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September 27, 2013

Ms. Barcy F. McNeal, Secretary
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215

Re: Exhibit MDT-5 to Ormet Exhibit 3
(Prefiled Direct Testimony of Mark D. Thompson)
Case No. 09-119-EL-AEC

Dear Ms. McNeal:

In accordance with the Attorney Examiner's directive, I am filing a redacted, public version of Exhibit MDT-5 to Ormet Exhibit 3 (a public version of the portion of the Power Plant Report attached as an exhibit to the Prefiled Direct Testimony of Mark D. Thompson). This redacted version of Exhibit MDT-5 contains only the same redactions that were in the last redacted copy of Ormet's Business Plan and Power Plant Report, portions of which the Attorney Examiner granted protective treatment in her September 25, 2013 Entry.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

M. Howard Petricoff

MHP/glp
Enclosure

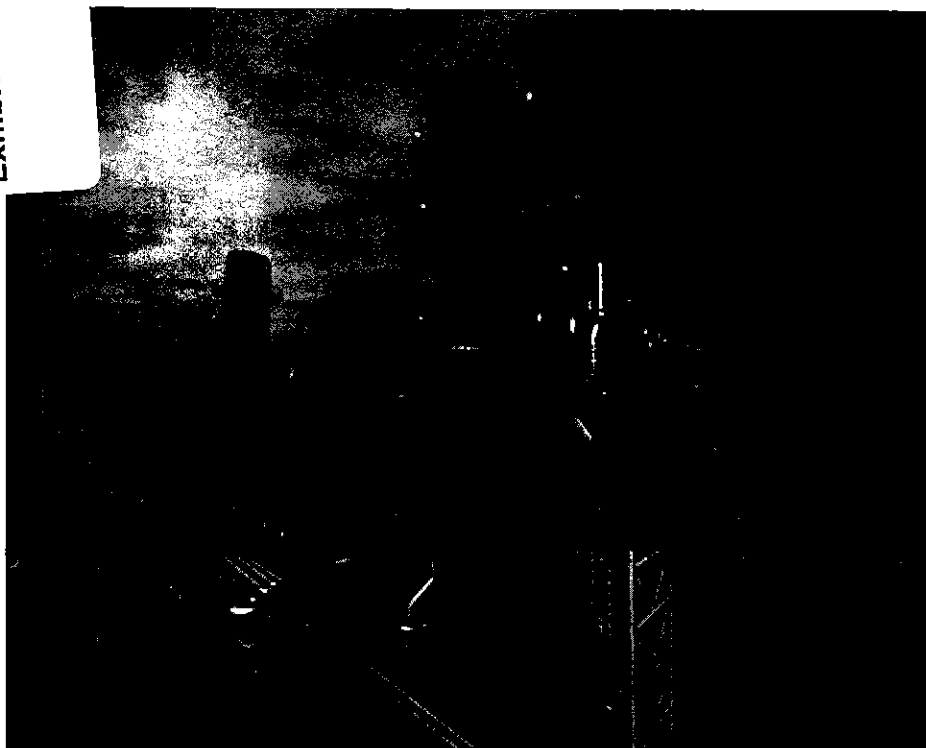
cc: Parties of Record

Public Version

Exhibit MDT-5 to Ormet Exhibit 3 (which is the Prefiled, Direct Testimony of Mark D. Thompson)

Case No. 09-119-AEC

Exhibit MDT-5



**Low Emission, Highly Fuel Efficient
Natural Gas-fired Combined-Cycle Generation**

Investing in our Future

is dependent upon

Sustainable Energy Supply

which creates

Sustainable Jobs

and **Creation of New Jobs**

while focusing on a

Sustainable Environment

such that the combined disciplined focus provides for a

Sustainable Future

CONFIDENTIAL

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Investment Objective and Economic Development

Local Resources sustaining and creating local jobs



- Construction Jobs – 300 average (peaking to 600) skilled and unskilled jobs during 18 month construction
- Ongoing Operational Jobs – 28 full-time family wage power plant jobs
- Off-site service and community commercial business growth
- Local natural gas supply production, development and infrastructure jobs
- Stable Future for Core Operations – Sustainable energy costs will support core operations and secure the long-term viability of approximately 1,000 direct and indirect jobs at Ormet and potentially other major Ohio energy users



Reliable, Efficient and Low Emissions

Project capacity will be sufficient to meet Ormet and other major users' long-term energy requirements.

Project will be designed with low NO_x combustion (with SCR controls) to meet EPA BACT emissions standards.

Location:	Hannibal, Ohio
Nominal Capacity:	540 MW Base Capacity
COD:	[REDACTED]
Heat Rate:	[REDACTED] Btu/kWh ¹
NERC Region:	PJM (AEP)
Pricing Point:	AEP-Dayton
Fuel:	Natural Gas
Gas Interconnection:	Dominion Pipeline
Electric Interconnection:	Ormet 138 kV
Facility Type:	Combined-Cycle
Configuration:	2x1 Power Block (2 CT x 2 HRSG x 1 ST)
Key Equipment:	2 [REDACTED] 7FA CTs 4 [REDACTED] HRSGs [REDACTED]
Site:	12- 24 acre site
O&M Provider:	Third Party O&M (41 on-site personnel)
Energy Manager:	[REDACTED]

On Site Generation Development Project Schedule

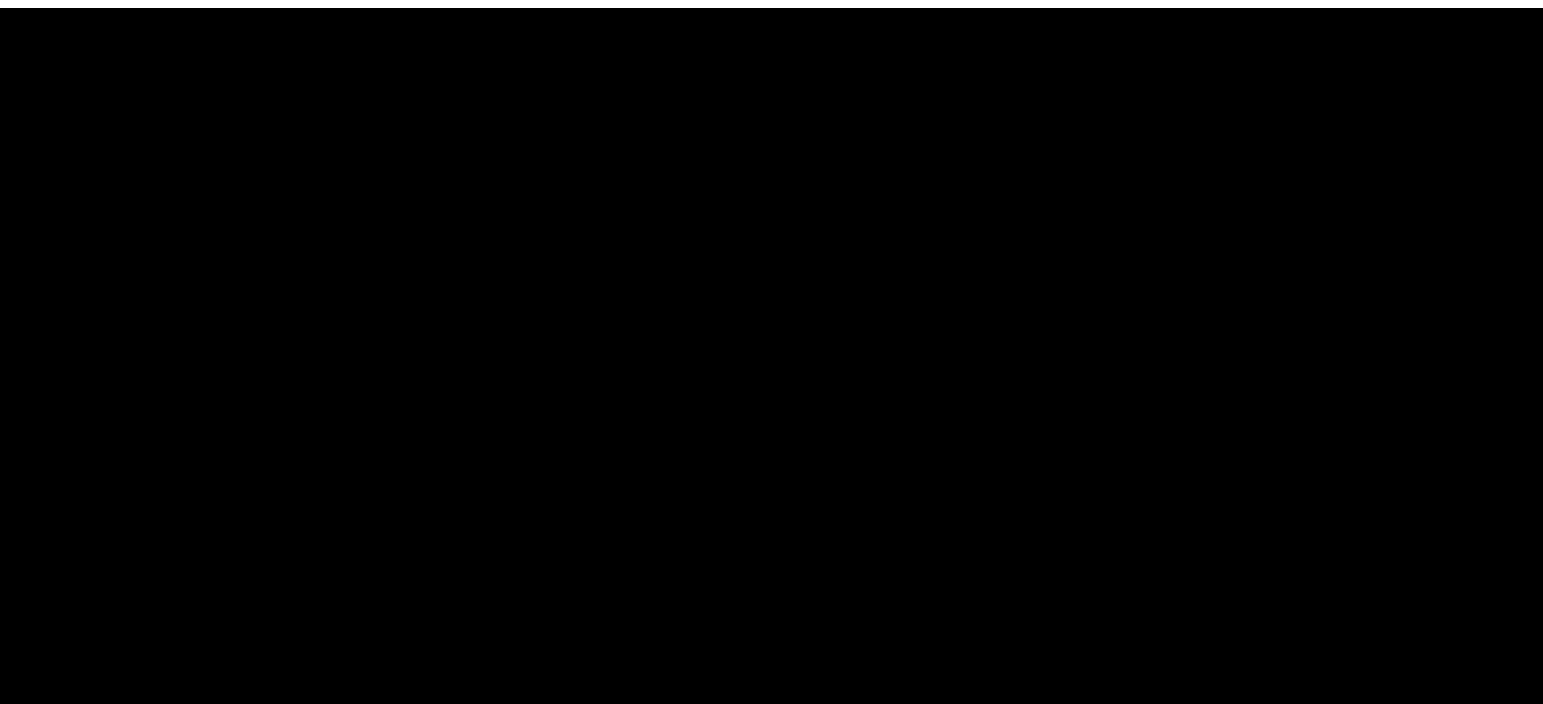
Task	Task details	Q-4 2013	Q-1 2014	Q-2 2014	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2015	Q-4 2015	Q-1 2016
		O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M
Permitting	Total Project 2x1 CC plant														
	Certificate of environmental compatibility														
	Air Permit (emissions)														
	Interconnection														
Engineering	Engineering cost estimate														
	Mechanical Engineering														
	Civil Engineering														
	Electrical Engineering														
	DCS engineering														
Procurement	Mechanical (piping/valves)														
	Electrical														
	Combustion Turbines														
	Steam turbine														
	Condenser														
	HRSg's/stacks/SCR's														
	Transformer's (GSU/Aux.)														
	Cooling tower														
	CEMS														
	DCS														
	Structural steel														
	BOP equipment														
	RO/demin														
	Instrumentation														

On Site Generation Development Project Schedule

Task	Task details	Q-4 2013	Q-1 2014	Q-2 2014	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2015	Q-4 2015	Q-1 2016
		O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M

Construction

Civil Grade
Fencing
Underground Electrical
Underground Mechanical
Civil Foundations
HRSG's
Set Turbines and generators
Erect Structural Steel
Cooling Tower
Assemble mechanical piping/valves
Assemble BOP equipment
CEMS assembly
Assembly DCS
Assembly MCC's
GSU transformer's erection
Aux. transformer erection
Iso phase buss duct erection
Tank erection
Fire Protection

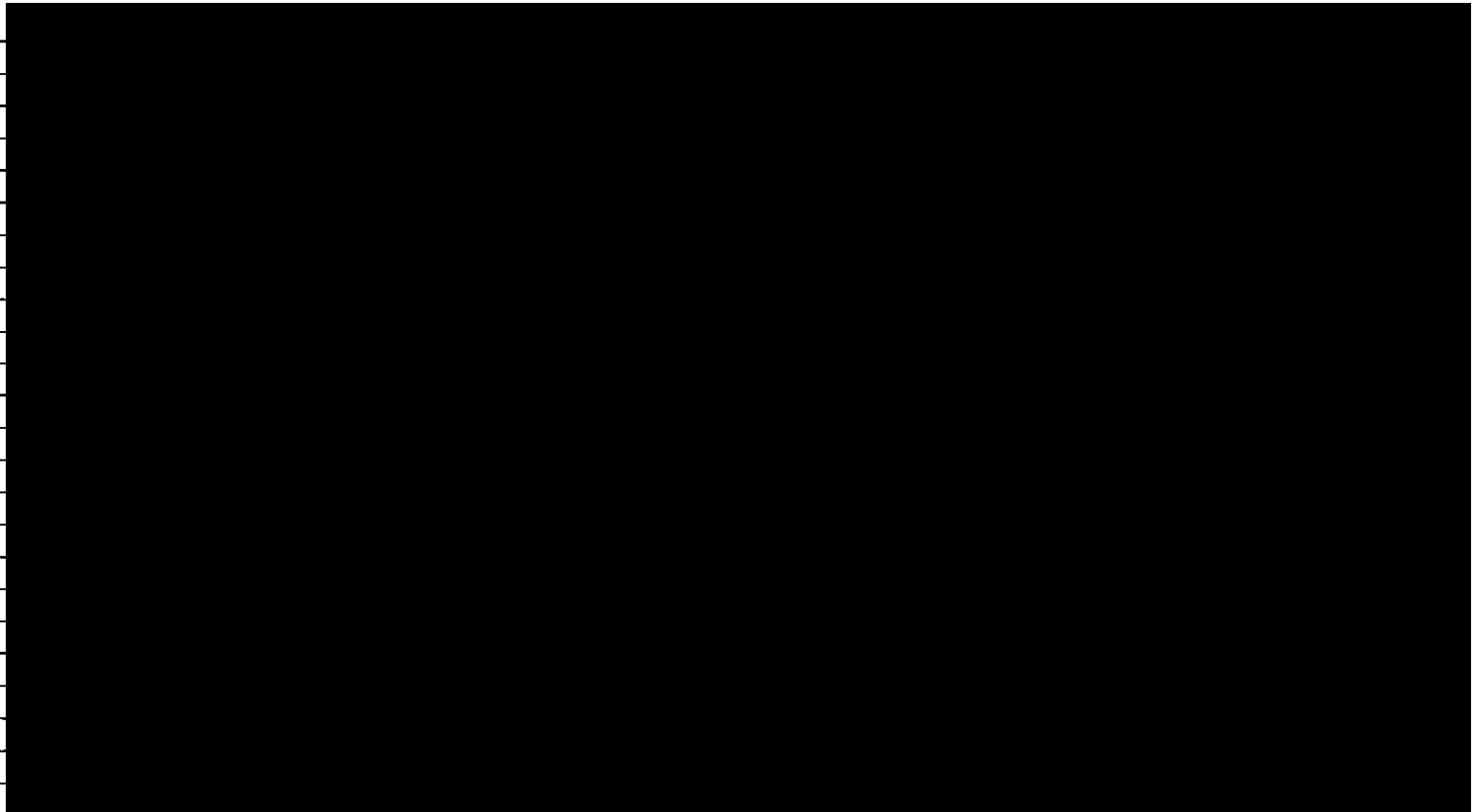


On Site Generation Development Project Schedule

Task	Task details	Q-4 2013	Q-1 2014	Q-2 2014	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2014	Q-4 2014	Q-1 2015	Q-2 2015	Q-3 2015	Q-4 2015	Q-1 2016
		O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M

Start-up and Commissioning

Back Feed electrical power
Electrical Systems Verification
Water and cooling systems verification
Fire Protection functional testing
DCS/Instrumentation systems verification
Electrical systems verification
Closed cycle cooling water verification
Compressed Air system verification
RO/Demin system verification
Cooling tower verification
Mechanical systems verification
Combustion turbine verification
Steam turbine/condenser verification
Generator Protection systems verification
Excitation system verification
LCI system verification
Mechanical system flushes
Steam blow piping erection
Steam blows
Steam blow restoration
Power testing
COD
HR and output testing to establish capacity



ORMET PRIMARY ALUMINUM CORP.
POTENTIAL POWER PLANT SITE OPTIONS
43840 STATE RT. 7 HANNIBAL, OHIO 43931

FILE of MATERIAL

SITE PLAN

CONTACTED FOR INFO REGARDING
OF THIS INFO FROM THE
IN 1974.

RE-ENTRY INFO FROM THE
IN 1974.

THE FILE CONTAINS INFO
AND INFO ON OTHER INFO
OBTAINED FROM THE
IN 1974. THE FILE
CONTAINS INFO ON THE
IN 1974.

Swiss Valley Associates, Inc.
P.O. Box 39
Hannibal, OH 43931

SA

[illegible]

NAME	ESS	COMP	STUDIOS
DOB	0000	CLASS	STUDIOS
ADDRESS	000	AGE	0000
CITY	000000	STATE	00
ZIP	000000	SEX	00

TYPE: CRVET POWER AL. WIND 3000
POTENTIAL POWER - LAST
SITE 010000

0-20-25-1-5-63

PJM Interconnection Feasibility Procedure and Costs

- A new generation resource or a new transmission facility to the PJM system must submit an Interconnection Request in the form of an executed Generation or Transmission Interconnection Feasibility Study Agreement (OATT at Part VI, Attachment N or Attachment S, respectively) and a study deposit
- A generation request shall include:
 - ❖ Location
 - ❖ Evidence of ownership
 - ❖ Size
 - ❖ Description of equipment
 - ❖ COD
- Generation Interconnection Feasibility Study Costs:










Month of New Services Queue	Non-refundable deposit	Cost per MW of Interconnection Request	Maximum deposit
1st	\$10,000	\$100	\$100,000
2nd	\$20,000	\$150	\$100,000
3rd	\$30,000	\$200	\$100,000

- The applicant is obligated to pay the actual costs of studies conducted by PJM on its behalf, and the non-refundable deposit is applied to those costs as work is completed.
- Any remaining non-refundable deposit monies will be credited toward the Interconnection Customer's cost responsibility for any other studies

PJM Interconnection Procedure and Costs

Activity	Duration	Cumulative Duration	Costs
Feasibility Study Agreement to PJM	Requests received in 4 cycles per year ending on January 31, April 30, July 31, and October 31.	Up to 91 days	\$10,000-\$30,000 Deposit
PJM conducts Generation and/or Transmission Interconnection Feasibility Study in coordination with each affected ITO. Complete studies in 4 cycles per year (complete by April 30, July 31, October 31, and January 31)	Up to 92 day window	Up to 183 days	
IC determines response to the Generation and/or Transmission Interconnection Feasibility Study results.	Up to 30 days	Up to 213 days	
IC submits an executed System Impact Study Agreement (with proof of application for an air permit if required for a generator installation).			\$50,000 Deposit
PJM conducts the System Impact Study and completes the Study within 120 days. (Studies in 4 cycles per year June 1, September 1, December 1, and March 1)	Up to 120 days for study	Up to 333 days	
IC determines response to the System Impact Study results.	Up to 30 days	Up to 363 days	
IC submits an executed Generation and/or Transmission Interconnection Facility Study Agreement			\$100,000 Deposit or estimated cost
PJM conducts the Generation and/or Transmission Interconnection Facilities Studies	Based on estimate of time needed	Up to 363 days +time for Facilities Studies	
IC executes and returns tendered Interconnection Service Agreement or Upgrade Construction Service Agreement		Up to 558 days + Facilities Studies	

Ohio Natural Gas Projects in the PJM Generation Queue

Queue	AQ	Queue Date	PJM Substation	MW	MWC	MWE	Status	Feas	Imp	Fac	ISA	CSA	St	In Service	Fuel
W1-072A_AT5		4/26/2010 12:00:00 AM	Lemoyne	640	40	40		●	●	○	○		OH	2011 Q2	⬆
W3-128		10/29/2010 12:00:00 AM	Sporn-Waterford 345kV	652	652	652		●	●	○			OH	2016 Q2	⬆
X3-051		9/27/2011 12:00:00 AM	Flatlick 765kV	1460	610	610		●	○				OH	2016 Q1	⬆
Y1-035		3/8/2012 12:00:00 AM	Eastlake 138kV	462	462	462		●	●				OH	2016 Q2	⬆
Y1-036		3/8/2012 12:00:00 AM	Eastlake 345kV	462	462	462		●					OH	2016 Q2	⬆
Y1-069		4/27/2012 12:00:00 AM	Bay Shore-Fostoria Central 345kV	799	799	799		●	●	○			OH	2017 Q2	⬆
Y2-050		8/15/2012 12:00:00 AM	Tidd-Canton Central	749	710	749		●					OH	2017 Q3	⬆
Y2-053		8/15/2012 12:00:00 AM	Lemoyne 138kV	675	35	35		●					OH	2013 Q2	⬆
Y2-085		10/30/2012 12:00:00 AM	Sammis-Star 345kV	1050	1050	1050		○					OH	2017 Q1	⬆

MW - Maximum facility output after interconnection request
MWC - Capacity interconnection request for the queue position (summer net)
MWE - MW Energy for the interconnection request (winter net)

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/30/2013 4:17:05 PM

in

Case No(s). 09-0119-EL-AEC

Summary: Exhibit -- Redacted, Public Copy of Exhibit MDT-5 (an attachment to Ormet Exhibit 3) electronically filed by Mrs. Gretchen L. Petrucci on behalf of Ormet Primary Aluminum Corporation