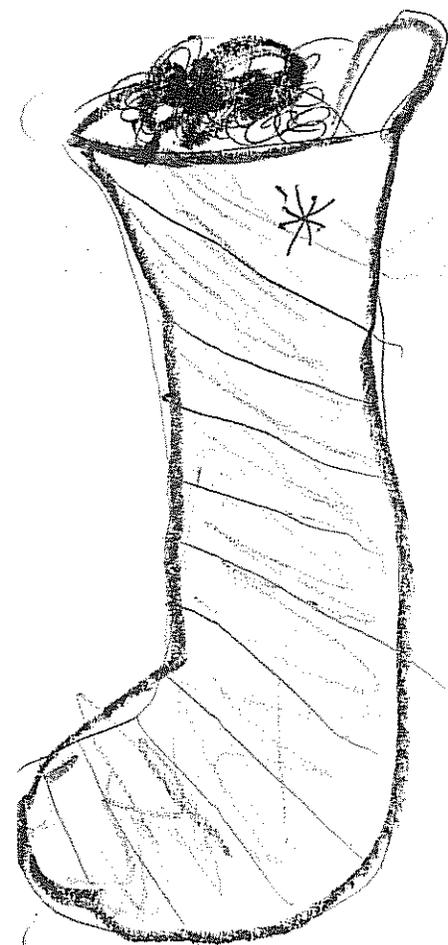
2. A coal plant would sort of gum up the area. It may be more of a hinderance than a help. ~~etc~~

Because:

A. It would release 420 pounds of mercury a year.

B. It would also release 832 pounds of lead a year.

Thanks for your  
Time.



Cindy -

Would you please present these questions and concerns to the planning commission for us? Thank you

1. With industry closing all over the state & nation, has a need for this plant been proven?
2. With the water level in the river channel getting lower all the time, boats can now come in but we'd soon have to resort to barges. There are good ports in St. Joe, Holland, Grand Haven & Muskegon that can also handle barges. Grand Haven money speaks but are clear against having this type of plant constructed in their back yard, even though this project is for their benefit. Power generation is big business, the owners of the plants benefit hugely according to the amount generated.
3. The number of jobs created for Man-ister does not justify the health risk to the population of the whole area, this is too big a health hazard to an area already compromised by pollution.



Have we not always been concerned and re-  
sentful of the pollution coming across the lake  
& now we want to add to our own problem?

**CITY OF MANISTEE  
PLANNING COMMISSION  
MEETING/WORKSESSION DATES  
2004**

**Meeting Dates**

January 8, 2004  
February 5, 2004  
March 4, 2004  
April 1, 2004  
May 6, 2004  
June 3, 2004  
July 1, 2004  
August 5, 2004  
September 2, 2004  
October 7, 2004  
November 4, 2004  
December 2, 2004

**Worksession Dates**

January 22, 2004  
February 19, 2004  
March 18, 2004  
April 15, 2004  
May 20, 2004 (Annual Bus Tour)  
No Worksession  
July 22, 2004  
No Worksession  
September 16, 2004  
October 21, 2004  
November 18, 2004  
No Worksession

# MANISTEE CITY PLANNING COMMISSION

## COMMISSION MEMBERS - 2004

December 5, 2003

Commission Members	Term Expiration	Committee Assignments
<b>DAVIS, Bob</b> 410 Cedar Street Manistee, MI 49660 (h) 398-3055 <span style="float: right;">2000</span>	10/2005	Historic Overlay/Site Plan Review Committee - Alternate
<b>FORTIER, Edward Ray</b> 367 Eleventh Street P.O. Box 404 Manistee, MI 49660 (h) 723-7258 <span style="float: right;">1997</span>	10/2003  Vice-Chair	Joint City Ordinance Review Committee Ordinance Re-Write Committee Zoning Board of Appeals
<b>FERGUSON, Greg</b> 207 St. Mary's Parkway Manistee, MI 49660 (h) 398-9001 <span style="float: right;">2001</span>	10/2003	Bike Trails Master Plan Review Committee Ordinance Re-Write Committee
<b>FULLER, Cyndy</b> 18 Cottage Lane Manistee, MI 49660 (w) 723-0070 <span style="float: right;">2003</span>	10/2005	
<b>JOHNSON-ROSS, Christa</b> 215 First Avenue Manistee, MI 49660 (h) 723-5175 <span style="float: right;">2003</span>	10/2004	
<b>KELLEY, David</b> 337 ½ Sixth Street Manistee, MI 49660 (h) 723-8308 <span style="float: right;">2001</span>	10/2003	Historic Overlay/Site Plan Review Committee
<b>SLAWINSKI, Anthony</b> 384 Seventh Street Manistee, MI 49660 (h) 723-2992 <span style="float: right;">1977</span>	10/2004	Master Plan Review Committee
<b>WITTLIEF, Mark</b> 363 Tenth Street Manistee, MI 49660 (h) 723-9540 <span style="float: right;">2003</span>	10/2004	
<b>YODER, Roger</b> 225 Seventh Street Manistee, MI 49660 (h) 723-6926 <span style="float: right;">1984</span>	10/2005  Chairman	Historic Overlay/Site Plan Review Joint City Ordinance Review Committee Ordinance Re-Write Committee
<b>ROSE, Jon</b> (w) 723-2558 ext 12	Liaison to the Planning Commission	
<b>BLAKESLEE, Denise</b> (w) 723-2558	Recording Secretary	

municipalities. Regardless of the ownership structure, the Plant will either pay taxes or a community services payment. The Plant will not begin construction until an amount is negotiated that is satisfactory with the proper officials.

#### **What impact will the Plant have on tourism?**

The Northern Lights Plant will have little or no negative impact on tourism in Manistee County. In fact, the Plant should have a positive impact on tourism with the increased number of on-site labor and additional income in the area.

#### **What impact will the Plant have on property values?**

If our experience with the construction of the TES Plant is a guide, some of the construction workers who do not live in Manistee will stay and buy homes, in addition to the operating staff, which should increase property values in the area.

#### **What impact will the Plant have on the quality of life in Manistee?**

The Northern Lights Plant will improve the quality of life in Manistee in several ways. First, the existing site will be transformed into a new, clean operating site. Second, the additional jobs, service infrastructure, and revenue will bring the City and County an economic boost. Finally, Michigan citizens will enjoy the stable and low-cost power that is generated by a state-of-the-art baseload power plant.

#### **What is the net economic impact of the Plant?**

The projected annual budget for the Northern Lights Plant calls for \$4 million in payroll and \$11 million in third party services. These services include trucking, landfill payments, suppliers, contract maintenance workers, equipment purchases, and general plant expenses, most of which will stay in Manistee. Our on-site labor budget is over \$100 million. Those wages and benefits will be paid over three years to the people building the plant.

#### **Will a bond be required for future site cleanup?**

This question implies that the owners of the Plant will abandon it at some time in the future. This is unheard of with an operating, baseload, coal-fired power plant. For a plant of this size to be built, long term financing will be required. This financing will require long term power purchase commitments, making an operating power plant one of the most stable operating companies to work for.

#### **Why not build windmills instead of the Plant?**

The Northern Lights Plant is a 425 megawatt facility, producing 3,351 gigawatt hours of electricity per year running at 90% capacity. Wind turbines vary in size and generating capacity, but the industry average is each windmill generates 1 megawatt of electricity. In Michigan, the wind blows an average of 25% of the time. In theory, it would take 1,530 windmills to generate the same power as the Northern Lights Plant. This is equivalent to dedicating as much as 76,500 acres of land, according to data available from the American Wind Energy Association. In practice, the entire installed windmill capacity in the State of California produces less electricity annually than the Northern Lights Plant will.

### **Other General Questions regarding the Northern Lights Plant**

#### **Where will the Northern Lights Plant be located?**

Three potential sites in Michigan were evaluated. The first was the General Chemical site in Manistee. The second was adjacent to the TES Filer City Plant in Filer City on Manistee Lake. Another potential location was outside of Manistee County. As of October, 2003, our focus is now on the General Chemical site in Manistee.

and the cost to produce electricity. Scale eliminates many of these options. Non-traditional options of biomass or waste fuels are used in small-scale applications. Solar power is expensive, as much as 10 times more expensive than coal, and is practical only in small applications. The only viable option for power plants greater than about 50MW is to use coal, natural gas, oil, nuclear, or hydro as a fuel source. Nuclear plants have been rejected as an option in the U.S. for the foreseeable future. Hydro is dependent upon the availability of suitable water resources, such as a fast flowing river or one that can be dammed. There are inadequate water sources in Michigan to support a large-scale hydro facility. Wind energy has serious challenges with scale, cost and they are not reliable (when the wind stops they do not produce electricity), and therefore cannot be used for baseload power. Oil as a fuel is expensive and is primarily used in the US as an emergency backup fuel. For large-scale baseload electricity generation, the only viable fuel sources are natural gas and coal.

### **What is a "baseload" power plant?**

While electricity as a commodity is the same throughout North America, it is differentiated by the way it is used. Electricity used 24 hours a day, 7 days a week, 52 weeks per year is "baseload" electricity. Electricity that is needed for only short periods of time during the day or the year is "peaking" electricity. A household refrigerator requires baseload electricity, whereas a cooking stove requires peaking electricity. Electricity is categorized this way because it is expensive to store in large volumes, many power plants cannot quickly respond to changes in demand, and electricity must be used as it is generated or it is lost.

A baseload power plant requires low cost fuel. More capital can be invested in a baseload power plant because it will operate all the time. A peaking plant is not used very often, so the capital cost should be as low as possible, since it has to be paid for it whether it is running or not. Because a peaking plant is operated infrequently, the cost of fuel is not as much of a concern as in a baseload plant.

Until the 1980s, coal plants were the most economical option for baseload plants, but not for peaking plants. The coal plant cost more to build but the fuel was much cheaper. A gas plant was less expensive to build, but the fuel was much more expensive than coal. From the 1980s through the 1990s, this relationship changed as gas power plant technology improved. The availability of low cost natural gas and more efficient equipment led to baseload power plants being designed to burn natural gas.

### **Why use coal instead of natural gas to generate baseload electricity?**

The decision to use coal or natural gas depends on economics. When the price of natural gas was cheap, it was the fuel of choice. When gas prices increased, coal was preferred. Recently, a new element to this equation has emerged. As gas prices have risen to historic highs, existing gas reserves may not be sufficient to meet demand as supplies are depleted and shortages may be possible.

Coal, however, is very abundant in the US. There are hundreds of years of coal resources in the US. Its price is not driven by shortages as with natural gas. The price of coal is based on its mining and transportation costs. Its price is therefore predictable and stable and long-term supplies are readily available. At today's prices, electricity from a new high efficiency coal fueled power plant is less than half the cost from a comparable gas fueled facility. This represents significant savings.

### **Why were most of the recently constructed power plants fueled with natural gas?**

In the 1970s, President Carter banned the use of natural gas in electricity power plants and recognized natural gas as a premium fuel. In many applications, it is the only option. Coal is not practical in cooking stoves or heating furnaces for houses, hospitals, or schools. The pollution control equipment for such small-scale coal fueled operations is prohibitively expensive. But in a large-scale power plant, coal can be used in a clean and efficient manner. Because of this premium for gas as well as the Carter administration's belief of future shortages in gas supplies, the fuel was banned from use in large-scale electricity power plants.

In the early 1980s, this ban was lifted. Natural gas was cheap at the time and gas supplies appeared

Site 129.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistice Lake, by all modes (non-charter) of sportfishing, 1999. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month												Season
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Pink salmon	0.0077 (0.0013)	0 (0)	0 (0)	0 (0)	189 (94)	380 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	569 (94)	
Coho salmon	0.0016 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (-)	118 (15)	0 (-)	0 (-)	0 (0)	0 (0)	0 (0)	118 (15)	
Chinook salmon	0.0154 (0.0017)	0 (0)	0 (0)	0 (0)	0 (0)	326 (-)	54 (12)	758 (123)	0 (-)	0 (0)	0 (0)	0 (0)	1,138 (124)	
Rainbow trout	0.0022 (0.0008)	0 (0)	63 (25)	0 (0)	0 (0)	4 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	96 (54)	163 (60)	
Brown trout	0.0086 (0.0013)	631 (98)	0 (0)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	631 (98)	
Northern pike	0.0070 (0.0004)	0 (0)	0 (0)	42 (8)	108 (22)	325 (-)	41 (14)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	516 (28)	
White perch	0.0015 (0.0003)	0 (0)	0 (0)	0 (0)	108 (22)	0 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	108 (22)	
White bass	0.0001 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	10 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	10 (0)	
Rock bass	0.1061 (0.0236)	0 (0)	1,661 (308)	4,649 (1,695)	928 (147)	253 (-)	341 (79)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	7,832 (1,731)	
Pumpkinseed	0.0492 (0.0044)	0 (0)	485 (123)	1,371 (251)	728 (87)	480 (-)	569 (109)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	3,633 (312)	
Bluegill	0.1440 (0.0167)	0 (0)	4,327 (1,093)	1,853 (269)	2,819 (385)	1,012 (-)	584 (126)	0 (0)	0 (-)	29 (6)	0 (0)	0 (0)	10,624 (1,196)	
Smallmouth bass	0.0054 (0.0007)	0 (0)	0 (0)	106 (23)	0 (0)	148 (-)	145 (48)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	399 (54)	
Largemouth bass	0.0008 (0.0002)	0 (0)	0 (0)	0 (0)	57 (18)	0 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	57 (18)	
Black crappie	0.0259 (0.0014)	0 (0)	719 (81)	11 (2)	117 (46)	1,061 (-)	0 (0)	0 (0)	0 (-)	0 (0)	0 (0)	0 (0)	1,908 (93)	

(Site 129 continued.)

Species	Harvest per hour	Month												Season
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
Yellow perch	0.1325 (0.0089)	706 (103)	1,247 (110)	3,041 (485)	1,455 (225)	1,998	849 (229)	481	0	0	0	0	0	9,777 (604)
Walleye	0.0001 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	10 (-)	0 (0)	0 (0)	0 (-)	0 (-)	0 (-)	0 (0)	0 (0)	10 (0)
Freshwater drum	0.0024 (0.0004)	0 (0)	0 (0)	0 (0)	108 (22)	31 (-)	41 (14)	0 (0)	0 (-)	0 (-)	0 (-)	0 (0)	0 (0)	180 (26)
Angler hours		3,019 (228)	10,163 (1,528)	10,202 (653)	15,187 (722)	15,393	16,089 (732)	2,634 (145)	378 (64)	722 (319)	722 (319)	722 (319)	722 (319)	73,787 (2,000)
Angler trips		693 (181)	3,068 (631)	2,629 (629)	5,575 (834)	3,646	3,866 (522)	720 (105)	0 (-)	181 (104)	181 (104)	181 (104)	181 (104)	20,378 (1,348)
Angler days		693 (181)	2,451 (570)	2,245 (552)	4,777 (800)	3,052	2,703 (477)	628 (135)	0 (-)	174 (104)	174 (104)	174 (104)	174 (104)	16,723 (1,248)



(Site 129 continued.)

Species	Harvest per hour	Month												Season
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Other	0.0005 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	28 (14)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	28 (14)
Angler hours	0 (0)	0 (0)	7,843 (834)	6,945 (348)	12,915 (2,063)	12,429 (511)	11,398 (1,182)	5,135 (496)	2,433 (311)	59,098 (2,659)	0 (0)	0 (0)	0 (0)	0 (0)
Angler trips	0 (0)	0 (0)	2,227 (573)	2,133 (307)	3,524 (1,020)	3,062 (438)	2,661 (592)	1,222 (302)	734 (107)	15,563 (1,452)	0 (0)	0 (0)	0 (0)	0 (0)
Angler days	0 (0)	0 (0)	1,703 (496)	1,808 (306)	2,536 (809)	2,270 (406)	2,199 (559)	1,107 (303)	676 (119)	12,299 (1,256)	0 (0)	0 (0)	0 (0)	0 (0)

Site 129.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistee Lake (Manistee County), by all modes (non-charter) of sportfishing 2001. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month												Season
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Coho salmon	0.0044 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	111 (10)	167 (44)	0 (0)	278 (46)	
Chinook salmon	0.0242 (0.0078)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	884 (480)	575 (84)	66 (11)	0 (0)	0 (0)	1,525 (488)	
Rainbow trout	0.0175 (0.0017)	0 (0)	684 (77)	86 (16)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	190 (20)	145 (39)	0 (0)	1,105 (90)	
Brown trout	0.0021 (0.0003)	0 (0)	132 (18)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	132 (18)	
Northern pike	0.0005 (0.0001)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	31 (4)	0 (0)	0 (0)	0 (0)	0 (0)	31 (4)	
White sucker	0.0006 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	36 (15)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	36 (15)	
Channel catfish	0.0008 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	48 (24)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	48 (24)	
Rock bass	0.0268 (0.0037)	0 (0)	0 (0)	0 (0)	539 (97)	966 (187)	37 (18)	152 (26)	0 (0)	0 (0)	0 (0)	0 (0)	1,694 (213)	
Pumpkinseed	0.0184 (0.0028)	0 (0)	0 (0)	0 (0)	397 (61)	316 (77)	37 (18)	54 (9)	358 (128)	0 (0)	0 (0)	0 (0)	1,162 (162)	
Bluegill	0.1089 (0.0096)	0 (0)	0 (0)	60 (22)	1,168 (121)	316 (57)	0 (0)	4,688 (382)	644 (230)	0 (0)	0 (0)	0 (0)	6,876 (466)	
Smallmouth bass	0.0046 (0.0011)	0 (0)	0 (0)	0 (0)	52 (25)	33 (13)	119 (54)	18 (3)	0 (0)	70 (32)	0 (0)	0 (0)	292 (69)	
Black crappie	0.0116 (0.0017)	0 (0)	0 (0)	45 (13)	360 (41)	217 (87)	0 (0)	108 (18)	0 (0)	0 (0)	0 (0)	0 (0)	730 (99)	
Yellow perch	0.1261 (0.0099)	0 (0)	0 (0)	0 (0)	1,249 (141)	1,928 (161)	37 (18)	4,670 (382)	72 (26)	0 (0)	0 (0)	0 (0)	7,956 (439)	

(Site 129 continued.)

Species	Harvest per hour	Month												Season	
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Walleye	0.0007 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	47 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	47 (13)
Freshwater drum	0.0042 (0.0013)	0 (0)	0 (0)	0 (0)	0 (0)	46 (15)	144 (72)	0 (0)	72 (26)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	262 (78)
Angler hours	0 (0)	7,476 (750)	1,658 (217)	5,387 (647)	6,410 (366)	9,468 (1,349)	11,705 (1,957)	12,515 (2,304)	5,597 (582)	2,900 (444)	0 (0)	0 (0)	0 (0)	0 (0)	63,116 (3,558)
Angler trips	0 (0)	1,819 (478)	551 (68)	1,608 (307)	2,795 (674)	2,238 (528)	2,886 (727)	3,202 (700)	1,274 (344)	848 (221)	0 (0)	0 (0)	0 (0)	0 (0)	17,221 (1,498)
Angler days	0 (0)	1,506 (444)	509 (52)	1,397 (273)	2,455 (756)	1,931 (498)	2,518 (693)	2,565 (646)	1,161 (354)	724 (240)	0 (0)	0 (0)	0 (0)	0 (0)	14,766 (1,474)



(Sites 130 and 341 continued.)

Species	Harvest per hour	Month												Season
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Angler hours	50,793 (2,180)	86,424 (5,163)	11,733 (766)	13,985 (544)	18,181 (526)	33,761 (1,040)	127,414 (3,140)	129,806 (6,623)	48,102 (1,512)	8,567 (606)	528,766 (9,488)			
Angler trips	12,234 (895)	17,978 (1,885)	3,518 (491)	3,715 (945)	5,399 (724)	7,982 (1,067)	24,836 (1,493)	24,657 (1,851)	9,647 (893)	1,897 (335)	111,863 (3,703)			
Angler days	10,004 (811)	13,436 (1,513)	2,685 (413)	3,001 (926)	3,940 (591)	5,983 (948)	18,058 (1,258)	18,800 (1,454)	7,600 (717)	1,569 (277)	85,076 (3,084)			

Sites 130 and 341 combined.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for the Manistee River from Tippy Dam to Manistee Lake, by all modes (non-charter) of sportfishing, 2000. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month												Season
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Coho salmon	0.0034 (0.0002)	45 (30)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	521 (45)	954 (82)	493 (99)	35 (12)	2,048 (140)
Chinook salmon	0.0419 (0.0025)	0 (0)	114 (11)	0 (0)	0 (0)	0 (0)	0 (0)	812 (50)	11,241 (901)	0 (0)	12,961 (1,160)	31 (9)	0 (0)	25,159 (1,470)
Rainbow trout	0.0357 (0.0012)	1,640 (312)	10,794 (468)	2,600 (111)	215 (33)	307 (32)	362 (26)	102 (21)	491 (37)	2,354 (86)	2,250 (148)	2,250 (148)	322 (86)	21,437 (609)
Atlantic salmon	0.0001 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	74 (19)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	74 (19)
Brown trout	0.0017 (0.0001)	40 (10)	0 (0)	52 (8)	52 (15)	267 (30)	27 (4)	58 (13)	227 (25)	227 (25)	103 (12)	183 (24)	39 (9)	1,048 (54)
Brook trout	0.0000 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	22 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	22 (7)
Lake trout	0.0001 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	46 (15)	0 (0)	0 (0)	46 (15)
Northern pike	0.0003 (0.0001)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	159 (33)	0 (0)	0 (0)	4 (0)	18 (4)	0 (0)	181 (33)
White sucker	0.0015 (0.0002)	0 (0)	368 (21)	531 (89)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	899 (91)
Bluegill	0.0006 (0.0001)	0 (0)	0 (0)	0 (0)	111 (35)	6 (2)	253 (44)	7 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	377 (57)
Smallmouth bass	0.0002 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	14 (3)	88 (16)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	102 (16)
Black crappie	0.0000 (0.0000)	0 (0)	0 (0)	0 (0)	30 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	30 (9)
Yellow perch	0.0007 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	413 (138)	0 (0)	0 (0)	413 (138)

(Sites 130 and 341 combined, combined.)

Species	Harvest per hour	Month												Season	
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Walleye	0.0004 (0.0001)	0 (0)	17 (5)	0 (0)	13 (6)	0 (0)	0 (0)	151 (29)	79 (11)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	260 (32)
Other	0.0008 (0.0001)	0 (0)	0 (0)	272 (44)	65 (19)	144 (46)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	481 (67)
Angler hours		20,204 (3,956)	114,601 (3,811)	67,139 (2,796)	12,380 (1,094)	12,553 (613)	22,995 (774)	28,603 (769)	144,974 (5,696)	115,975 (4,006)	48,904 (1,528)	111,919 (740)	600,247 (9,599)		
Angler trips		5,241 (1,123)	22,733 (1,373)	13,862 (1,113)	3,854 (574)	3,370 (651)	7,103 (866)	7,716 (955)	28,036 (2,123)	24,487 (1,512)	9,505 (708)	2,251 (413)	128,158 (3,777)		
Angler days		3,882 (780)	18,085 (1,210)	10,692 (921)	2,810 (451)	2,794 (562)	5,787 (796)	6,298 (902)	20,110 (1,599)	19,521 (1,311)	8,116 (684)	2,185 (413)	100,280 (3,131)		

Sites 130 and 341 combined.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for the Manistee River from Tippy Dam to Manistee Lake, by all modes (non-charter) of sportfishing, 2001. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month												Season
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Coho salmon	0.0017 (0.0003)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	257 (37)	843 (158)	0 (0)	0 (0)	0 (0)	1,100 (162)
Chinook salmon	0.0567 (0.0035)	0 (0)	0 (0)	0 (0)	0 (0)	104 (9)	0 (0)	2,011 (172)	16,613 (1,137)	17,770 (1,776)	61 (31)	0 (0)	0 (0)	36,559 (2,116)
Rainbow trout	0.0318 (0.0014)	621 (49)	2,551 (108)	5,061 (424)	125 (28)	476 (47)	232 (59)	54 (9)	756 (49)	7,035 (570)	2,406 (149)	1,190 (80)	20,507 (746)	
Brown trout	0.0009 (0.0001)	52 (6)	45 (9)	5 (2)	0 (0)	46 (8)	10 (3)	0 (0)	196 (40)	132 (12)	12 (6)	94 (27)	592 (52)	
Lake trout	0.0000 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	19 (6)	0 (0)	19 (6)	
Northern pike	0.0000 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	20 (4)	0 (0)	0 (0)	0 (0)	20 (4)	
White sucker	0.0030 (0.0003)	0 (0)	485 (129)	1,425 (179)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,910 (221)	
Rock bass	0.0011 (0.0001)	0 (0)	0 (0)	0 (0)	102 (10)	414 (42)	0 (0)	165 (25)	0 (0)	0 (0)	0 (0)	0 (0)	681 (50)	
Bluegill	0.0019 (0.0004)	0 (0)	0 (0)	0 (0)	11 (1)	1,021 (237)	48 (19)	37 (8)	107 (36)	0 (0)	0 (0)	0 (0)	1,224 (240)	
Smallmouth bass	0.0003 (0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	39 (7)	128 (24)	0 (0)	0 (0)	0 (0)	0 (0)	167 (24)	
Black crappie	0.0001 (0.0001)	90 (40)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	90 (40)	
Yellow perch	0.0008 (0.0001)	0 (0)	0 (0)	0 (0)	175 (26)	142 (17)	0 (0)	133 (31)	71 (24)	0 (0)	0 (0)	0 (0)	521 (50)	
Walleye	0.0004 (0.0000)	18 (8)	0 (0)	18 (7)	18 (3)	0 (0)	47 (6)	12 (2)	58 (9)	0 (0)	0 (0)	71 (14)	242 (21)	

(Sites 130 and 341 combined, continued.)

Species	Harvest per hour	Month												Season
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Other	0.0067 (0.0008)	0 (0)	138 (36)	2,931 (392)	842 (261)	347 (64)	0 (0)	0 (0)	0 (0)	69 (8)	0 (0)	0 (0)	0 (0)	4,327 (477)
Angler hours		13,127 (1,488)	62,581 (2,920)	125,515 (8,616)	13,207 (626)	11,658 (427)	15,992 (623)	25,819 (1,377)	177,919 (7,016)	142,953 (8,701)	46,032 (2,118)	10,420 (649)	645,223 (14,754)	
Angler trips		3,105 (608)	16,234 (1,910)	22,720 (1,990)	3,340 (550)	3,216 (459)	4,352 (601)	6,560 (1,147)	36,079 (2,563)	27,589 (2,271)	9,324 (826)	2,285 (227)	134,804 (4,757)	
Angler days		2,547 (533)	12,571 (1,507)	18,685 (1,827)	2,688 (484)	2,649 (423)	3,552 (572)	5,131 (1,049)	27,312 (2,114)	23,638 (2,029)	7,425 (706)	2,064 (248)	108,262 (4,108)	

Site 128.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistee, by all modes (non-charter) of sportfishing 1999. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month							Season
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0083 (0.0034)	0 (0)	0 (0)	6 (12)	8 (11)	855 (392)	470 (316)	12 (14)	1,351 (504)
Chinook salmon	0.0467 (0.0145)	30 (48)	242 (227)	287 (262)	2,185 (907)	3,340 (1,336)	1,321 (988)	181 (146)	7,586 (1,931)
Rainbow trout	0.0159 (0.0052)	34 (40)	64 (57)	96 (96)	63 (58)	77 (78)	492 (303)	1,764 (619)	2,590 (707)
Brown trout	0.0132 (0.0049)	1,013 (556)	277 (206)	63 (75)	413 (308)	149 (97)	110 (93)	126 (98)	2,151 (693)
Lake trout	0.0119 (0.0049)	3 (6)	126 (116)	129 (101)	1,211 (646)	399 (274)	68 (51)	0 (0)	1,936 (720)
Northern pike	0.0026 (0.0047)	0 (0)	0 (0)	396 (761)	0 (0)	6 (11)	16 (31)	0 (0)	418 (762)
Tiger Muksie	0.0000 (0.0000)	3 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)
Rock bass	0.0031 (0.0047)	0 (0)	0 (0)	0 (0)	511 (752)	0 (0)	0 (0)	0 (0)	511 (752)
Bluegill	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	35 (66)	0 (0)	35 (66)
Smallmouth bass	0.0008 (0.0012)	0 (0)	0 (0)	0 (0)	132 (200)	0 (0)	0 (0)	6 (13)	138 (200)
Yellow perch	0.0017 (0.0032)	8 (16)	261 (519)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	269 (520)
Walleye	0.0002 (0.0005)	0 (0)	0 (0)	40 (76)	0 (0)	0 (0)	0 (0)	0 (0)	40 (76)
Round whitefish	0.0047 (0.0031)	284 (357)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	476 (317)	760 (478)
<u>Angler hours</u>		18,824 (7,975)	15,810 (7,181)	8,472 (3,885)	46,767 (15,558)	34,990 (11,165)	25,048 (17,906)	12,598 (3,140)	<u>162,509</u> (28,765)
<u>Angler trips</u>		5,510 (2,361)	4,181 (1,758)	1,953 (846)	10,230 (3,351)	6,997 (2,201)	5,465 (3,597)	3,513 (913)	<u>37,849</u> (6,262)
<u>Angler days</u>		4,678 (2,117)	3,369 (1,447)	1,805 (781)	8,684 (2,881)	5,494 (1,775)	4,116 (2,682)	2,697 (716)	<u>30,843</u> (5,133)

Site 128.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistee, by all modes (non-charter) of sportfishing, 2000. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month							Season
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Pink salmon	0.0001 (0.0001)	0 (0)	0 (0)	0 (0)	0 (0)	11 (18)	0 (0)	0 (0)	11 (18)
Coho salmon	0.0326 (0.0285)	93 (11)	890 (1,571)	48 (4)	248 (145)	2,561 (3,932)	2,276 (2,693)	6 (5)	6,122 (5,021)
Chinook salmon	0.0639 (0.0370)	36 (3)	515 (739)	316 (10)	2,976 (1,199)	6,073 (5,270)	1,937 (2,197)	150 (2)	12,003 (5,881)
Rainbow trout	0.0079 (0.0035)	49 (10)	3 (5)	312 (78)	430 (309)	345 (305)	56 (70)	287 (175)	1,482 (480)
Brown trout	0.0305 (0.0101)	4,027 (420)	659 (453)	93 (10)	543 (293)	273 (-)	143 (193)	3 (0)	5,741 (709)
Lake trout	0.0115 (0.0056)	0 (0)	271 (448)	293 (58)	816 (390)	725 (545)	54 (88)	0 (0)	2,159 (813)
Northern pike	0.0001 (0.0000)	15 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	15 (3)
Channel catfish	0.0003 (0.0005)	0 (0)	0 (0)	0 (0)	53 (96)	0 (0)	0 (0)	0 (0)	53 (96)
Rock bass	0.0024 (0.0009)	0 (0)	0 (0)	444 (83)	0 (0)	0 (0)	0 (0)	0 (0)	444 (83)
Pumpkinseed	0.0001 (0.0003)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	27 (59)	0 (0)	27 (59)
Smallmouth bass	0.0001 (0.0000)	0 (0)	0 (0)	10 (2)	0 (0)	0 (0)	0 (0)	0 (0)	10 (2)
Yellow perch	0.0148 (0.0095)	0 (0)	0 (0)	463 (186)	1,751 (1,379)	567 (730)	0 (0)	0 (0)	2,781 (1,571)
Freshwater drum	0.0000 (0.0000)	0 (0)	0 (0)	3 (1)	0 (0)	0 (0)	0 (0)	0 (0)	3 (1)
Round whitefish	0.0036 (0.0029)	0 (0)	0 (0)	26 (13)	0 (0)	0 (0)	0 (0)	652 (501)	678 (501)
<u>Angler hours</u>		21,711 (1,905)	12,169 (10,915)	8,957 (963)	33,540 (15,105)	73,873 (47,633)	29,633 (26,886)	8,061 (1,862)	<u>187,944</u> (57,854)
<u>Angler trips</u>		5,955 (631)	3,179 (2,749)	2,104 (262)	6,610 (3,175)	16,383 (10,621)	6,790 (5,906)	2,383 (587)	<u>43,404</u> (12,889)
<u>Angler days</u>		5,225 (596)	2,667 (2,405)	2,036 (259)	5,680 (2,734)	13,462 (8,662)	5,802 (5,058)	1,797 (452)	<u>36,669</u> (10,700)

Site 128.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistee, by all modes (non-charter) of sportfishing, 2001. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Month							Season
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0086 (0.0068)	0 (0)	52 (100)	15 (26)	299 (244)	1,177 (1,138)	54 (67)	25 (33)	1,622 (1,171)
Chinook salmon	0.0738 (0.0406)	18 (24)	805 (641)	902 (804)	3,492 (2,921)	7,843 (5,239)	838 (690)	79 (122)	13,977 (6,126)
Rainbow trout	0.0190 (0.0081)	52 (55)	12 (18)	715 (513)	631 (341)	599 (437)	363 (408)	1,225 (435)	3,597 (964)
Brown trout	0.0068 (0.0036)	578 (343)	369 (342)	42 (33)	165 (161)	88 (77)	45 (46)	7 (14)	1,294 (520)
Lake trout	0.0118 (0.0065)	2 (4)	85 (109)	665 (447)	648 (443)	813 (748)	27 (42)	4 (7)	2,244 (985)
Rock bass	0.0022 (0.0039)	30 (64)	394 (716)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	424 (719)
Pumpkinseed	0.0003 (0.0004)	0 (0)	0 (0)	48 (76)	0 (0)	0 (0)	0 (0)	0 (0)	48 (76)
Yellow perch	0.0019 (0.0020)	0 (0)	356 (360)	0 (0)	13 (26)	0 (0)	0 (0)	0 (0)	369 (361)
Round whitefish	0.0013 (0.0016)	37 (58)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	200 (284)	237 (290)
Other	0.0001 (0.0003)	27 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	27 (50)
Angler hours		10,340 (4,895)	9,485 (4,674)	17,280 (9,388)	51,392 (36,363)	81,781 (49,709)	10,735 (4,776)	8,483 (2,325)	189,496 (62,892)
Angler trips		2,788 (1,257)	2,343 (1,078)	3,737 (1,888)	10,065 (6,871)	16,544 (10,344)	2,196 (922)	2,077 (577)	39,750 (12,716)
Angler days		2,392 (1,086)	1,954 (926)	3,432 (1,712)	8,749 (5,972)	13,218 (8,273)	1,879 (788)	1,865 (537)	33,489 (10,488)

Site 128.

Estimated harvest per hour, number harvested, and effort (angler hours, trips, and days) for Manistee, by all modes (non-charter) of sportfishing, 2002. Two standard errors of the mean in parentheses.

Species	Harvest per hour	Apr	May	Jun	Jul	Aug	Sep	Oct	Season
Pink salmon	0.0000 #DIV/0!	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Coho salmon	0.0254 (0.0201)	0 (0)	37 (47)	129 (186)	158 (139)	4,559 (3,926)	841 (812)	8 (15)	5,732 (4,016)
Chinook salmon	0.0887 (0.0454)	29 (48)	524 (782)	3,904 (2,695)	4,618 (2,832)	9,295 (5,825)	1,424 (1,136)	201 (0)	19,995 (7,150)
Rainbow trout	0.0185 (0.0127)	11 (15)	19 (30)	1,450 (1,939)	2,123 (1,405)	187 (239)	16 (33)	371 (316)	4,177 (2,427)
Brown trout	0.0129 (0.0081)	1,648 (1,281)	789 (699)	182 (126)	119 (120)	143 (125)	33 (35)	0 (0)	2,914 (1,476)
Lake trout	0.0257 (0.0177)	7 (14)	98 (146)	2,402 (2,428)	2,532 (2,279)	753 (547)	7 (13)	0 (0)	5,799 (3,378)
Northern pike	0.0001 (0.0001)	0 (0)	15 (29)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	15 (29)
Rock bass	0.0004 (0.0007)	0 (0)	0 (0)	0 (0)	0 (0)	87 (159)	0 (0)	0 (0)	87 (159)
Bluegill	0.0005 (0.0010)	0 (0)	0 (0)	0 (0)	0 (0)	124 (226)	0 (0)	0 (0)	124 (226)
Yellow perch	0.0016 (0.0023)	0 (0)	0 (0)	102 (195)	0 (0)	248 (453)	0 (0)	0 (0)	350 (493)
Walleye	0.0001 (0.0003)	0 (0)	30 (63)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	30 (63)
Round whitefish	0.0001 (0.0001)	0 (0)	14 (26)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)	17 (27)
Angler hours		7,164 (3,788)	10,243 (9,108)	40,317 (36,739)	54,117 (33,856)	94,129 (64,845)	14,398 (7,225)	5,115 (1,422)	225,483 (82,779)
Angler trips		2,305 (1,067)	2,799 (2,262)	7,712 (7,012)	11,426 (6,827)	17,310 (10,902)	3,038 (1,465)	1,334 (380)	45,924 (14,939)
Angler days		2,017 (959)	2,598 (2,199)	7,112 (6,479)	10,023 (6,009)	14,285 (8,682)	2,628 (1,319)	1,209 (338)	39,872 (12,692)