

PENNSSTATE



**Feasibility Analysis for Installing a Circulating Fluidized Bed Boiler for
Cofiring Multiple Biofuels and Other Wastes
with Coal at Penn State University**

Second Quarterly Technical Progress Report for the Period 09/15/2000 to 12/14/2000

By

Bruce G. Miller, Sharon Falcone Miller, and Curtis Jawdy

The Energy Institute;

Robert Cooper and Douglas Donovan

Office of Physical Plant; and

Joseph J. Battista

Cofiring Alternatives

December 21, 2000

Work Performed Under Grant No. DE-FG26-00NT40809

For
U.S. Department of Energy
National Energy Technology Laboratory
P.O. Box 10940
Pittsburgh, Pennsylvania 15236

By
The Energy Institute
The Pennsylvania State University
C211 Coal Utilization Laboratory
University Park, Pennsylvania 16802

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EXECUTIVE SUMMARY

The Pennsylvania State University, under contract to the U.S. Department of Energy, National Energy Technology Laboratory is performing a feasibility analysis on installing a state-of-the-art circulating fluidized bed boiler and ceramic filter emission control device at Penn State's University Park campus for cofiring multiple biofuels and other wastes with coal or coal refuse, and developing a test program to evaluate cofiring multiple biofuels and coal-based feedstocks.

The objective of the project is being accomplished using a team that includes personnel from Penn State's Energy Institute and the Office of Physical Plant, Foster Wheeler Energy Corporation, Foster Wheeler Development Corporation, and Cofiring Alternatives.

The major emphasis of work during this reporting period was to assess the quantity and location of potential woodwaste feedstocks from the surrounding region and continue sample analyses.

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1.0 Introduction

The Pennsylvania State University, under contract to the U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL) is performing a feasibility analysis on installing a state-of-the-art circulating fluidized bed (CFB) boiler and ceramic filter emission control device at Penn State's University Park campus for cofiring multiple biofuels and other wastes with coal or coal refuse, and developing a test program to evaluate cofiring multiple biofuels and coal-based feedstocks. Penn State currently operates an aging stoker-fired steam plant at its University Park campus and has spent considerable resources over the last ten to fifteen years investigating boiler replacements and performing life extension studies. This effort, in combination with a variety of agricultural and other wastes generated at the agricultural-based university and the surrounding rural community, has led Penn State to assemble a team of fluidized bed and cofiring experts to assess the feasibility of installing a CFB boiler for cofiring biomass and other wastes along with coal-based fuels.

The objective of the project is being accomplished using a team that includes personnel from Penn State's Energy Institute and the Office of Physical Plant, Foster Wheeler Energy Corporation, Foster Wheeler Development Corporation, and Cofiring Alternatives.

The CFB boiler system that will be considered in the feasibility analysis is unique in that it will:

- 1) be of compact versus traditional design;
- 2) include modules to evaluate ceramic filters, along with fabric filters, for particulate matter control (recent work at Penn State has shown that ceramic filters have potential advantages regarding fine particulate matter and trace elements, i.e., mercury, removal);
- 3) contain an advanced instrumentation package including temperature and pressure sensors, deposition and slagging probes, heat flux meters, and corrosion/ erosion panels;
- 4) contain multi-fuel capabilities (making it a versatile test site for industry and government studies); and
- 5) be a commercial facility in a rural, agricultural setting that contains an engineering and agricultural-based university.

The state-of-the-art CFB boiler and ceramic filter device would allow the University the opportunity to do the following:

- to more economically supply heat to the University Park Campus;
- to reduce the amount of air-borne pollutants (NO_x , SO_2 , particulate matter, and potentially trace elements), thus helping to reduce the overall emissions from the University's central heating plant;
- to reduce the amount of agricultural and other waste products produced by the University that must be disposed;

- to help reduce the amount of CO₂ (a greenhouse gas) emissions by combusting waste biofuels; and
- to ultimately serve as a large-scale (commercial demonstration size) test facility for federally and other outside source-funded research and development projects related to cofiring of biofuels with coal and other coal refuse.

It is the intent of the feasibility analysis to assess: the economics of producing steam; the economics of off-sets such as utilizing multiple biomass and other wastes (i.e., sewage sludge); the value of a unique CFB test facility to perform research for industry, such as Foster Wheeler, and government agencies, such as the DOE; the environmental aspects of the CFB boiler; and the availability of funding from multiple sources including University, state, and federal sources. The feasibility study will also include developing a multiple-year program to test biofuels as the boiler system will be unique in that it will be heavily instrumented and will be able to handle multiple fuels.

1.1 Penn State's Steam Plants

Penn State University, Office of Physical Plant (OPP) currently operates a coal-fired central steam plant at the University Park Campus. The installed coal-fired capacity is 450,000 lb/h (pph) steam generated by four vibra-grate stoker boilers at 250 psig/540°F, which are used as baseload units. Additional steam generating capacity is available with gas or oil fire in three other boilers, totaling 260,000 pph. Electricity is also produced, as a by-product, with a maximum installed generating capacity of 6,500 kW. Currently, at peak operation, which occurs when classes are in session and winter conditions experienced, 420,000 pph of steam are required. Steam requirements during the summer are 125,000 pph while approximately 200,000 pph of steam is required during the spring/fall.

Although the present total steam generating capacity is 710,000 pph, the University prefers not to operate the gas and oil-fired boilers because the price of the natural gas and fuel oil is significantly higher than that of the coal. Ideally, the University would like to fire only coal and have sufficient coal firing capability to allow for one coal-fired boiler to be down without impacting steam production or forcing the operation of a gas/oil-fired boiler.

The four stoker-fired boilers at Penn State are all between 32 and 39 years old. When the units were installed (1961 to 1968), the projected life of a typical unit was expected to be approximately 40 years. Since that time, the life of the steam generating units has been reevaluated based on changing technology, economic, and regulatory factors. Life extension studies on many plants have now indicated that economic lives up to 50 to 60 years may be possible depending on the levels of maintenance, type of operation of the units, the cost of competing units, and other parameters related to these factors. Despite

this, the University is exploring the possibility of installing a CFB boiler to cofire biomass and other waste streams with coal because of the following possible benefits:

- 1) Waste stream utilization. The CFB boiler would be multi-fuel capable with coal being the primary fuel and supplemented with waste streams. Waste stream disposal costs would be eliminated. For example, sewage sludge is currently landfilled at a cost of \$47/ton.
- 2) Lower overall fuel costs. This includes using a lower grade coal including bituminous coal refuse (i.e., gob), growing grasses or crops on University land and cofiring in the boiler, accepting biomass and other wastes from the municipality, and being a test site for industry (e.g., Foster Wheeler) to conduct various fuel tests where the test fuel would be used in place of fuels purchased by the University.
- 3) Higher efficiency boilers.
- 4) Lower boiler emissions.
- 5) Possible alternative to spreading manure on fields and the associated odor problem.
- 6) Potential external funding source for a boiler replacement project. A recent energy assessment for Penn State showed that a coal-fired cogeneration plant was not economically feasible. However, OPP is reconsidering a boiler replacement because there is the possibility that some of the funding may come from other sources, e.g., industrial sponsorship, state and federal agencies.
- 7) Research component. By being a test site for industry (e.g., Foster Wheeler), not only would there be a decrease in fuel costs but there is the possibility that other operating costs such as labor could be reduced when industry-funded testing occurs.

Penn State's seven boilers are housed at two locations on campus as shown in Figure 1. The four coal-fired boilers and one small natural gas and oil-fired boiler are located at the West Campus Steam Plant (WCSP). There is not any room for installing additional boilers at this location. Two 100,000 pph of steam boilers, designed for natural gas and No. 2 fuel oil, are located at the East Campus Steam Plant (ECSP). This facility is used for peaking purposes. This location has been identified for future boiler expansion. At this time, OPP is interested in installing a CFB boiler with 200,000 pph of steam capacity at the ECSP. This size of a boiler could be installed without extensive upgrades to the current steam, water, and condensate return infrastructure. Final selection of the boiler size will be determined as part of the feasibility study.

1.2 Project Outline

The work consists of gathering design-related information, collecting and analyzing representative biofuels, coal, and coal refuse samples, developing a conceptual CFB boiler system design, developing a preliminary three-year test program and associated budget, determining the system design/test program economics, and performing the feasibility study. The work is being performed via the following tasks:

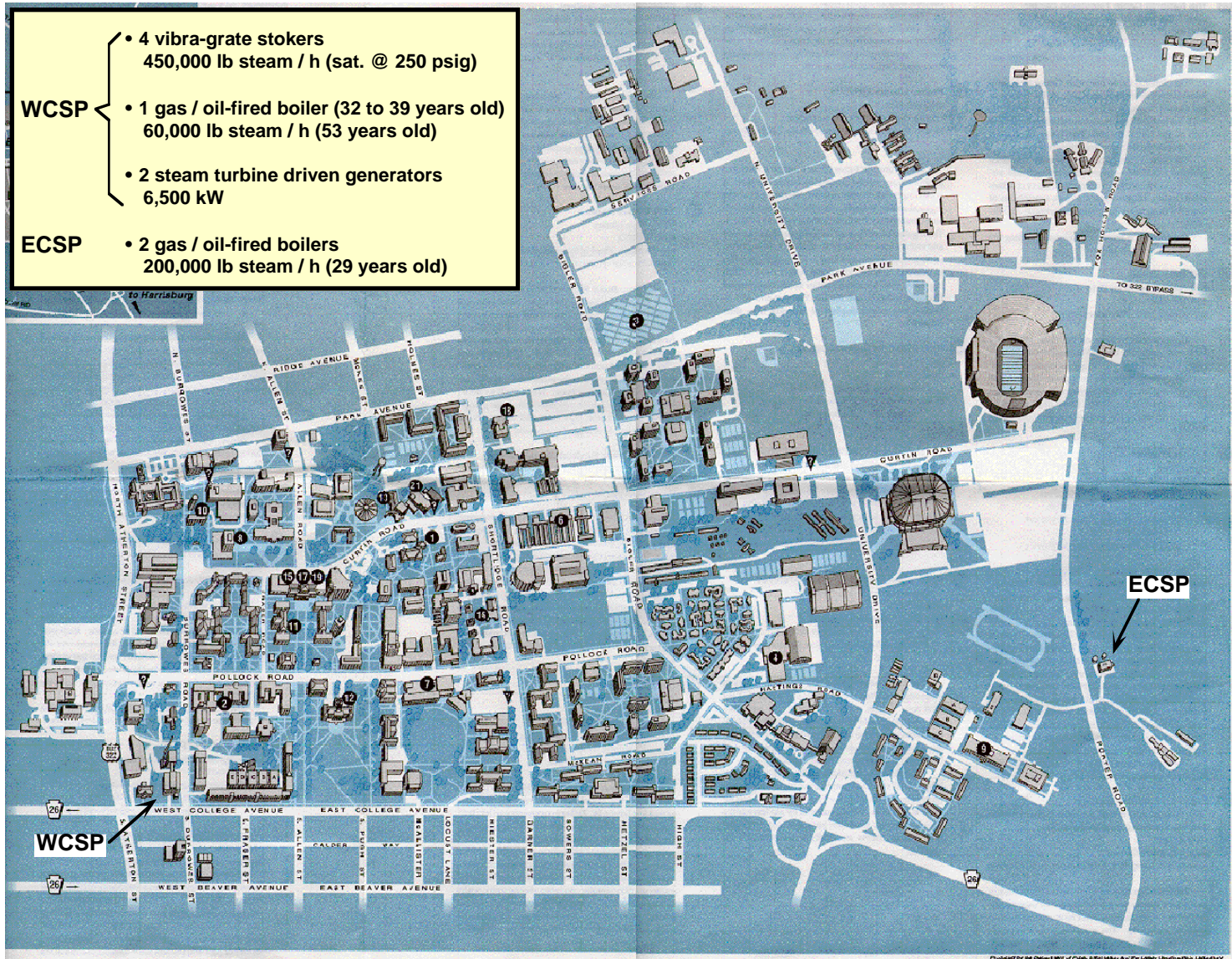


Figure 1. PENN STATE'S WEST CAMPUS AND EAST CAMPUS STEAM PLANTS

- Task 1. Information and Sample Collection
- Task 2. Biofuels and Biofuel/Coal Characterization
- Task 3. Develop Conceptual Design
- Task 4. Develop Preliminary Test Program/Budget
- Task 5. Determine System/Program Economics
- Task 6. Complete Feasibility Study
- Task 7. Project Management/Reporting

A summary of the activities being performed in each task includes:

Task 1. *Information and Sample Collection:* System requirements and infrastructure information will be assembled by Penn State and provided to Foster Wheeler. In addition, representative samples of biofuel, coal, and coal refuse will be collected by Penn State and Cofiring Alternatives.

Task 2. *Characterize Biofuels and Biofuel/Coal Combinations:* Penn State will characterize the samples collected in Task 1 and use the analyses for assessing issues such as materials handling, deposition, and emissions.

Task 3. *Develop Conceptual Design:* A CFB boiler system will be designed to address the multiple project objectives. Foster Wheeler will perform the conceptual design with input from Penn State and Cofiring Alternatives.

Task 4. *Develop Preliminary Test Program/Budget:* A three-year test program will be designed and costed to use the state-of-the-art CFB boiler system for investigating a range of issues when cofiring multiple biofuels and possibly other waste materials. Penn State will develop the preliminary test program with consultation from Foster Wheeler and Cofiring Alternatives.

Task 5. *Determine System/Program Economics:* Capital and operating costs will be determined. In addition, the availability of funding for the system and test program will be assessed.

Task 6. *Complete Feasibility Study:* The feasibility study will be completed by incorporating the results from each of the tasks.

Task 7. *Project Management/Reporting:* The project will be managed and reported per DOE's contractual requirements. Reporting will include the quarterly program/project management and technical progress reports, and a final report.

The status of Tasks 1 through 7 is presented in Sections 2.0 through 8.0, respectively. Activities planned for the next quarterly period are listed in Section 9.0. References and acknowledgments are contained in Sections 10.0 and 11.0, respectively. The project schedule is given in Figure 2, with a description of the milestones contained in Table 1.

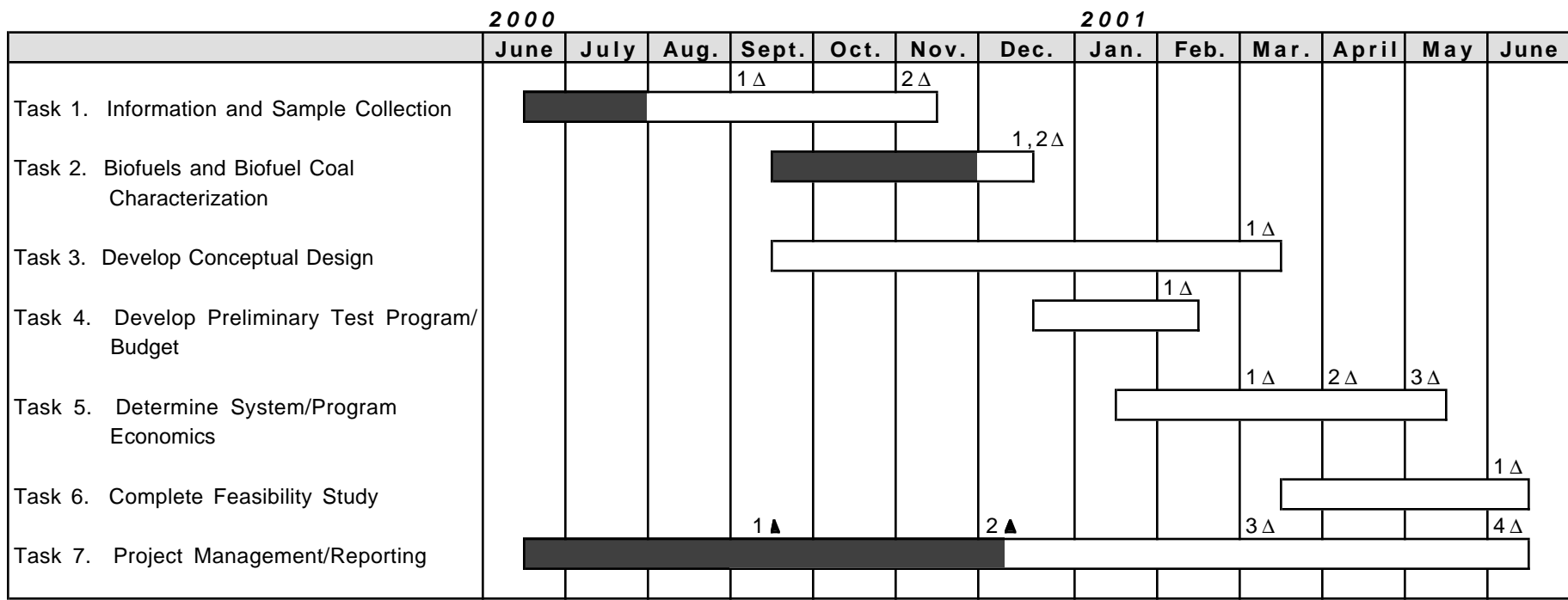


Figure 2. MILESTONE SCHEDULE

Table 1. Description of Milestones

<u>Milestone</u>	<u>Description</u>	<u>Planned Completion Date</u>	<u>Actual Completion Date</u>
Task 1, No. 1	Assemble system requirements and infrastructure information	09/15/00	
Task 1, No. 2	Collect representative biofuel and coal samples	11/15/00	
Task 2, No. 1	Complete characterization of biofuel samples	12/15/00	
Task 2, No. 2	Complete characterization of biofuel/coal samples	12/15/00	
Task 3, No. 1	Complete conceptual design	03/15/01	
Task 4, No. 1	Develop preliminary task program/budget	02/15/01	
Task 5, No. 1	Determine capital cost	03/15/01	
Task 5, No. 2	Determine operating costs	04/15/01	
Task 5, No. 3	Assess availability of funding	05/15/01	
Task 6, No. 1	Complete feasibility study	06/15/01	
Task 7, No. 1	Prepare program/project management and technical report 1	09/15/00	10/15/00
Task 7, No. 2	Prepare program/project management and technical report 2	12/15/00	12/15/00
Task 7, No. 3	Prepare program/project management and technical report 3	03/15/01	
Task 7, No. 4	Prepare program/project management and technical report 4; prepare final report	06/14/01	

2.0 Task 1. Information and Sample Collection

The subcontract is still being negotiated with Foster Wheeler; consequently, no work has been done by Foster Wheeler during this reporting period. It is anticipated that the subcontract will be executed by the end of December 2000. In the meantime, Penn State started working on assembling information on balance of plant costs. Penn State reviewed Foster Wheeler's scope of work and generated a list of questions on system requirements and termination points. This information will be used in a design meeting scheduled for January 10, 2001 at Penn State, which will be attended by all parties.

A subcontract was executed with Cofiring Alternatives on September 26, 2000. During the last reporting period, Cofiring Alternatives began an assessment of sawmills and secondary wood processors with wood wastes available for marketing as well as other potential biomass feedstocks for the CFB. Appendices A through E contain the results from the preliminary work.

The assessment was started by identifying the counties that are within 75 miles of Centre County (county where Penn State's University Park campus is located). Next, companies that produce wood products/ wastes that are located in these counties were identified (NREL report; Foster Wheeler 1998; The Pennsylvania Wood Residue Directory 1993). Approximately 325 companies were identified and are listed in Appendix A.

Next, the distance from University Park to the companies was determined. Although all the original counties selected are within 75 miles of Centre County, many of the companies are farther than 75 miles from University Park. Therefore, all companies greater than 75 miles were removed from the list. Appendices B and C list the 107 companies that are within 75 miles of University Park. In Appendix B they are listed by alphabet while in Appendix C they are listed by increasing distance from University Park (from 10 to 75 miles). The companies in Appendix C will be called to gather more information. The information will be used to prepare a summary sheet that includes:

- Company name;
- Phone number;
- Town nearest company location;
- Contact person;
- Directions from University Park to company location;
- Quantity of sawdust or wood chips available;
- Transportation cost;
- What is done with the sawdust or wood chips; and
- Other notes.

The companies in Appendix C will be called starting from the one nearest University Park and working towards the one farthest away. It is unlikely that all 107 companies will be

called because it is anticipated that sufficient wood products will be identified within 45 miles of University Park. The summary sheets will be provided in the next quarterly report.

In addition to the lists of sawmills and secondary wood processors with wood wastes, two lists were prepared containing potential business contacts and other potential biomass residues. The list of potential business contacts contains companies within 100 miles of University Park that may generate/ collect biomass and other wastes can be found in Appendix D. The list of other potential biomass residues, given in Appendix E, contains a variety of companies and industries identified from the yellow pages, which include those found in the following categories:

- Bakeries;
- Boxes – corrugated, fiber, and wooden;
- Building materials;
- Cabinet makers;
- Candy – wholesale;
- Feed - wholesale and manufacturers;
- Food, brokers, consultants, products;
- Furniture designers and custom builders;
- Home improvements (possible source of construction/ demolition wood);
- Logging companies;
- Lumber – retail;
- Lumber – wholesale;
- Newspapers (waste newsprint);
- Nurseries – plants, trees, etc. (possible source of wood from prunings, dead stock, etc.);
- Potato chips – wholesale;
- Recycling centers;
- Rubbish and garbage removal;
- Septic tanks – cleaning and repairing (possible source of biowastes);
- Sewage disposal systems (possible source of biowastes);
- Stables (possible source of manure and bedding);
- Tire dealers (possible source of waste tires);
- Tire retreading and repairing (possible source of waste tires);
- Tree services;
- Waste reduction, disposal and recycling service – industrial; and
- Windows (possible source of waste wood).

Appendices D and E will be reviewed and select businesses will be contacted.

During the last reporting period, Penn State started assessing the types and quantities of potential feedstocks at Penn State (except for the wood products which are from a supplier in the surrounding region) and collected samples of them for analysis (Miller and Jawdy, 2000). A list of the feedstocks currently being considered is contained in Table 2.

Table 2. Potential CFB Feedstocks

Material	Quantity (tons/yr)
<i>Biomass/Biomass Waste at University Park</i>	
Animal Wastes:	
Dairy manure (tie stall and free stall mixed with leaves)	13,200
Manure from covered manure barn (poultry litter, horse barn, misc.)	1,180
Beef manure	1,033
Sheep manure	265
Swine waste	2,505
	(@ 2.2% solids)
Woodwaste/brush	150
Pallets	92
Reed canary grass	600
<i>Other Wastes at University Park</i>	
Sewage sludge	2,708
	(@ 12% solids)
Bottom ash	6,990
Fly ash	1,445
Plastics - total	2.1
Horticulture hard plastics	0.2
Horticulture plastic bags	1
Bale tarps	0.5
Silo bunker covers	0.4
Used oil	14
Tires	5
<i>Biomass from Surrounding Region</i>	
Wood products (chips/shavings)	20,000

3.0 Task 2. Biofuels and Biofuel/Coal Characterization

Analysis of the biofuels started during the previous reporting period and is nearly completed. After Foster Wheeler is under subcontract, the list of analyses will be reviewed and any missing analyses that are identified will be performed. Appendix F contains the results of the analyses conducted to-date. The analyses consist of:

- 1) Proximate analysis;
- 2) Ultimate analysis;
- 3) Higher heating value;
- 4) Bulk density (where appropriate);
- 5) Chlorine content (where appropriate); and
- 6) Rheological characteristics (where appropriate).

Chemical fractionation analysis is presently being performed on the following samples to determine the mode of occurrence of major and minor elements:

- 1) Pine shavings;
- 2) Red oak shavings;
- 3) Dairy tie-stall manure;
- 4) Dairy free-stall manure;
- 5) Miscellaneous manure (mixture of various small-quantity manure streams that are collected at a central storage barn);
- 6) Sewage sludge;
- 7) Sheep manure;
- 8) Reed canary grass;
- 9) Bottom ash; and
- 10) Fly ash.

The chemical fractionation process has been completed for all of the samples. The chemical composition of the solid and liquid fractions (a total of eight) from two of the chemically fractionated samples, sewage sludge and sheep manure, have been analyzed and are currently being reviewed. The material balances and variability of the analyses are being checked prior to submitting the remaining fractions. A detailed description of the chemical fractionation procedure and the results will be reported in the next quarterly report.

4.0 Task 3. Develop Conceptual Design

No work was performed in Task 3 during this reporting period.

5.0 Task 4. Develop Preliminary Test Program/Budget

No work was performed in Task 4 during this reporting period.

6.0 Task 5. Determine System/Program Economics

No work was performed in Task 5 during this reporting period.

7.0 Task 6. Complete Feasibility Study

No work was performed in Task 6 during this reporting period.

8.0 Task 7. Project Management/Reporting

During this reporting period, a project kickoff meeting was attended at NETL's offices in Pittsburgh, Pennsylvania on October 24, 2000. A presentation was prepared and presented at the meeting.

9.0 Next Quarterly Activities

During the next reporting period, the following will be done:

- A subcontract will be executed with Foster Wheeler;
- A kick-off design meeting will be held at Penn State on January 10, 2001;
- The analysis of all potential feedstocks will be completed; and
- System requirements and infrastructure information will be assembled by Penn State and provided to Foster Wheeler.

10.0 References

Foster Wheeler, "Assessment of Fuel Availability in the Seward, Pennsylvania Region," 1998.

Miller, B.G. and C. Jawdy, "Feasibility Analysis for Installing a Circulating Fluidized Bed Boiler for Cofiring Multiple Biofuels and Other Wastes with Coal at Penn State University First Quarterly Technical Progress Report for the Period 06/15/2000 to 09/14/2000," Prepared for the U.S. Department of Energy National Energy Technology Laboratory, Pittsburgh, Pennsylvania, DE-FG26-00NT40809, October 9, 2000.

National Renewable Energy Laboratory, Renewable Resource Data Center – The Biomass Resource Information Clearinghouse, "Wood Chip Suppliers and Brokers – Pennsylvania," <http://rrdec.nrel.gov>.

Pennsylvania Department of Environmental Resources, Bureau of Forestry, Forest Advisory Services, and Pennsylvania Energy Office, Bureau of Sustainable Energy & Technical Services, "The Pennsylvania Wood Residue Directory, Sawmills & Secondary Wood Processors," 1993.

11.0 Acknowledgements

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Energy, National Energy Technology Laboratory (Pittsburgh). Philip Goldberg of NETL is the project manager.

William Scerencsits and John Gaudlip from Penn State's OPP, and Randy Swope from Penn State's College of Agricultural Sciences Farm services are acknowledged for the assistance in quantifying and sampling various potential feedstocks.

Appendix A. POTENTIAL SAWDUST SUPPLIERS – TOTAL LISTING

POTENTIAL SAWDUST SUPPLIERS FOR PENN STATE COMBUSTOR — Total Listing

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
A & A Logging and Sales		RD3, Box 160 Westfield, PA 16950	113		814-628-2191	
A & L Woods, Inc.	60	Mount Pleasant Mills, PA 17853	64		717-539-8922	
A & M Wood Products		RD2 Mayport, PA 16240	108		814-365-2166	
A. D. Renninger Lumber Co	75	PO Box 95 Richfield, PA 17086	62		717-694-3351	
Alan Summerhill	2	RD1, Box 3550 Leechburg, PA 15656	120		412-845-9569	
Aldenville Industries		Route 170 Aldenville, PA 18401	177		717-785-3141	Andy Senia
Alexandria Wood Products	60	PO Box 357 Alexandria, PA 16611	30		814-669-4469	E. Gary O'Bryan
Amberson Valley Lumber Products	10	17891 Cold Spring Rd Spring Run, PA 17262	73		717-349-7359	
American Hardwood Industries	60	Titusville, PA 16354	140		814-827-4621	hardwood kiln dried shavings
American Hickory Corp	15	Lewistown, PA 17044	31		717-543-6070	air dried shavings
Andreas Lumber, Inc.		RD #1, Box 92 Wapwallopen, PA 18660	110		717-379-3644	Carl Andreas
Andrews Forest Products, Inc.		Le Raysville, PA 18853	151		717-744-2829	
Andy J Weaver		RD2 Spartansburg, PA 16434	159			
Appleton Papers, Inc.	120	100 Paper Mill Road Roaring Spring, PA 16673	54		814-224-6411	wood fines
Art Coldsmith Sawmill	8	6145 White Church Rd Shippensburg, PA 17257	86		717-532-8127	
Ayers		R.D. #2, Box 213 Clarks Summit, PA 18411	157		717-587-1318	Roy Ayers
Babcock Lumber Co.		Roaring Run Road Champion, PA 15622	127		724-593-6124	
Babcock Lumber Co.		421 S. West Street Ebensburg, PA 15931	64		814-472-6911	
Bakers Lumber Co.	23	1481 Shawna Road, Cherry Tree, PA 15724	78		814-743-6671	Larry Baker, Robert L. Baker
Barrett Lumber Co.	100	Box 615 Dayton, PA 16222	117		814-257-8208	Barry, Lyle Barrett

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Baumunk Lumber Company		Box 16 Forksville, PA 18616	110		717-924-3591	Charles Baumunk
Beals Lumber Co.	10	Hyndman, PA 15545	94		814-842-6432	
Beckner Lumber Co.		RD1 Manns Choice, PA 15550	84		814-443-4228	David Beckner
Bedford Pallet	50	Bedford, PA 15522	77		814-623-1521	air dried sawdust
Benscoter Forest Products		Box 94 Laceyville, PA 18623	141		717-869-1460	Lloyd Benscoter
Bickel Wood Products, Inc.	90	E Ohio St, Box 416 McClure, PA 17841	46		717-658-8343	
Bills Lumber	50	3297 Cumberland Hwy, Meyersdale, PA 15552	125		814-634-5355	Jan
Bingham & Son		RD 3 Liberty, PA 17740	90		717-324-6042	Darrell Rubson
Blair Sterer Rough Lumber Products		RD1 Saxton, PA 16678	58		814-658-3400	
Blue Triangle Hardwoods, Inc.	80	RD 2, Box 249 Everett, PA 15537	85		814-652-9111	David Amsden
Bonnell Lumber Company		RD 1 Trout Run, PA 17771	81		717-634-2731	Ted Bonnell
Boswell Lumber Co		4902 Penn Avenue, Boswell, PA 15531	98		814-629-5625	
Bowers Lumber Company		RD 1, Box 39B Mill Run, PA 15464	140		412-455-2041	Charles L. Bowers, Jr
Bowser Lumber Co.		Route 36 N, RD1, Box 240 Mahaffey, PA 15757	60		814-277-9956	Ron or Ed
Bradford Forest Products	20	444 High Street Bradford, PA 16701	144		814-368-3701	
Brode Lumber	6	RD1 Saxton, PA 16678	58		814-653-3624	
Brojack Lumber Co.		RD 1, Box 482 Olyphant, PA 18447	154		717-586-2281	William Brojack
Brooks Lumber Co	45	PO Box 68 Ralston, PA 17763	84		717-995-5066	
Brookville Wood Products	100	RD 1 Brookville PA 15825	80		814-849-8487 or 7331	Joe Mitchel
Brownlee Lumber Co	100	RD1 Box 135 Brookville, PA 15825	80		814-328-2240	
Bruce Charles Lumber	8	RD1 Unityville, PA 17774	95		717-458-4249	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Brumbaugh Lumber Co	40	Shirleysburg, PA 17260	57		814-542-8880	
Brunges Pallet Mfg. Company, Inc.		RD 5, Box 2A Montrose, PA 18801	192		717-278-1101	Andrea Wood
Bryner Lumber Co		Route 201 Vanderbilt, PA 15486	134		724-529-2732	
Buehler Lumber Co	100	W. Main St, Box 239 Ridgway, PA 15853	100		814-776-1121	Larry Buehler
Burger's Sawmill & Logging		P.O. Box 26 Kresgeville, PA 18333	166		215-681-4762	Clark F. Burger
Byler s Lumber	25	RD3, Box 323A Punxsutawney, PA 15767	94			
Byler Brothers Sawmill	10	RD1, Box 115F Mill Hall, PA 17751	37			
C. A. Walker Lumber & Supply Co.		Bigler, PA 16825	37		814-857-7642	C.A. Walker
Cabinet Industries, Inc.	30	Danville, PA 17821	83		717-275-1400	
Cable & Snyder Logging Co	200	RD3, Box 331 Reynoldsville, PA 15851	83		814-653-2343	
Cameron Lumber	25	RD1 Homer City, PA 15748	91		814-749-9635	Homer Cameron
Carey Lumber & Pallet	5	Box 179, HC-31 Williamspport, PA 17701	64		717-435-5051	
Carl Rosenberry & Sons Lumber, Inc.	100	7446 Path Valley Road Fort Loudon, PA 17224	78		717-349-2289	Carl L. Rosenberry
Cassler Lumber Company		Cairnbrook, PA 15924	87		814-754-4514	Strohl E. Cassler
Cassler Lumber Company		213 Hickory Street Davidsville, PA 15928	88		814-734-4514	Strohl E. Cassler
Catawissa Lumber & Specialty	75	Catawissa, PA 17820	92		717-356-2349	
Champion Lumber Co.		RD1 Champion, PA 15622	127		724-455-3401	Richard Naugle
Charles D. Roberts Co.	75	PO Box 429 Benton, PA 17814	104		717-925-2525	
Clear Lake Lumber, Inc.		Box 129 Mill Street Spartansburg, PA 16434	159		814-654-7031	Carl R. Brown
Conewago Lumber Co	12	RD2, Box 229-x Elizabethtown, PA 17022	107		717-533-8090	
Cornish Lumber Co	32/16	RD1, PO Box 140 Bear Lake, PA 16402	164		814-489-3246	Harold Cornish - hardwood/ softwood green sawdust

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Corr Ind State Correc Inst	2	Box A Bellefonte, PA 16823	10		814-355-4874 ext 207	
Corsica Lumber Company		RD 1 Corsica, PA 15829	86		814-752-2727	Donald J. Songer
Coshran Lumber Mfg	25	RD2, PO Box 298 Kane, PA 16735	124		814-945-6531	
Cover Lumber Co.	25	RD3, Box 622 Bedford, PA 15522	77		814-356-3263	
Cubbon Lumber Company		RD 1 Emlenton, PA 16373	116		412-867-9441	J.W. Cubbon
D & D Wood Saws		268 Amadei Road Nicktown, PA 15762	78		814-948-8670	Bernie Dumm
D. L. Bussard Forest Products		RD 2 Hopewell, PA 16650	67		814-652-5566	
Dallas Lumber Company		717 W. Central Avenue Titusville, PA 16354	140		814-827-3332	Donald Dallas
Dan White Lumber		RD 1 Champion, PA 15622	127		724-593-2347	Dick
Daniel C. Smith	4	RD6, Box 314 Punxsutawney, PA 15767	94		814-938-9609	
David L. Robinson	2	9269 Mentzer Gap Rd Waynesboro, PA 17268	111		717-762-3380	
Dayton Lumber Co.	25	RD 1 Dayton, PA 16222	117		814-257-8474	Maryanne Lytle
Dean P. Otto Lumber		RD 3 Altoona, PA 16601	42		814-944-5447	
Deer Park Lumber, Inc.		RD 4, Box 280 Tunkhannock, PA 18657	144		717-836-1133	Sherry L. Sabbatini
Delbert L Renninger & Sons Wood Products	180	RD1, Box 118 Richfield, PA 17086	62		717-539-8120	
Delmont Builders Supply	6	100 Industrial Drive Delmont, PA 15626	109		724-468-5701	Mike Ferris, kiln dried sawdust
Dennis McCarty Pallet Co.	70	RD1, Box 308 Forks ville, PA 18616	110		717-924-3672	
Detweiler s Lumber Mill	80	HCR 61, Box 11B Allensville, PA 17002	25			
Dibble Lumber Company		RD Monroeton, PA 18832	135		717-265-5166	Charles Dibble
Distillery Mill		Route 160 Berlin, PA 15530	104		814-267-4805	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Doliveira Lumber Co.	3	Cardiff Road RD1, Box 144 Nanty Glo, PA 15943	72		814-749-0910	James Doliveria
Donald Hoffmaster	60	Box 290A Huntingdon, PA 16652	32		814-667-2472	
Donald Shirey Lumber	200/60	RD3, Box 38 New Bethlehem, PA 16242	101		814-275-4111	chips/green sawdust
Dunkelberger Lumber	7	RD1, Box 510 Centre Hall, PA 16828	12		814-366-1012	
Dwight Lewis Lumber Co., Inc.	75	Hillsgrove, PA 18619	92		717-924-3507	Melvin W. Lewis
E & E Lumber Company, Inc.		RD 1, Box 29 Loretto, PA 15940	62		814-886-4440	Eugene F. Krug
E & R Hitchcock & Sons Lumber		Box 16 Fisher, PA 16225	98		814-764-5320	
E. D. Klahre Pulpwood & Lumber Co.		RD 2 Clearville, PA 15535	97		814-784-5869	Ellis D. Klahre
E. K. Fenstermaker Lumber Company		RD 1 Summerville, PA 15864	104		814-856-2721	Emmin W. Fenstermaker
Eagle Mountain Lumber Company		Box 332 Fannettsburg, PA 17221	74		717-349-2375	John C. Rosenberry
Earth Spirit		4 Mile, Emporium, PA 15834	80		814-486-3687	
Ed Nicholson & Sons Lumber, Inc.	23	Route 711, Springfield Pike Normalville, PA 15469	135		724-628-1771	Scott Nicholson
Ed s Logging		RD1, Box 214 Olanta, PA 16863	42		814-236-3279	
Edward L Bennett Lumber	15	PO Box 445 De Young, PA 16728	117		814-968-3885	
Endeavor Lumber Company	160	Endeavor, PA 16322	120		814-463-7701	Larry Evans
Eutsey Lumber, Inc.	25	HC 39 Bos 88A Scottdale, PA 15683	127		724-887-8404	Dale
Everett Hardwood Lumber Co., Inc.		W. Third St., Box 90 Everett, PA 15537	85		814-652-5111	Lawrence H. Foor
Fabian Lumber Co.		HC 39 White, PA 15490	130		724-887-3446	
Farr Bros. Lumber Company		RD 2 Millville, PA 17846	88		717-458-5565	Dennis & Dale Farr
Feaster Lumber Co.	80	RD1 New Paris, PA 15554	71		814-839-2648	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Fishel s Pallet Mill	35	Box 37 Blandburg, PA 16619	46		814-687-4251	
Forrester & Sons Wood Processing	1	9952 Wye Road Orrstown, PA 17244	80		717-532-5331	
Forrester Lumber Co, Inc	15	2015 Orrstown Road Shippensburg, PA 17257	86		717-532-5609	
Foster Lumber Co.	20	175 Shamrock Street Johnstown, PA 15909	88		814-322-1958	Mr. Foster
Francis R. Bartley	25	RD2, Box 98 Bellefonte, PA 16823	10		814-355-1775	
Frank D. Suppa Logging & Lumber	15	740 Pleasant Drive Warren, PA	135		814-734-7360	
Fred Sherry Lumber Company	8	RD2, Box 123 Ebensburg, PA 15931	64		814-948-7468	Ken
Fulton Bros Forest Products	65	RD1, Box 43 Shipperville, PA 16254	100		814-782-3448	Larry K. Fulton
G & S Lumber Co	140	HCR ;61, Box 51 Blairs Mills, PA 17213	67		814-259-3763	
Garner Lumber Co	9	PO 462 James Creek, PA 16657	44		814-658-3700	J. Robert Garner
Gaston Lumber Company		Rte. 119, RD 1, Box 170 Punxsutawney, PA 15767	94		724-286-9602	Edward E. Gaston
George S. Rabenstein & Son	6	PO Box 236 Orbisonia, PA 17243	54		814-447-3465	
George W. Long & Sons Lumber Co.	50	RD 1, Box 1 Patton, PA 16668	60		814-674-3615	Joseph A. Long, Robert
Gerald King Lumber Co.		Scottdale,-Smithon Rd. Ruffs Dale, PA 15679	122		724-887-3688	
Ger-Hill Lumber	1	RT1, Box 27 Galeton, PA 16922	97			
Gingerichs Mill		RD3 Union City, PA 16438	163			
Glenn Storm Lumber & Timber		RD 5, Box 69 Lehighton, PA 18235	139		215-377-3680	Glenn Storm
Goshorn Lumber Company		HCR 62, Box 62 Neelyton, PA 17239	65		814-259-3716	Randy Goshorn
Gray s Pallets	80	Mifflintown, PA 17059	45		717-436-8585	
Grove Bros. Lumber, Inc.		1970 Frank Road Chambersburg, PA 17201	103		717-264-6710	Norman J. Grove
H & R Sawmill	1	RD Julian, PA 16844	10		814-863-3049	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
H. D. Leedy Lumber Sales	2	454 N Franklin Street Chambersburg, PA 17201	103		717-264-2527	
Harmony Gas, Oil & Timber Co.	20	RD 3, Box 18 Cherry Tree, PA 15724	78		814-743-5353	
HCR 57		Mifflin, PA 17058	46		717-734-3291	J.M. Junk
Heeter Lumber Co	17	RD1, Box 148 Beavertown, PA 17813	52		717-658-3292	John D. Heeter
Helsel Lumber Mill, Inc.	70	RD2, Box 173 Duncansville, PA 16635	47		814-696-0869	
Herman Lumber Co.		616 Snyder Street Connellsville, PA 15425	133		724-736-0250	Ronnie
Hervatin Lumber		RD 1, Box 197-A Kane, PA 16735	123		814-778-5319	Joe Hervatin
Hickman Lumber Company		RD 2 Emlenton, PA 16373	116		412-867-9441	Larry W. Hickman
High Point Hardwoods		1070 Dogwood Lane Roaring Spring, PA 16673	54		814-224-4171	
Hoffman Brothers Lumber, Inc.	90	RD1 Richfield, PA 17086	62		717-694-3340	Delbert Hoffman
Horner Lumber Co.		RD 1 Boswell, PA 15531	98		814-629-5861	Harvey
House Wood Products	15	PO Box 277 Mansfield, PA 16933	108		717-662-3868	
Hoy s Sawmill, 193 Ridge Rd.	2	Carlisle, PA 17013	103		717-258-6734	
Hulburt & Savitts Lumber		P.O. Box 14 Reedsville, PA 17084	24		717-667-6259	J. Hulburt & S. Savitts
Husted s Inc.	27	RD2, Box 1410 Mansfield, PA 16933	108		717-549-3000	
Husted s Pallets, Inc.	60	Mansfield, PA 16933	108		717-549-4955	
Hyma-Devore Lumber Mill, Inc.		Box 222 Youngsville PA 16371	151		814-563-4646	Wilbur Devore
Indian Creek Timberlands, Inc.		Route 711 Mill Run, PA 15464	140		724-455-2034	
J. E. Culbertson Co, Inc.	25	Mill Creek, PA 17060	40		814-643-4519	
J N Pallet, Co	80	Conneautville, PA 16406	187		814-587-2666	
J. Nevin White Lumber Co	40	RD3, PO Box 99 Duncannon, PA 17020	75		717-834-4242	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
J. C. McGough & Son		RD Dysart, PA 16636	51		814-674-8914	Edgar J. McGough
J. D. Younker Sons, Inc.		RD #1589 Bethel, PA 19507	120		717-933-8568	Bruce & David Younker
J. M. Smith & Son Lumber		RD 1, Box 70 McVeytown, PA 17051	40		814-542-9877	James M. Smith
J. Nevin White Lumber Company		P.O. Box 99 Duncannon, PA 17020	75		717-957-2182	J. Nevin White
J. V. Hammond Company		Spangler, PA 15775	80		814-948-6350	J.V. Hammond
Jacob Leisenring Lumber, Inc.	14	RD1, Box 307 Elysburg, PA 17824	90		717-672-9793	
James Shallenburger Lumber	60	527 Mountain Road RD1, Box 43 McAlisterville, PA 17049	50		717-463-2546	James Shallenberger
John M. Fink Lumber	8/10/3	Montoursville, PA 17754	70			hardwood green sawdust/ shavings/softwood green sawdust
Johnson's Sawmill, Inc.		RD 1 Millville, PA 17846	88		717-438-6959	Edward & Edwin Johnson
K. House & Son Lumber Co	1	Box 28 Blossburg, PA 16912	98		717-638-3270	Harold House
K. F. Wood Products		Box 20, HCR 80 Big Cove Tannery, PA 17212	85		717-485-4365	
Kaminski Lumber Co	70	PO Box 517 Tioga, PA 16946	119		717-835-5423	
Kane Hardwood Div., Collins Pine Co.	160	Box 807 Kane, PA 16735	123		814-837-6941	Paul N. Higby
Kephart Bros Lumber Co.	50	RD1 Osceola Mills, PA 16666	29		814-339-7600	Gene & Morris Kephart
Kern Bros. Lumber Company		Star Route Box 5 Normalville, PA 15469	135		814-893-3042	John A. Kern
Keystone Land & Timber Co.	50	RD1, Box 701 Portage, PA 15946	64		814-495-9398	
King & Bumgard Lumber Company		RD 1 Markleton, PA 15551	129		814-926-2158	Roy & Dalton King
King s Lumber	1	RD2 Box 83 Vandergrift, PA 15690	114		412-568-1345	
Kinzua Wood Products		RD 1, Box A Tidioute, PA 16351	131		814-484-3551	C.A. Benner
Kirsch Window Treatment Co,	40	PO Box 543 Shamokin, PA 17872	98		717-672-2591	softwood kiln dried sawdust

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Kitko Wood Products, Inc.		Route 53, Box 3 Glen Hope, PA 16645	44		814-672-3606	Robert Kitko, Ken
Klepchick Brothers		RD #5, Box 5269 Pottsville, PA 17901	122		717-385-4597	Stan, Tony & Cindy Klepchick
Knell Lumber Company	1	RD1, Box 186 Vandergrift, PA 15690	114		412-568-3440	
Koppers Co.	6	Box 30 Marble, PA 16334	107		814-354-7304 or 2800	wood shavings
Koppers Company		Box 85 Marble, PA 16334	107		814-354-2748	Bruce McCool
Kovalick Lumber Co	50	RD1, Box 258 Frenchville, PA 16836	45		814-263-4928	
Krumenacker Lumber Co.	25	327 Krumenacker Lane RD1, PO Box 24 Carrolltown, PA 15722	75		814-948-6858	Dave Krumenacker
Kuhns Bros. Lumber Company, Inc.	140	Route 2, Box 406 Lewisburg, PA 17837	71		717-568-1412	Larry Kuhns
Kyler Lumber Co	1	204 Whiterock Road Freeport, PA 16229	129		412-295-3567	
L & H Lumber Co		RD1, Box 1081 Forksville, PA 18816	110		717-924-3759	Richard & Marvin Higley
L L Baumunk & Sons, Inc.	70	Box 1 Shunk, PA 17768	98		717-924-3231	L. Dale Baumunk
Lapp Lumber Co.		1640 Mine Road Paradise, PA 17562	136		717-442-4116	Melvin G. Lapp, Man
Larimer & Norton, Inc.	36/36	Russell, PA 16345	152		814-757-4532	hardwood green sawdust/green shavings
Lauchle Logging & Lumber	4	RD1, Box 110 Montoursville, PA 17754	70		717-435-3352	
Les Kumkle & Sons	1	3406 Valley Road Marysville, PA 17053	84			
Lewis & Hockenberry, Inc.		RD1, Box 378A Emporium, PA 15834	80		814-486-0359	
Little Lumber Co, Inc.	50/50	Colley St, Box L Benton, PA 17814	104		717-925-2101	Miles Little - hard/softwood green sawdust
Longs Hardwoods, Inc.		3133 New Germany Road Ebensburg, PA 15931	64		814-472-4740	
Louis Long Lumber Company, Inc.		1984 New Germany Road RD 3, Box 299 Ebensburg, PA 15931	64		814-472-9219	Joe Seliga
Lynn L. Bouch	10	RD1, Box 149 Mahaffey, PA 15757	60		814-277-6087	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
M. C. Houseworth Lumber Co.		RD 6, Box 155 Bedford, PA 15522	77		814-623-5893	David S. Fisher
Maier Lumber Co., Inc.		RD3 Box 248 Bangor, PA 18013	170		215-588-3335	Walt & Rich Maier
Maljovec Lumber Company		P.O. Box 535 Kane, PA 16735	123		814-837-7915	Joe Maljovec
Marquardt Brothers	20/6	Box 25 Muncy Valley, PA 17758	105		717-482-2171	hardwood/softwood green sawdust
Martindale Lumber Co.	75	1047 Puritan Road, Box 207 Portage, PA 15946	64		814-736-3032	Ray McCabe
Mastowski & Fullem Lumber Co., Inc.		P.O. Box A Normalville, PA 15469	135		412-455-3320	J. Robert Fullem
Matson Lumber Company	80	132 Main Street Brookville, PA 15825	80		814-849-5334	John D. Matson, Richard Conti
Max Forcey Lumber Company		RD 1 Woodland, PA 16881	37		814-857-5002	Terry Forcey, Jr.
May Lumber Co.		RD 1 Mill Run, PA 15464	140		724-455-7405	
McChesney Lumber Company		RD 1, Box 84 Spring Creek, PA 16436	166		814-664-2821	William McChesney
McClintock Logging	30	Muncy Valley, Pa 17758	105		717-482-3300	
McDowell Lumber Company, Inc.		P.O. Box 148 Crosby, PA 16724	100		814-887-2717	Randy L. Green
McKenzie Brothwrs Lumber	30	Fort Hill, PA 15540	129		814-662-2689, home: 301-689-5484 or 301-895-5358	Olin McKenzie
McMillen Lumber Co. of Sheffield		203 Center Street Sheffield, PA 16347	129		814-968-3241	James McMillen
Megnin Cooperage Mills, Inc.		RFD 1, Box 248A Kittanning, PA 16201	115		412-543-2019	V. U. Megnin
Meiser Lumber Co	75	Drawer F Millerstown, PA 17062	59		717-589-3122	Mike Meiser
Mellott Lumber Co	20	S R 3, Box 24 Harrisonville, PA 17228	80		717-987-3512	
Miller Lumber	75	RD1, Box 491 Petersburg, PA 16669	14		814-667-2478	
Morey s Lumber Co	5	RT 6W, Box 118 Roulette, PA 16746	103		814-544-8310	
Morgan Bros Lumber Co	30	HCR 60, Box 370 Orbisonia, PA 17243	54		814-447-5662	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Mt. Valley Farms & Lumber Products		1240 Nawakwald Street Biglerville, PA 17307	101		717-677-6166	Kenneth R. Taylor
Myers Logging Company		RD 1 Hughesville, PA 17737	82		717-584-4310 or 3819	Robert L. Myers
Myers Wood Products	100-400	4583 National Pike Markleysburg, PA 15459	149		724-329-8150	Chuckie Myers
Nash Lumber Co	3	RD1 Mainesburg, PA 16932	116			
Nora White & Son		RD 2 Mahaffey, PA 15757	61		814-277-6093	Ted
Nosker Lumber Company		RD 1, Box 80 Brookville PA 15825	80		814-328-2266	Mr. Nosker
Nott & Limm Lumber Co	20	RD2, Box 155A Spartansburg, PA 16434	159		814-654-7837	
Novosel Industries, Inc.		RD 2, Box 66 Kane, PA 16735	123		814-837-6898	Chuck Novosel
Ochs Lumber Company, Inc.		Box 160 Lucinda, PA 16235	106		814-226-7528	Albius W. Ochs, Sr.
Ondrizek Lumber Co.		Box 46 Strongstown, PA 15957	74		814-749-0996	Ted Ondrizek
Ordie Price's Sawmill, Inc.		Star Route 92 South Gibson, PA 18842	175		717-222-3296	Ordie E. Price
P & M Zimmerman Lumber	10	RD1, Box 464 Brookville, PA 15825	80		814-849-5035	
Parchey s Sawmill	50	RD2, Box 138-1A McVeytown, PA 17051	40		717-899-6062	
Patterson Lumber Co, Inc.	40	PO Box 157 Wellsboro, PA 16901	92		717-724,3210	Robert DeCamp
Payne Forest Products, Inc.	25	RD1, Box 159 Kane, PA 16735	123		814-837-7200	Donald E. Payne
Peach Bottom Lumber Company		Box 100A Rigby Road Peach Bottom, PA 17563	149		717-548-3792	
Peachey s Sawmill	35	RD1, Box 322A Belleville, PA 17004	26			
Penn Select Hardwoods, Inc.		RD 3 Punxsutawney, PA 15767	94		814-427-5935	
Pennsy Lumber Products	8	RD1, Box 204A Williamsburg, PA 16693	37		814-832-3404	
Phillip's Wood Products		RD 2 Mill Hall, PA 17751	37		717-726-3515	Carl Phillips
Pine Creek Lumber, Inc.	1	RD1, BOX 35B, Mill Hall, PA 17751	37		717-726-7795	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Plate, Inc.		RD 4 Berlin, PA 15530	104		814-267-5799	Zane
Precision Pallets & Lumber	100	Route 40 Addison, PA 15411	135		814-395-5351	Tim Whetsel
Preston & Preston Company		RD 1, Box 20 Wyalusing, PA 18853	143		717-746-1810	Herbert Preston
Propst Lumber Company		RD 4 Honesdale, PA 18431	180		717-729-7408	Robert Propst
Quehanna Hardwoods, Inc.		Box 297 Frenchville, PA 16836	45		814-263-4919	Victor Plubell
R & H Lumber Company		14506 Buchanan Trail, W Mercersburg, PA 17236	92		717-328-3566	Lloyd Rockwell
R. H. Morgan Lumber Co.		HCR 60, Box 370 Orbisonia, PA 17243	45		814-447-5662	Ramon H. Morgan, Owner
R. J. Hoffman & Sons	50	RD 2, Box 350 Mt. Pleasant Mills, PA 17853	64		717-539-2428	Rudolph J. Hoffman
R. V. Bridendolph & Son	20	14144 Buchanan Trail West Mercersburg, PA 17236	92		717-228-3650	
R. W. Karosic Lumbering		240 Margaret Lane Windber, PA 15963	87		814-467-6321	Richard Karosic
Ralph A. Hepner Lumber		RD1, Box 140 McAlisterville, PA 17049	50		717-463-2439	
Ralph Stuck Lumber		Box 23 Richfield, PA 17086	62		717-539-8666	Harold Stuck
Ram Forest Products, Inc.	80	Star Route Box 15-A Shinglehouse, PA 16748	132		814-697-7181	Robert A. Mallery
Ray Kaminski Lumber, Inc.		P.O. Box 51 Tioga, PA 16946	119		717-835-5423	Raymond J. Kaminski
Ream Lumber	40	RD 3, Box 64 Somerset, PA 15501	112		814-445-8185	Clark Ream
Rehner		RD 7, Box 1371 Harrisburg, PA 17112	88		717-469-2562	Edward Rehner
Rick Ochs Lumber Co		275 W.Main Street Brookville, PA 15825	80		814-849-7345	
Ridgway Lumber Company		RD 1, Box 54C Ridgway, PA 15853	100		814-776-1743	G. Wayne Buehler
Ritenour Lumber Co.	90	Melcroft, PA 15462	131		724-455-2286	Jeff
Robert Pierce & Sons Lumber	15-40	RD 1 Smicksburg, PA 16256	108		724-286-9757	George

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Roberts Mill	50	Box 249 Benton, PA 17814	104		717-925-2525	Steve Heppensteel
Robinson Lumber Co	8	RD1 Elliottsburg, PA 17024	70		717-789-3265	
Robinson Lumber Company		RD 3, Box 565 Bellefonte, PA 16823	10		814-355-9583	Richard N. Robinson
Rodgers		RD 3, Nutt Road Grove City, PA 16127	147			Martin E. Rodgers
Rorabaugh Lumber Co	15	Box 321 Burnside, PA 15721	72		814-845-2277	Roger D. Rorabaugh
Rose Lumber & Planing Mill		306 Rose Road Boswell, PA 15531	98		814-629-6883	
Rosenberry Bros. Lumber Co., Inc.		Drawer A Fannettsburg, PA 17221	74		717-349-7196	Glen Rosenberry
Roy Miller		RD 1 Mahaffey, PA 15757	61		814-277-6055	
Russell Meyers Lumber Company		RD 4, Box 560 Mountain Top, PA 18707	124		717-868-3090	Russell Meyers
S & S Sawmill		Box 80, Rebersburg, PA 16872	34			
Samuel J. McMath	20	RD, Box 140 Mount Union, PA 17066	44		814-542-4779	
Samuel Kolva, Jr.		RD 1, Box 309 Elizabethville, PA 17023	91		717-652-2200	Samuel Kolva, Jr.
Samuel M. Koban		RD1, Box 258 Summerhill, PA 15958	67		814-482-9348	
Samuel Smith, Inc.		424 W. Main Street Evans City, PA 16033	173		412-538-4610	Samuel Smith
Sanner Bros. Lumber Company		RD 4 Meyersdale, PA 15557	125		814-634-0808	Edmond Sanner
Sawlog, Inc.		RD #1, Box 308 Forksville, PA 18616	110		717-924-3672	
Saylor Lumber	20/35	RD1, Box A344 Lock Haven, PA 17745	40		717-769-6567	hardwood/softwood green sawdust
Seigel Sawmill		RD 2, Box 379 Pine Grove, PA 17963	121		717-345-8426	William L. Seigel
Seven D Wholesale		302 Saint Thomas St. Gallitzin, PA 16641	54		814-886-8352	
Shaffer Brothers Lumber Co.		RD 1 Hyndman, PA 15545	94		814-842-3903	
Shaffer Products, Inc	6	13062 Grant Shook Rd Greencastle, PA 17225	103		717-597-2688	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Sherwood Sawmill	1	RD2, Box 177 Dubois, PA 15801	62		814-371-9492	
Shives Lumber	20	HCR 80 Needmore, PA 17238	87		717-573-2813	
Signor & Sherant Lumber Co		Arnot, PA 16911	94		717-638-2773	
Smith Bros. Sawmill		Route 522, S. Mount Union, PA 17066	44		814-542-8320	Bernard Smith
Snyder Lumber Co	200	RD1, Box 717 Mahaffey, PA 15757	60		814-277-6640	
Spigelmyer Lumber		RD2 Port Royal, PA 17082	48		717-248-6555	
Spilka Hardwood Products, Inc.		Box 193 Ludlow, PA 16333	133		814-945-6503	George W. Spilka
Sproul Lumber Co.		Pittsburgh Street Uniontown, PA 15401	145		412-261-5665	Buddy Eicher
Sproul Lumber Company, Inc.		P.O. Box 458 Uniontown, PA 15401	145		412-438-3574	Fred G. Sproul
Stec Lumber Company	40	Garland, PA 16416	158		814-563-9002	Jim Stec
Steele s Lumber Co.	50	Box 79 Riddlesburg, PA 16672	66		814-928-4497	James & Donald Steele
Stonemetz Log Home Supplies		RD1, Honedye Road Shinglehouse, PA 16748	132		814-697-6660	
Strait s Sawmill	6	Box 305 Warfordsburg, PA 17267	107		717-513-2866	
Stroup s Sawmill		RD1, Box 244A Kane, PA 16735	124		814-778-5170	
Summerhill Lumber	8	RD1, Box 3550 Leechburg, PA 15656	120		412-763-2284	
Superior Wood Products		RD 1, Box 258 Summerhill, PA 15958	67		814-472-9348	
Surewood Forest Products, Inc.		405 South 4th Street Youngwood, PA 15697	116		724-925-8967	
Surewood Forest Products, Inc.		Greensburg, PA 15601	110		412-925-8967	
Sutherland Lumber Company		Box 351 Burgettstown, PA 15021	163		412-947-3388	W.W. Sutherland
Swistock Contracting		PO Box 145 Houtzdale, PA 16651	34		814-378-8621	
Tamaqua Lumber, Inc.		RD 3, Box 81 Tamaqua, PA 18252	130		717-386-5660	John Wickerizer

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Tanfield Lumber Company		Box 8 Moscow, PA 18444	158		717-842-4769	Rich & Tom Tanfield
Thomas Timberlands Enterprises	50	Box 75, Thomas Lane Pleasant Gap, PA 16823	10		814-359-2890	
Thompson Maple Products, Inc.	80	Colza Road, RD2, Box 99 Corry, PA 16407	174		814-663-2931 or 664-8831	Chuck Henness
Tinkey Bros. Lumber Company		RD 1 Rockwood, PA 15557	123		814-926-3293	James J. Tinkey
Torch Lumber Mills		45 Clark Avenue Carbondale, PA 18407	166		717-282-5212	Joseph Torch
Treen Box & Pallet Corp	70	Mifflintown, PA 18966	45		215-639-5100	
Turner Trusses		134 Turner Heights Hollsopple, PA 15935	91		814-479-4040	Kiln dried sawdust
Ulysses Lumber Company	150	Box 274 Ulysses, PA 16948	109		814-848-7405	Timothy Watson
Upton Lumber Company		Box 41 Garland, PA 16416	158		814-563-7812	
Urbanik Lumber	3	Box 102 Clarence, PA 16829	33		814-387-6939	
Virgil R. Beary	60	RD1, Box 42A, Shipperville, PA 16254	100		814-782-3488	other
Vitale		Box 297 Newfoundland, PA 18445	173		717-676-3400	Carmen Vitale
W. B. Shaffer Lumber Co	10	RR 4148 Dushore, PA 18614	112		717-924-3540	
W. J. Reining & Sons, Inc.		Box 777 Beach Lake, PA 18405	190		717-729-7325	Gerald Reining & Floyd Oliver
Wade Cisney Lumber Company, Inc.		Box 75, HCR 61B Shade Gap, PA 17255	61		814-542-9757	Wade Cisney
Walczak Lumber Company, Inc.		Box 340 Clifford, PA 18413	169		717-222-9651	Ron Walczak
Walter H. Weaver Sons, Inc.		RD 4, Route 241 Lebanon, PA 17042	113		717-867-2212	Rodney Shufflet
Walter R. Lindenmuth Lumber Co.		Box 59 Ashland, PA 17921	108		717-875-3138	Walter R. Lindenmuth
Weaver Brothers Lumber	55	RD1, Box 188 Beaver Springs, PA 17812	54		717-658-8371	Mel & Abe Weaver
Weaver s Sawmill	30	RD2, Box 649 Liverpool, PA 17045	74			
Weber Lumber	50	RD1, Box 426 Ashville, PA 16613	51		814-674-5124	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Wenkosky Lumber		RD 5, Box 5152 Lake Ariel, PA 18405	169		717-689-2487	Robert Wenkosky
Wenturine Brothers Lumber, Inc.	70	Route 553 Nicktown, PA 15762	78		814-948-6050	John or Kim
Wetzel Bros Lumber Co., Inc.	1	RD1, Box 268E Mill Hall, PA 17751	37		717-726-3473	
Wheeland Lumber Co	50	Inc, RD1, Box 220B Liberty, PA 16930	90		717-324-6042	
White Lumber Co	10	Mahaffey, PA 15757	60		814-277-6098	
Wickizer Lumber Co., Inc.		Route #2 Kingsley, PA 18826	178		717-289-4118	William Ord, Jr.
Willamette Industries, Inc.		100 Center Street Johnsonburg, PA 15845	108		814-965-6399	Dan Evans
William Bohl & Son		132 Trevose Road Trevose, PA 19047	200		215-357-2132	William G. Bohl
William Simpson Lumber Co.	75	RD4, Box 158 Brookville, PA 15825	80		814-849-3678	William Simpson
Wingate Lumber Co	25	RD1, Box 176 East Waterford, PA 17021	70		717-734-3812	Roy Wingate
Wood Chips, Inc.	120	Route 150 Avis, PA 17721	46		717-769-6441	James H. Maguire
Wood Word Forest Products	25	RD1, Box 458 Linden, PA 17744	57		717-322-1312	
Youngwood Industries	50	1512 Pine Street Greensburg, PA 15601	110		724-837-3612	Joe
Zanes Wood Products	60	2431 Berlin Plank Road Berlin, PA 15530	104		814-267-5199	Zane
Zeager Bros., Inc.		4000 E. Harrisburg Pike Middletown, PA 17057	152		717-944-7481	Charles B. Zeager
Zook Lumberworks	6	RD2, Box 223 McVeytown, PA 17051	40		717-899-6543	
Zuzek Lumber Company		RD 2, Box 27 Kane, PA 16735	123		814-837-7090	Emil Zuzek

12/11/00

Appendix B. POTENTIAL SAWDUST SUPPLIERS – BY ALPHABET

POTENTIAL SAWDUST SUPPLIERS FOR PENN STATE COMBUSTOR — Selected by Alpha

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
A & L Woods, Inc.	60	Mount Pleasant Mills, PA 17853	64		717-539-8922	
A. D. Renninger Lumber Co	75	PO Box 95 Richfield, PA 17086	62		717-694-3351	
Alexandria Wood Products	60	PO Box 357 Alexandria, PA 16611	30		814-669-4469	E. Gary O'Bryan
Amberson Valley Lumber Products	10	17891 Cold Spring Rd Spring Run, PA 17262	73		717-349-7359	
American Hickory Corp	15	Lewistown, PA 17044	31		717-543-6070	air dried shavings
Appleton Papers, Inc.	120	100 Paper Mill Road Roaring Spring, PA 16673	54		814-224-6411	wood fines
Babcock Lumber Co.		421 S. West Street Ebensburg, PA 15931	64		814-472-6911	
Bickel Wood Products, Inc.	90	E Ohio St, Box 416 McClure, PA 17841	46		717-658-8343	
Blair Sterer Rough Lumber Products		RD1 Saxton, PA 16678	58		814-658-3400	
Bowser Lumber Co.		Route 36 N, RD1, Box 240 Mahaffey, PA 15757	60		814-277-9956	Ron or Ed
Brode Lumber	6	RD1 Saxton, PA 16678	58		814-653-3624	
Brumbaugh Lumber Co	40	Shirleysburg, PA 17260	57		814-542-8880	
Byler Brothers Sawmill	10	RD1, Box 115F Mill Hall, PA 17751	37			
C. A. Walker Lumber & Supply Co.		Bigler, PA 16825	37		814-857-7642	C.A. Walker
Carey Lumber & Pallet	5	Box 179, HC-31 Williamsport, PA 17701	64		717-435-5051	
Corr Ind State Correc Inst	2	Box A Bellefonte, PA 16823	10		814-355-4874 ext 207	
D. L. Bussard Forest Products		RD 2 Hopewell, PA 16650	67		814-652-5566	
Dean P. Otto Lumber		RD 3 Altoona, PA 16601	42		814-944-5447	
Delbert L Renninger & Sons Wood Products	180	RD1, Box 118 Richfield, PA 17086	62		717-539-8120	
Detweiler s Lumber Mill	80	HCR 61, Box 11B Allensville, PA 17002	25			

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Doliveira Lumber Co.	3	Cardiff Road RD1, Box 144 Nanty Glo, PA 15943	72		814-749-0910	James Doliveria
Donald Hoffmaster	60	Box 290A Huntingdon, PA 16652	32		814-667-2472	
Dunkelberger Lumber	7	RD1, Box 510 Centre Hall, PA 16828	12		814-366-1012	
E & E Lumber Company, Inc.		RD 1, Box 29 Loretto, PA 15940	62		814-886-4440	Eugene F. Krug
Eagle Mountain Lumber Company		Box 332 Fannettsburg, PA 17221	74		717-349-2375	John C. Rosenberry
Ed s Logging		RD1, Box 214 Olanta, PA 16863	42		814-236-3279	
Feaster Lumber Co.	80	RD1 New Paris, PA 15554	71		814-839-2648	
Fishel s Pallet Mill	35	Box 37 Blandburg, PA 16619	46		814-687-4251	
Francis R. Bartley	25	RD2, Box 98 Bellefonte, PA 16823	10		814-355-1775	
Fred Sherry Lumber Company	8	RD2, Box 123 Ebensburg, PA 15931	64		814-948-7468	Ken
G & S Lumber Co	140	HCR ;61, Box 51 Blairs Mills, PA 17213	67		814-259-3763	
Garner Lumber Co	9	PO 462 James Creek, PA 16657	44		814-658-3700	J. Robert Garner
George S. Rabenstein & Son	6	PO Box 236 Orbisonia, PA 17243	54		814-447-3465	
George W. Long & Sons Lumber Co.	50	RD 1, Box 1 Patton, PA 16668	60		814-674-3615	Joseph A. Long, Robert
Goshorn Lumber Company		HCR 62, Box 62 Neelyton, PA 17239	65		814-259-3716	Randy Goshorn
Gray s Pallets	80	Mifflintown, PA 17059	45		717-436-8585	
H & R Sawmill	1	RD Julian, PA 16844	10		814-863-3049	
HCR 57		Mifflin, PA 17058	46		717-734-3291	J.M. Junk
Heeter Lumber Co	17	RD1, Box 148 Beavertown, PA 17813	52		717-658-3292	John D. Heeter
Helsel Lumber Mill, Inc.	70	RD2, Box 173 Duncansville, PA 16635	47		814-696-0869	
Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact

High Point Hardwoods		1070 Dogwood Lane Roaring Spring, PA 16673	54		814-224-4171	
Hoffman Brothers Lumber, Inc.	90	RD1 Richfield, PA 17086	62		717-694-3340	Delbert Hoffman
Hulburt & Savitts Lumber		P.O. Box 14 Reedsville, PA 17084	24		717-667-6259	J. Hulburt & S. Savitts
J. C. McGough & Son		RD Dysart, PA 16636	51		814-674-8914	Edgar J. McGough
J. E. Culbertson Co, Inc.	25	Mill Creek, PA 17060	40		814-643-4519	
J. M. Smith & Son Lumber		RD 1, Box 70 McVeytown, PA 17051	40		814-542-9877	James M. Smith
J. Nevin White Lumber Co	40	RD3, PO Box 99 Duncannon, PA 17020	75		717-834-4242	
J. Nevin White Lumber Company		P.O. Box 99 Duncannon, PA 17020	75		717-957-2182	J. Nevin White
James Shallenburger Lumber	60	527 Mountain Road RD1, Box 43 McAlisterville, PA 17049	50		717-463-2546	James Shallenberger
John M. Fink Lumber	8/10/3	Montoursville, PA 17754	70			hardwood green sawdust/ shavings/softwood green sawdust
Kephart Bros Lumber Co.	50	RD1 Osceola Mills, PA 16666	29		814-339-7600	Gene & Morris Kephart
Keystone Land & Timber Co.	50	RD1, Box 701 Portage, PA 15946	64		814-495-9398	
Kovalick Lumber Co	50	RD1, Box 258 Frenchville, PA 16836	45		814-263-4928	
Krumenacker Lumber Co.	25	327 Krumenacker Lane RD1, PO Box 24 Carrolltown, PA 15722	75		814-948-6858	Dave Krumenacker
Kuhns Bros. Lumber Company, Inc.	140	Route 2, Box 406 Lewisburg, PA 17837	71		717-568-1412	Larry Kuhns
Lauchle Logging & Lumber	4	RD1, Box 110 Montoursville, PA 17754	70		717-435-3352	
Longs Hardwoods, Inc.		3133 New Germany Road Ebensburg, PA 15931	64		814-472-4740	
Louis Long Lumber Company, Inc.		1984 New Germany Road RD 3, Box 299 Ebensburg, PA 15931	64		814-472-9219	Joe Seliga
Lynn L. Bouch	10	RD1, Box 149 Mahaffey, PA 15757	60		814-277-6087	
Company Name	Tons/week available	Location	Miles to State College	FOB\$/ ton	Phone	Contact
Martindale Lumber Co.	75	1047 Puritan Road, Box 207 Portage, PA 15946	64		814-736-3032	Ray McCabe

Max Forcey Lumber Company		RD 1 Woodland, PA 16881	37		814-857-5002	Terry Forcey, Jr.
Meiser Lumber Co	75	Drawer F Millerstown, PA 17062	59		717-589-3122	Mike Meiser
Mellott Lumber Co	20	S R 3, Box 24 Harrisonville, PA 17228	80		717-987-3512	
Miller Lumber	75	RD1, Box 491 Petersburg, PA 16669	14		814-667-2478	
Morey s Lumber Co	5	RT 6W, Box 118 Roulette, PA 16746	103		814-544-8310	
Morgan Bros Lumber Co	30	HCR 60, Box 370 Orbisonia, PA 17243	54		814-447-5662	
Ondrizek Lumber Co.		Box 46 Strongstown, PA 15957	74		814-749-0996	Ted Ondrizek
Parchey s Sawmill	50	RD2, Box 138-1A McVeytown, PA 17051	40		717-899-6062	
Peachey s Sawmill	35	RD1, Box 322A Belleville, PA 17004	26			
Pennsy Lumber Products	8	RD1, Box 204A Williamsburg, PA 16693	37		814-832-3404	
Phillip's Wood Products		RD 2 Mill Hall, PA 17751	37		717-726-3515	Carl Phillips
Pine Creek Lumber, Inc.	1	RD1, BOX 35B, Mill Hall, PA 17751	37		717-726-7795	
Quehanna Hardwoods, Inc.		Box 297 Frenchville, PA 16836	45		814-263-4919	Victor Plubell
R. H. Morgan Lumber Co.		HCR 60, Box 370 Orbisonia, PA 17243	45		814-447-5662	Ramon H. Morgan, Owner
R. J. Hoffman & Sons	50	RD 2, Box 350 Mt. Pleasant Mills, PA 17853	64		717-539-2428	Rudolph J. Hoffman
Ralph A. Hepner Lumber		RD1, Box 140 McAlisterville, PA 17049	50		717-463-2439	
Ralph Stuck Lumber		Box 23 Richfield, PA 17086	62		717-539-8666	Harold Stuck
Robinson Lumber Co	8	RD1 Elliottsburg, PA 17024	70		717-789-3265	
Robinson Lumber Company		RD 3, Box 565 Bellefonte, PA 16823	10		814-355-9583	Richard N. Robinson
Company Name	Tons/week available	Location	Miles to State College	FOB\$/ ton	Phone	Contact
Rorabaugh Lumber Co	15	Box 321 Burnside, PA 15721	72		814-845-2277	Roger D. Rorabaugh
Rosenberry Bros. Lumber Co., Inc.		Drawer A Fannettsburg, PA 17221	74		717-349-7196	Glen Rosenberry

Roy Miller		RD 1 Mahaffey, PA 15757	61		814-277-6055	
S & S Sawmill		Box 80, Rebersburg, PA 16872	34			
Samuel J. McMath	20	RD, Box 140 Mount Union, PA 17066	44		814-542-4779	
Samuel M. Koban		RD1, Box 258 Summerhill, PA 15958	67		814-482-9348	
Saylor Lumber	20/35	RD1, Box A344 Lock Haven, PA 17745	40		717-769-6567	hardwood/softwood green sawdust
Seven D Wholesale		302 Saint Thomas St. Gallitzin, PA 16641	54		814-886-8352	
Sherwood Sawmill	1	RD2, Box 177 Dubois, PA 15801	62		814-371-9492	
Smith Bros. Sawmill		Route 522, S. Mount Union, PA 17066	44		814-542-8320	Bernard Smith
Snyder Lumber Co	200	RD1, Box 717 Mahaffey, PA 15757	60		814-277-6640	
Spigelmyer Lumber		RD2 Port Royal, PA 17082	48		717-248-6555	
Steele s Lumber Co.	50	Box 79 Riddlesburg, PA 16672	66		814-928-4497	James & Donald Steele
Superior Wood Products		RD 1, Box 258 Summerhill, PA 15958	67		814-472-9348	
Swistock Contracting		PO Box 145 Houtzdale, PA 16651	34		814-378-8621	
Thomas Timberlands Enterprises	50	Box 75, Thomas Lane Pleasant Gap, PA 16823	10		814-359-2890	
Treen Box & Pallet Corp	70	Mifflintown, PA 18966	45		215-639-5100	
Urbanik Lumber	3	Box 102 Clarence, PA 16829	33		814-387-6939	
Wade Cisney Lumber Company, Inc.		Box 75, HCR 61B Shade Gap, PA 17255	61		814-542-9757	Wade Cisney
Weaver Brothers Lumber	55	RD1, Box 188 Beaver Springs, PA 17812	54		717-658-8371	Mel & Abe Weaver
Weaver s Sawmill	30	RD2, Box 649 Liverpool, PA 17045	74			
Company Name	Tons/week available	Location	Miles to State College	FOB\$/ ton	Phone	Contact
Weber Lumber	50	RD1, Box 426 Ashville, PA 16613	51		814-674-5124	
Wetzel Bros Lumber Co., Inc.	1	RD1, Box 268E Mill Hall, PA 17751	37		717-726-3473	

White Lumber Co	10	Mahaffey, PA 15757	60		814-277-6098	
Wingate Lumber Co	25	RD1, Box 176 East Waterford, PA 17021	70		717-734-3812	Roy Wingate
Wood Chips, Inc.	120	Route 150 Avis, PA 17721	46		717-769-6441	James H. Maguire
Wood Word Forest Products	25	RD1, Box 458 Linden, PA 17744	57		717-322-1312	
Zook Lumberworks	6	RD2, Box 223 McVeytown, PA 17051	40		717-899-6543	

12/11/00

Appendix C. POTENTIAL SAWDUST SUPPLIERS – BY DISTANCE

POTENTIAL SAWDUST SUPPLIERS FOR PENN STATE COMBUSTOR — Selected by Distance

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Corr Ind State Correc Inst	2	Box A Bellefonte, PA 16823	10		814-355-4874 ext 207	
Francis R. Bartley	25	RD2, Box 98 Bellefonte, PA 16823	10		814-355-1775	
H & R Sawmill	1	RD Julian, PA 16844	10		814-863-3049	
Robinson Lumber Company		RD 3, Box 565 Bellefonte, PA 16823	10		814-355-9583	Richard N. Robinson
Thomas Timberlands Enterprises	50	Box 75, Thomas Lane Pleasant Gap, PA 16823	10		814-359-2890	
Dunkelberger Lumber	7	RD1, Box 510 Centre Hall, PA 16828	12		814-366-1012	
Miller Lumber	75	RD1, Box 491 Petersburg, PA 16669	14		814-667-2478	
Hulburt & Savitts Lumber		P.O. Box 14 Reedsville, PA 17084	24		717-667-6259	J. Hulburt & S. Savitts
Detweiler s Lumber Mill	80	HCR 61, Box 11B Allensville, PA 17002	25			
Peachey s Sawmill	35	RD1, Box 322A Belleville, PA 17004	26			
Kephart Bros Lumber Co.	50	RD1 Osceola Mills, PA 16666	29		814-339-7600	Gene & Morris Kephart
Alexandria Wood Products	60	PO Box 357 Alexandria, PA 16611	30		814-669-4469	E. Gary O'Bryan
American Hickory Corp	15	Lewistown, PA 17044	31		717-543-6070	air dried shavings
Donald Hoffmaster	60	Box 290A Huntingdon, PA 16652	32		814-667-2472	
Urbanik Lumber	3	Box 102 Clarence, PA 16829	33		814-387-6939	
S & S Sawmill		Box 80, Rebersburg, PA 16872	34			
Swistock Contracting		PO Box 145 Houtzdale, PA 16651	34		814-378-8621	
Phillip's Wood Products		RD 2 Mill Hall, PA 17751	37		717-726-3515	Carl Phillips
Byler Brothers Sawmill	10	RD1, Box 115F Mill Hall, PA 17751	37			
C. A. Walker Lumber & Supply Co.		Bigler, PA 16825	37		814-857-7642	C.A. Walker

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Max Forcey Lumber Company		RD 1 Woodland, PA 16881	37		814-857-5002	Terry Forcey, Jr.
Pennsy Lumber Products	8	RD1, Box 204A Williamsburg, PA 16693	37		814-832-3404	
Pine Creek Lumber, Inc.	1	RD1, BOX 35B, Mill Hall, PA 17751	37		717-726-7795	
Wetzel Bros Lumber Co., Inc.	1	RD1, Box 268E Mill Hall, PA 17751	37		717-726-3473	
J. M. Smith & Son Lumber		RD 1, Box 70 McVeytown, PA 17051	40		814-542-9877	James M. Smith
J. E. Culbertson Co, Inc.	25	Mill Creek, PA 17060	40		814-643-4519	
Parchey s Sawmill	50	RD2, Box 138-1A McVeytown, PA 17051	40		717-899-6062	
Saylor Lumber	20/35	RD1, Box A344 Lock Haven, PA 17745	40		717-769-6567	hardwood/softwood green sawdust
Zook Lumberworks	6	RD2, Box 223 McVeytown, PA 17051	40		717-899-6543	
Dean P. Otto Lumber		RD 3 Altoona, PA 16601	42		814-944-5447	
Ed s Logging		RD1, Box 214 Olanta, PA 16863	42		814-236-3279	
Garner Lumber Co	9	PO 462 James Creek, PA 16657	44		814-658-3700	J. Robert Garner
Samuel J. McMath	20	RD, Box 140 Mount Union, PA 17066	44		814-542-4779	
Smith Bros. Sawmill		Route 522, S. Mount Union, PA 17066	44		814-542-8320	Bernard Smith
Gray s Pallets	80	Mifflintown, PA 17059	45		717-436-8585	
Kovalick Lumber Co	50	RD1, Box 258 Frenchville, PA 16836	45		814-263-4928	
Quehanna Hardwoods, Inc.		Box 297 Frenchville, PA 16836	45		814-263-4919	Victor Plubell
R. H. Morgan Lumber Co.		HCR 60, Box 370 Orbisonia, PA 17243	45		814-447-5662	Ramon H. Morgan, Owner
Treen Box & Pallet Corp	70	Mifflintown, PA 18966	45		215-639-5100	
Bickel Wood Products, Inc.	90	E Ohio St, Box 416 McClure, PA 17841	46		717-658-8343	
Fishel s Pallet Mill	35	Box 37 Blandburg, PA 16619	46		814-687-4251	

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
HCR 57		Mifflin, PA 17058	46		717-734-3291	J.M. Junk
Wood Chips, Inc.	120	Route 150 Avis, PA 17721	46		717-769-6441	James H. Maguire
Helsel Lumber Mill, Inc.	70	RD2, Box 173 Duncansville, PA 16635	47		814-696-0869	
Spigelmyer Lumber		RD2 Port Royal, PA 17082	48		717-248-6555	
James Shallenburger Lumber	60	527 Mountain Road RD1, Box 43 McAlisterville, PA 17049	50		717-463-2546	James Shallenberger
Ralph A. Hepner Lumber		RD1, Box 140 McAlisterville, PA 17049	50		717-463-2439	
J. C. McGough & Son		RD Dysart, PA 16636	51		814-674-8914	Edgar J. McGough
Weber Lumber	50	RD1, Box 426 Ashville, PA 16613	51		814-674-5124	
Heeter Lumber Co	17	RD1, Box 148 Beavertown, PA 17813	52		717-658-3292	John D. Heeter
Appleton Papers, Inc.	120	100 Paper Mill Road Roaring Spring, PA 16673	54		814-224-6411	wood fines
George S. Rabenstein & Son	6	PO Box 236 Orbisonia, PA 17243	54		814-447-3465	
High Point Hardwoods		1070 Dogwood Lane Roaring Spring, PA 16673	54		814-224-4171	
Morgan Bros Lumber Co	30	HCR 60, Box 370 Orbisonia, PA 17243	54		814-447-5662	
Seven D Wholesale		302 Saint Thomas St. Gallitzin, PA 16641	54		814-886-8352	
Weaver Brothers Lumber	55	RD1, Box 188 Beaver Springs, PA 17812	54		717-658-8371	Mel & Abe Weaver
Brumbaugh Lumber Co	40	Shirleysburg, PA 17260	57		814-542-8880	
Wood Word Forest Products	25	RD1, Box 458 Linden, PA 17744	57		717-322-1312	
Blair Sterer Rough Lumber Products		RD1 Saxton, PA 16678	58		814-658-3400	
Brode Lumber	6	RD1 Saxton, PA 16678	58		814-653-3624	
Meiser Lumber Co	75	Drawer F Millerstown, PA 17062	59		717-589-3122	Mike Meiser
Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact

Bowser Lumber Co.		Route 36 N, RD1, Box 240 Mahaffey, PA 15757	60		814-277-9956	Ron or Ed
George W. Long & Sons Lumber Co.	50	RD 1, Box 1 Patton, PA 16668	60		814-674-3615	Joseph A. Long, Robert
Lynn L. Bouch	10	RD1, Box 149 Mahaffey, PA 15757	60		814-277-6087	
Snyder Lumber Co	200	RD1, Box 717 Mahaffey, PA 15757	60		814-277-6640	
White Lumber Co	10	Mahaffey, PA 15757	60		814-277-6098	
Roy Miller		RD 1 Mahaffey, PA 15757	61		814-277-6055	
Wade Cisney Lumber Company, Inc.		Box 75, HCR 61B Shade Gap, PA 17255	61		814-542-9757	Wade Cisney
Ralph Stuck Lumber		Box 23 Richfield, PA 17086	62		717-539-8666	Harold Stuck
A. D. Renninger Lumber Co	75	PO Box 95 Richfield, PA 17086	62		717-694-3351	
Delbert L Renninger & Sons Wood Products	180	RD1, Box 118 Richfield, PA 17086	62		717-539-8120	
E & E Lumber Company, Inc.		RD 1, Box 29 Loretto, PA 15940	62		814-886-4440	Eugene F. Krug
Hoffman Brothers Lumber, Inc.	90	RD1 Richfield, PA 17086	62		717-694-3340	Delbert Hoffman
Sherwood Sawmill	1	RD2, Box 177 Dubois, PA 15801	62		814-371-9492	
A & L Woods, Inc.	60	Mount Pleasant Mills, PA 17853	64		717-539-8922	
Babcock Lumber Co.		421 S. West Street Ebensburg, PA 15931	64		814-472-6911	
Carey Lumber & Pallet	5	Box 179, HC-31 Williamsport, PA 17701	64		717-435-5051	
Fred Sherry Lumber Company	8	RD2, Box 123 Ebensburg, PA 15931	64		814-948-7468	Ken
Keystone Land & Timber Co.	50	RD1, Box 701 Portage, PA 15946	64		814-495-9398	
Longs Hardwoods, Inc.		3133 New Germany Road Ebensburg, PA 15931	64		814-472-4740	
Louis Long Lumber Company, Inc.		1984 New Germany Road RD 3, Box 299 Ebensburg, PA 15931	64		814-472-9219	Joe Seliga
Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Martindale Lumber Co.	75	1047 Puritan Road, Box 207 Portage, PA 15946	64		814-736-3032	Ray McCabe

R. J. Hoffman & Sons	50	RD 2, Box 350 Mt. Pleasant Mills, PA 17853	64		717-539-2428	Rudolph J. Hoffman
Goshorn Lumber Company		HCR 62, Box 62 Neelyton, PA 17239	65		814-259-3716	Randy Goshorn
Steele s Lumber Co.	50	Box 79 Riddlesburg, PA 16672	66		814-928-4497	James & Donald Steele
Superior Wood Products		RD 1, Box 258 Summerhill, PA 15958	67		814-472-9348	
D. L. Bussard Forest Products		RD 2 Hopewell, PA 16650	67		814-652-5566	
G & S Lumber Co	140	HCR ;61, Box 51 Blairs Mills, PA 17213	67		814-259-3763	
Samuel M. Koban		RD1, Box 258 Summerhill, PA 15958	67		814-482-9348	
John M. Fink Lumber	8/10/3	Montoursville, PA 17754	70			hardwood green sawdust/ shavings/softwood green sawdust
Lauchle Logging & Lumber	4	RD1, Box 110 Montoursville, PA 17754	70		717-435-3352	
Robinson Lumber Co	8	RD1 Elliottsburg, PA 17024	70		717-789-3265	
Wingate Lumber Co	25	RD1, Box 176 East Waterford, PA 17021	70		717-734-3812	Roy Wingate
Feaster Lumber Co.	80	RD1 New Paris, PA 15554	71		814-839-2648	
Kuhns Bros. Lumber Company, Inc.	140	Route 2, Box 406 Lewisburg, PA 17837	71		717-568-1412	Larry Kuhns
Doliveira Lumber Co.	3	Cardiff Road RD1, Box 144 Nanty Glo, PA 15943	72		814-749-0910	James Doliveria
Rorabaugh Lumber Co	15	Box 321 Burnside, PA 15721	72		814-845-2277	Roger D. Rorabaugh
Amberson Vallery Lumber Products	10	17891 Cold Spring Rd Spring Run, PA 17262	73		717-349-7359	
Rosenberry Bros. Lumber Co., Inc.		Drawer A Fannettsburg, PA 17221	74		717-349-7196	Glen Rosenberry
Eagle Mountain Lumber Company		Box 332 Fannettsburg, PA 17221	74		717-349-2375	John C. Rosenberry
Ondrizek Lumber Co.		Box 46 Strongstown, PA 15957	74		814-749-0996	Ted Ondrizek
Company Name	Tons/week available	Location	Miles to State College	FOB\$/ ton	Phone	Contact
Weaver s Sawmill	30	RD2, Box 649 Liverpool, PA 17045	74			

J. Nevin White Lumber Company		P.O. Box 99 Duncannon, PA 17020	75		717-957-2182	J. Nevin White
J. Nevin White Lumber Co	40	RD3, PO Box 99 Duncannon, PA 17020	75		717-834-4242	
Krumenacker Lumber Co.	25	327 Krumenacker Lane RD1, PO Box 24 Carrolltown, PA 15722	75		814-948-6858	Dave Krumenacker
Mellott Lumber Co	20	S R 3, Box 24 Harrisonville, PA 17228	80		717-987-3512	
Morey s Lumber Co	5	RT 6W, Box 118 Roulette, PA 16746	103		814-544-8310	

12/11/00

Appendix D. POTENTIAL BUSINESS CONTACTS

Potential Business Contacts for Penn State Combustor — Alpha

Business Name	Location	Business Type	Phone	Miles to State College
Atotech USA Inc	500 Science Park Rd State College, PA		(814) 238-0514	2.1
Alex Oswald - Oswald & Assoc Engineers	Rr 1 Box 7a Huntingdon, PA		(814) 627-0300	25.3
Agriculture Animal Industry	600 Chestnut Ave Altoona, PA		(814) 946-7315	33.8
Agriculture Plant Ind Bureau	600 Chestnut Ave Altoona, PA		(814) 946-7315	33.8
Agriculture Animal Industry	615 Howard Ave Altoona, PA		(814) 946-7315	33.9
Agriculture Plant Ind Bureau	615 Howard Ave Altoona, PA		(814) 946-7315	33.9
Amp Inc	Route 11 & Post Rd Carlisle, PA		(717) 243-3811	54.0
Animal Industry	2301 N Cameron St Harrisburg, PA		(717) 783-5301	62.1
Atlan-Tech Industrial Sales	5108 Ridgeview Dr Harrisburg, PA		(717) 651-0448	64.1
American Fire & Safety Svc	6424 Derry St Harrisburg, PA		(717) 564-0990	67.7
Adams County Private Industry	108 N Stratton St Rear Gettysburg, PA		(717) 334-6727	74.3
Adept Corp	4601 N Susquehanna Trl York, PA		(717) 266-3606	76.7
Abbottstown Industries	420 W Fleet St Abbottstown, PA		(717) 259-0112	77.9
Acterna	1147 Eichelberger St Hanover, PA		(717) 637-8888	81.2
Agricultural & Ind Museum-York	217 W Princess St York, PA		(717) 852-7007	82.9
Agricultural & Ind Museum-York	480 E Market St York, PA		(717) 852-7007	83.0
Accudriv Inc	517 Prospect St York, PA		(717) 848-3088	83.4
Allegheny Tool Co	Rr 1 Box 1387 Clarendon, PA		(814) 726-0200	91.0
Artmor Plastics Corp	1000 Wills Mt Cumberland, MD		(301) 722-7440	92.6
Advanced Tool & Mfg Co	100 Railroad Ave # 103 Westminster, MD		(410) 876-7075	95.7
Ball Sanitation	Ramey, PA		(814) 378-5256	28.2
Blair County Ind Dev Auth	4500 6th Ave Altoona, PA		(814) 943-7571	36.3
Brubaker Tool Corp	Center St Millersburg, PA		(717) 692-2113	50.2

Business Name	Location	Business Type	Phone	Miles to State College
Badman Machine Industry	900 N Market St Selinsgrove, PA		(570) 988-6588	51.7
Bapco Engeerning	State Route 119 & 210 Punxsutawney, PA		(814) 938-6434	58.2
Brinrac Equipment Inc	300 Mulberry Dr Mechanicsburg, PA		(717) 766-1066	58.8
Besco Systems Inc	6 State Rd # 110 Mechanicsburg, PA		(717) 691-7490	59.1
Bureau Of Animal Industry Lab	2305 N Cameron St Harrisburg, PA		(717) 787-8808	62.1
Backus Co	411 W Water St Smethport, PA		(814) 887-5705	76.5
Bugle Boy Industry	1800 Loucks Rd York, PA		(717) 767-9699	80.5
Bradley Lifting	1030 Elm St York, PA		(717) 848-3121	83.7
Billet Industries	247 Campbell Rd York, PA		(717) 840-0280	85.6
Bushnell Associates	1064 Deyo Rd Corning, NY		(607) 524-6424	96.0
Centre County Solid Waste Auth	253 Transfer Rd Bellefonte, PA		(814) 238-7005	11.5
Culligan Water Svc	Huntingdon, PA		(814) 643-5250	18.5
Clearfield Machine Co	3rd & Everett St Clearfield, PA		(814) 765-6544	33.9
Cromaglass Corp	2902 Reach Rd Williamsport, PA		(570) 326-3396	51.5
Cumberland Tool & Die Inc	6 Brenneman Cir Mechanicsburg, PA		(717) 691-1125	57.7
Chambersburg Engineering Co	150 Derbyshire St Chambersburg, PA		(717) 264-7151	60.9
Chambersburg Waste Paper Co	2047 Loop Rd Chambersburg, PA		(717) 264-4890	62.0
Capitol Tool & Mfg Co	429 Old York Rd New Cumberland, PA		(717) 938-6165	67.1
C & K Ind Equipment Repair	286 Grandview Ave Indiana, PA		(724) 465-6138	68.3
Cycle Chem Of Lewisberry Inc	Lewisberry, PA		(717) 938-6745	69.0
Cindex Inc	Rr 1 Hershey, PA		(717) 534-2890	73.1
Canton Manufacturing Co	120 E 2nd St Canton, PA		(570) 673-5145	79.4
Cannon Ind Ltd	3325 Connelly Rd Emigsville, PA		(717) 764-1811	80.0
Commercial/Ind Appraisal Svc	2709 S Queen St York, PA		(717) 741-5264	84.1
Conn & Co	11 S Marion St Warren, PA		(814) 723-7980	97.3
Communications/Power Industry	15805 York Rd Sparks/Glencoe, MD		(410) 666-5800	106.5
D-M-E Co	977 Loop Rd Lewistown, PA		(717) 242-0347	20.3

Business Name	Location	Business Type	Phone	Miles to State College
D K White Specialty Ind	6288 N State Road 103 Lewistown, PA		(717) 248-4077	20.4
Dixon Tool & Die	PO Box 188 Tyrone, PA		(814) 684-0266	21.1
Dept Of Labor & Ind	2923 N 7th St Harrisburg, PA		(717) 787-7500	61.4
DO All Ind Supplies	506 Industrial Dr Lewisberry, PA		(717) 938-4959	69.4
Die A Matic Inc	650 N State St York, PA		(717) 846-9300	82.5
Dermajetics-Ind Herbalife Dist	Cumberland, MD		(301) 724-4046	92.6
Dgd Inc	500 Cobham Park Rd Warren, PA		(814) 723-3680	97.3
Emporium Specialties Co	Foster Ave Austin, PA		(814) 647-8661	55.5
E-I-T Corp	Rd 2 Route 61 Sunbury, PA		(570) 286-7744	57.0
Egger Industries	Boot Jack Rd Ridgway, PA		(814) 772-7953	63.3
Elsner Engineering Works Inc	475 Fame Ave Hanover, PA		(717) 637-5991	82.1
Engdahl Manufacturing Inc	354 W Clarke Ave York, PA		(717) 854-7114	82.6
Eyster's Machine & Wire Prod	97 Church St Seven Valleys, PA		(717) 792-9896	86.7
Eastern Machine Inc	1415 Brown Rd Westminster, MD		(410) 876-1888	89.2
Fci Berg Electronics	511 Spruce St Clearfield, PA		(814) 765-2431	33.9
F L Smithe Machine Co	899 Old Route 220 N Duncansville, PA		(814) 695-5521	38.6
Flight Systems Ind Prod Co	185 Hempt Rd Mechanicsburg, PA		(717) 697-0333	57.3
Finishing Systems Inc	70 Willow Springs Circle York, PA		(717) 764-1106	78.1
Foltz Manufacturing & Ind Supl	63 E Washington St Hagerstown, MD		(301) 739-1076	80.0
Flinchbaugh Co	390 Eberts Ln York, PA		(717) 854-7720	83.0
Fincor Electronics Div	3750 E Market St York, PA		(717) 751-4200	84.9
F D Miller Tool Inc	Tannery Rd Glenville, PA		(717) 229-2335	89.0
F & M Machine Corp	1234 Tech Ct Westminster, MD		(410) 876-5900	93.9
Georgino & Sons Ind Supplies	Routes 255 Penfield, PA		(814) 637-5301	44.8
Gkn Sinter Metals	1 Cameron Rd Emporium, PA		(814) 486-3314	54.4
Graham Engineering Corp	1203 Eden Rd York, PA		(717) 848-3755	82.0
H M Spencer Inc	1004 Ridge Rd Mill Hall, PA		(570) 726-7495	28.3

Business Name	Location	Business Type	Phone	Miles to State College
H M Spencer Inc	288 Park Ave Woolrich, PA		(570) 769-6721	39.0
Harrisburg Waste Paper Co	4200 Industrial Rd Harrisburg, PA		(717) 236-7971	60.4
Houseknecht's Machine & Tool	120 N Railroad St Hughesville, PA		(570) 584-3010	66.9
Hanover Pattern Shop	401 Carlisle St Hanover, PA		(717) 637-7988	82.2
Industry & Technology Ctr	2820 E College Ave State College, PA		(814) 237-8510	4.4
Irvin's Tinware	102 Cedar Ln Mount Pleasant Mills, PA		(570) 539-8200	45.2
Indian Trails Mountain Water	Indian Trail Rd Gratz, PA		(717) 365-3898	61.7
International Dynetics	630 Loucks Mill Rd York, PA		(717) 846-4443	82.4
John's Welding Shop	Rr 4 Box 190a Huntingdon, PA		(814) 643-4564	22.8
J R Miller Drilling Co	Rr 1 Box 46 Williamsburg, PA		(814) 643-3120	28.4
Juniata Business & Industry	15 S Main St Mifflintown, PA		(717) 436-8201	28.8
John Wilson Ind Svc	Rr 1 Clearfield, PA		(814) 765-2000	33.8
Johnson Machine Co	90 Bigler Ave Clearfield, PA		(814) 765-9648	34.2
John Wilson Ind Svc	Guinea Hill Rd Clearfield, PA		(814) 765-4834	34.6
Jec Ind Automation	1205 Mahaffey Hollow Rd Linden, PA		(570) 322-5300	49.8
Joe Chwan Ind Tool Inc	5521 Carlisle Pike # 200 Mechanicsburg, PA		(717) 691-7300	59.6
Jenny Products Inc	850 N Pleasant Ave Somerset, PA		(814) 445-3400	83.8
Jarrett Machine Co	20 Roberts St Bradford, PA		(814) 362-2755	90.0
Jmf Contracting	2301 Mount Carmel Rd Parkton, MD		(410) 329-6050	102.7
Keen Manufacturing Corp	2540 Clyde Ave State College, PA		(814) 238-4935	3.7
Korlinchak Fabrication	Westover Rd Coalport, PA		(814) 672-5328	35.4
Ken-Tex Corp	599 S High St Selinsgrove, PA		(570) 374-4476	52.0
Kennametal Mining & Constr Div	422 Chalybeate Rd Bedford, PA		(814) 623-2711	61.1
Karadon Corp	4125 Route 22 Hwy E Blairsville, PA		(724) 676-5790	71.3
Keener Coatings	3711 Board Rd York, PA		(717) 764-1106	79.5
Kenterprise Research Inc	1360 N George St York, PA		(717) 848-4528	81.7

Business Name	Location	Business Type	Phone	Miles to State College
Kba Motter Corp	3900 E Market St York, PA		(717) 755-1071	84.9
Keystone Tool & Die	Route 417 Westons Mills, NY		(716) 372-6987	91.7
Lee Industries Inc	514 W Pine St Philipsburg, PA		(814) 342-0461	20.4
Lawruk Machine & Tool Co	302 E 6th Ave Altoona, PA		(814) 943-6136	33.1
Labor Dept Industry	306 E Locust St Clearfield, PA		(814) 765-6398	34.0
Lumax Industries Inc	4th St & Chestnut Ave Altoona, PA		(814) 944-2537	5.0
L/B Water Svc	550 S High St Selinsgrove, PA		(570) 374-1157	52.0
Labor & Industry Dept	208 W 3rd St # 303 Williamsport, PA		(570) 327-3519	54.2
Laukemann Recycling	Mechanicsburg, PA		(717) 732-0510	60.3
L/B Water Svc-South Inc	427 Skelly Rd Chambersburg, PA		(717) 264-8445	62.3
Labor & Industry Dept	1171 S Cameron St Harrisburg, PA		(717) 783-3620	64.4
Labor & Industry Dept	200 Lincoln St Johnstown, PA		(814) 533-2371	64.5
Loudon Industry Inc	140 Landis Dr Mercersburg, PA		(717) 328-9808	66.1
Louise Rutkowski Ind Cruise	1080 Old Mountain Rd Dillsburg, PA		(717) 432-5136	67.7
Labor & Industry Dept	104 Market St Coudersport, PA		(814) 274-9330	7.8
Lindberg Machine Shops	Rr 1 Wilcox, PA		(814) 929-5427	67.8
Librandi's Plating	93 Airport Dr Middletown, PA		(717) 944-9442	71.2
Landis Threading Systems	360 S Church St Waynesboro, PA		(717) 762-3151	73.5
Labor & Industry Dept	841 Vogelsong Rd York, PA		(717) 767-7620	80.8
Lever Wood Machine Works Inc	420 S Sherman St York, PA		(717) 848-2356	83.6
Lehr Design & Mfg Inc	12 Valley Rd Jacobus, PA		(717) 428-1828	87.5
Lillibridge Tool Machine Co	43 Lillibridge Rd Portville, NY		(716) 933-6600	89.8
Labor & Industry Dept-Acctg	42 Davis St Bradford, PA		814) 362-6992	90.4
Mifflin County Ind Dev Corp	6395 State Route 103 N Bldg 50 Lewistown, PA		(717) 242-0393	20.1
M & J Ind Supply Inc	309 E Main St Lock Haven, PA		(570) 748-3802	32.2
M C Tool & Die	2324 Union Ave Altoona, PA		(814) 944-8654	34.9
Mc Lanahan Corp	200 Wall St Hollidaysburg, PA		(814) 695-9807	38.0

Business Name	Location	Business Type	Phone	Miles to State College
Mainline Sanitation	1005 1/2 Main St Portage, PA		(814) 736-9310	1.1
Mid State Trading Co	2525 Trenton Ave Williamsport, PA		(570) 326-9431	51.7
M S Ind Enterprises Inc	620 Old York Rd Etters, PA		(717) 932-8924	69.2
Marisol Inc	553 Harvest Dr York, PA		(717) 854-5695	80.3
Mayer Hydraulic Repair	371 W Philadelphia St York, PA		(717) 845-2220	82.5
Micro Cut Inc	1758 S Queen St York, PA		(717) 848-4150	84.7
Metis	Rr 6 Box 11420 Berkeley Springs, WV		(304) 258-4799	85.3
Miller's Precision Tool	12 Hill St # B Railroad, PA		(717) 235-3345	94.1
M & M Painting Co	22 Edelweiss Way Parkton, MD		(410) 357-5101	99.6
Mega Tool & Mfg Corp	1023 Caton Ave Elmira, NY		(607) 734-8398	103.2
Nagle's Disposal Svc	901 N 8th St Bellwood, PA		(814) 742-8626	28.2
Northway Industry Inc	Paxtonville Rd Middleburg, PA		(570) 837-1564	42.7
Newburg-Hopewell Sewer	PO Box 128 Newburg, PA		717) 423-6180	47.1
Niagara Cutter Svc Ctr	150 S 5th St Reynoldsville, PA		(814) 653-8211	57.4
North American Ind Supply Inc	St Marys Rd Rt 120 Ridgway, PA		(814) 773-3179	63.3
National Federation Ind	301 Chestnut St Harrisburg, PA		(717) 232-8582	63.4
National Systems Inc	1118 Roosevelt Ave York, PA		(717) 848-6053	81.4
New Way Packaging Machinery	210 N Blettner Ave Hanover, PA		(717) 637-2133	82.6
Private Industry Council	2595 Clyde Ave # 1 State College, PA		(814) 237-8998	3.6
Private Industry Council	200 Shadylane Dr Philipsburg, PA		(814) 342-3833	19.8
Prochem Scientific	101 Shady Ln McClure, PA		(570) 658-7678	27.3
Pace Precision Products Inc	21 Ohio Ave DuBois, PA		(814) 371-6201	52.2
Pennsylvania Ind Audiology	512 E Central Ave South Williamsport, PA		(570) 327-9511	54.9
P A Ind Heat Treaters	Access Rd St Marys, PA		(814) 781-6262	57.1
Port-O-Let	4300 Industrial Park Rd Camp Hill, PA		(717) 232-0878	61.7
Plant Industry Bureau	2301 N Cameron St # G13 Harrisburg, PA		(717) 787-4843	62.1

Business Name	Location	Business Type	Phone	Miles to State College
Pennsylvania Waste Ind Assn	1 Westwind Dr Lemoyne, PA		(717) 737-2340	62.6
Penna Chemical Industry	25 N Front St # 100 Harrisburg, PA		(717) 232-6681	63.2
Penn-Mo Fire Brick Co	825 Paxton St Harrisburg, PA		(717) 234-4504	63.8
Platt & Sons Inc	2190 Teaberry Rd Bedford, PA		(814) 623-8183	66.5
Precision Manufacturing	3155 Buchanan Trl W Greencastle, PA		(717) 597-2165	69.0
Purcell Machine Co	Rr 2 Palmyra, PA		(717) 838-5611	70.3
Programmable Orienting Systems	Rr 2 Port Allegany, PA		(814) 544-4000	73.4
Pangborn Corp	580 Pangborn Blvd Hagerstown, MD		(301) 739-3500	79.5
Precision Tool & Mfg Corp	70 Church Rd Emigsville, PA		(717) 767-6454	80.0
Pope Avenue Ind & Ofc Park	901 Pope Ave Hagerstown, MD		(301) 790-3909	81.1
Precision Components Corp	500 Lincoln St York, PA		(717) 848-1126	82.2
Precision Machinery Systems	630 Loucks Mill Rd York, PA		(717) 846-6800	82.4
Penn Forklift Svc	1231 Wallace St York, PA		(717) 846-2375	83.1
Potomac Metal & Supply Inc	12001 Siebert Rd SE Cumberland, MD		(301) 722-4030	95.3
Potomac Valley Ind Supply Inc	16214 National Hwy SW Frostburg, MD		(301) 689-9212	95.7
Rohr Industry	150 N Broad St Ridgway, PA		(814) 772-1600	62.9
Rbs Fab Inc	230 Hoernerstown Rd Hummelstown, PA		(717) 566-9513	68.7
Remtech Environmental Group	550 Industrial Dr Lewisberry, PA		(717) 938-4700	69.2
Remediation Inc	4331 Fox Run Rd Dover, PA		(717) 292-4432	76.5
Rampf Molds Ind	10 Western Maryland Pkwy Hagerstown, MD		(301) 791-6880	79.4
Ronald J Glass Ind Svc	3600 Board Rd # C York, PA		(717) 779-0520	79.5
Readco Manufacturing Inc	901 S Richland Ave York, PA		(717) 848-2801	83.2
R F Kelly & Co	1501 Saint Paul St York, PA		(717) 846-1300	84.1
Rti Technollier	4075 E Market St York, PA		(717) 840-0678	84.9
Superior Waste Svc	25 Decibel Rd State College, PA		(814) 237-3713	.0
Swartz Fire & Safety Equipment	513 E Bishop St Bellefonte, PA		(814) 355-9033	9.5
Sukala Fabricating	Rr 1 Box 56 Coalport, PA		(814) 672-5565	35.4

Business Name	Location	Business Type	Phone	Miles to State College
Shop-Vac Corp	2323 Reach Rd Williamsport, PA		(570) 326-0502	51.9
Sylon Plastics	25 S Franklin St DuBois, PA		(814) 371-7510	52.4
Sedco Manufacturing Co	396 E 2nd Ave S outh Williamsport, PA		(570) 323-1232	54.7
Susquehanna Fire Equipment Co	17 Main St Dewart, PA		(570) 538-5505	55.8
Safety-Kleen Corp	10 Eleanor Dr New Kingstown, PA		(717) 697-9783	56.4
Stoey's Trucking	45 Mount Pleasant Rd Fayetteville, PA		(717) 352-3016	62.8
Sheet-Metal Ind Equipment	2041 Blue Mountain Pkwy Harrisburg, PA		(717) 671-4776	63.3
Spirit Inc	95 Fox Rd Mercersburg, PA		(717) 328-3266	65.7
Shimmel's Container Svc	61 Codorus Furnace Rd Mount Wolf, PA		(717) 266-5250	81.4
Sss Ind Leithiser Div	145 N Hartley St York, PA		(717) 843-8989	82.4
Svedala Industries Inc	240 Arch St York, PA		(717) 843-8671	82.6
Scheufelen North American	789 Kings Mill Rd York, PA		(717) 845-5493	83.1
Sanmina Corp	100 Craftway Dr Littlestown, PA		(717) 359-7131	83.2
Somerset-Westmoreland Ind	750 S Center Ave Somerset, PA		(814) 444-8767	84.3
S & T Painting Inc	221 Bentley Rd Parkton, MD		(410) 357-4911	99.7
S & M Mc Donald Contracting	14 Institution Rd Pine City, NY		(607) 732-4034	99.8
Sun Automation Inc	66 Loveton Circle Sparks/Glencoe, MD		(410) 329-3560	108.8
Timberwolf Co	Route 453 Smokerun, PA		(814) 378-6200	29.5
Tlc Hauling	901 4th Avenue Lakemont/Altoona, PA		(814) 946-0211	33.9
Tmp Acquisitions	Graham St Hyde, PA		(814) 765-9615	34.6
Turner Hydraulics Inc	1605 Industrial Dr Carlisle, PA		(717) 243-3329	52.9
Total Filter Recycling	2323 Woodlawn St Harrisburg, PA		(717) 561-1168	64.8
Tandem Staffing For Industry	1 W Market St # 1 York, PA		(717) 854-9999	82.8
Twelfth Ward Ind Democratic	298 N Sherman St York, PA		(717) 843-3739	82.8
Trail Tool Inc	10027 Oak Ridge Rd Glen Rock, PA		(717) 235-1893	88.9
Williams Brothers Ind & Mill	124 S Osmond St State College, PA		(814) 238-3033	0.8

Business Name	Location	Business Type	Phone	Miles to State College
W O Hickok Mfg Co	900 Cumberland St Harrisburg, PA		(717) 234-8041	62.8
W J Mc Combie Ind Rcrtrs	637 Philadelphia St # 308 Indiana, PA		(724) 349-1525	68.3
White-Brook Inc	1 Sylvania St Brookville, PA		(814) 849-8441	68.3
Wilke Enginuity Inc	250 Obrien Ln Hanover, PA		(717) 632-5937	81.2
Wheelabrator Water Technologis	Hwy 601 N Somerset, PA		(814) 445-6026	84.4
Yeager Sanitation	Rr 2 Box 182 Punxsutawney, PA		(814) 427-2837	59.2
Young Industries	16 Painter St Muncy, PA		(570) 546-3165	62.4
York County Farm & Ind Equip	3265 Otterbein Ave Emigsville, PA		(717) 764-6412	80.0
York County Ind Development	144 Roosevelt Ave # 100 York, PA		(717) 846-8879	81.1
York County Solid Waste	2700 Black Bridge Rd York, PA		(717) 845-1066	81.1
York Tool Warehouse Inc	1901 W Market St York, PA		(717) 848-2847	81.7
Yis Inc	1049 N Hartley St York, PA		(717) 854-7804	81.7
York Engraving Co	630 Loucks Mill Rd York, PA		(717) 848-1748	82.4
York Manufacturing Ind Inc	351 N East St York, PA		(717) 755-7242	83.1
Yorkkraft Inc	550 S Pine St York, PA		(717) 845-3666	83.5
York Tool & Die Inc	2603 Keyway Dr York, PA		(717) 741-4844	86.3

12/11/00

Appendix E. OTHER POTENTIAL BIOMASS RESIDUES

POTENTIAL BIOMASS RESIDUES FOR PENN STATE COMBUSTOR

Bakers:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Delectable Delights by Heather Holland		Centre Hall, PA 16828			814-364-2995	
Pacifico Angelo & Sons					800-934-2867	

Biological Products:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Vespa Labs		RD1 Spring Mills, PA 16875	814-422-8165			

Boxes — Corrugated, Fiber & Wooden:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Beacon Container Corp. of PA		Montoursville, PA 17754			800-332-8562 570-368-2688	
C & E Containers, Inc.		Jersey Shore, PA 17740			570-398-4464	
Mail Boxes Etc.		State College, PA 16801			814-237-2552	
Packaging Service Group		Jersey Shore, PA 17740			570-398-4792	
Parcel Plus		State College, PA 16801			814-231-8030	
Sullivan s Moving & Storage		Bellefonte, PA 16823			814-234-7090	
U-Haul Company		State College, PA 16801			814-234-8719	
Zeigler s Packing and Crating		State College, PA 16801			814-238-4021	

Building Materials:

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Black Bear Truss		State College, PA 16801			800-326-9689	
Centre Concrete Co.		State College, PA 16801			814-238-0558	
Crain Lumber Co.		Port Matilda, PA 16870			814-692-5020	
84 Lumber Co.		Milesburg, PA 16853			814-355-1584	
GOSCO Hardwood Products		Lewistown, PA 17044			717-543-6470	
Heather-Lite Co (polyurethane)		Centre Hall, PA 16828			814-364-1947	
Houts O W & Son Inc.		State College, PA 16801			814-238-6701	
Penns Valley Building Supply		Spring Mills, PA 16875			814-422-7827	
Jones & Brown		Johnstown, PA 15901			800-452-0227	
Lezzer Lumber Co.		State College, PA 16801			814-237-3511	
Miller Builders Supply		State College, PA 16801			814-237-2886	
Oak Hall Fabricators		Centre Hall, PA 16828			814-364-1616	
Quehanna Millwork		Frenchville, PA 16836			814-263-4145	
Triangle Building Supplies		Bellefonte, PA 16823			814-355-5885	
Your Building Centers, Inc.		State College, PA 16801			800-585-3377 814-238-4971	

Butchering:

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
A J Peachey & Sons		State College, PA 16801			814-237-0288	

Cabinet Makers:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Associated Woodcrafts		Centre Hall, PA 16828			814-364-9190	
Biddle s Jeff Woodworking		Boalsburg, PA 16827			814-466-7720	
Cabinet Solutions		State College, PA 16801			814-861-3253	
Creekside Custom Millwork		Bellefonte, PA 16823			814-357-8102	
Interior Motives		Duncansville, PA 16635			814-693-9100	
McClellan Millwork		Centre Hall, PA 16828			814-364-9858	
New Cabinet Fashions		State College, PA 16801			814-238-7611	
Price Hardwood & Cabinetry		State College, PA 16801			814-231-0260	
R A F Woodworking		Centre Hall, PA 16828			814-364-9235	
Rogers Terry L Custom Wood Shop		Bellefonte, PA 16823			814-355-8788	
Traditional Touch		Altoona, PA 16601			814-942-2737	

Candy — Wholesale:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Gardner s Candies		Tyrone, PA 16686			814-684-3925	

Feed Wholesale & Manufacturers:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Tyrone Milling		Tyrone, PA 16686			800-439-6455	

Food, Brokers, Consultants, Products:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Colyer Escargot Farm		Millheim, PA 16854			814-349-9809	
Fellinger Mike Co		State College, PA 16801			814-867-0701	
Food Safety Consultants		Hollidaysburg, PA 16648			814-696-5943	
Hanover Foods Corp		Centre Hall, PA 16828			814-364-1482	
Herloicher Foods		State College, PA 16801			814-237-0134	
Suzie Wong s Eggroll & More		Ferguson, PA			814-237-5005	
SYSCO Food Service of Central PA					800-733-7420	
Village Eating House		Harris, PA			814-466-6865	

Furniture Designers & Custom Builders:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Butterfield, Robert		Julian, PA 16844			814-355-9054	
Happy Valley Wooden Treasures		Port Matilda, PA 16870			814-692-8811	

Home Improvements (possible source of construction/demolition wood):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Affordable Roofing		State College, PA 16801			814-237-2866	
Appalacian Building & Construction		Bellefonte, PA 16823			814-355-0973	

Ark Construction		State College, PA 16801			814-234-8943	
Bald Knob Builders		Boalsburg, PA 16827			814-466-7658	
Bonchack Maintenance		State College, PA 16801			814-238-1123	
Brothers in Christ Construction		Penns Valley, PA			814-364-9202	
C. L. Greenland		State College, PA 16801			814-237-2363	
Casamento & Sons Construction		Port Matilda, PA 16870			814-234-3748	
Discount Remodelers, Inc.		Bellefonte, PA 16823			814-355-0680	
E-B Enterprises		Boggs, PA			814-355-2098	
Frey Builders		Spring Mills, PA 16875			814-364-9955	
Gilmore Construction		Bellefonte, PA 16823			814-355-0911	
Handyworks		Bellefonte, PA 16823			814-355-8060	
Hartswick Construction, Inc.		State College, PA 16801			814-238-9537	
Homan Construction, Inc.		State College, PA 16801			814-237-4051	
Homescapers		Bellefonte, PA 16823			814-353-0507	
Hoy & Reede		Pleasant Gap, PA 16823			814-359-3032	
J. B. Roofing		State College, PA 16801			814-231-2824	
Johnson Construction, Inc.		Spring Mills, PA 16875			814-364-1436	
Jovinelli Services		State College, PA 16801			814-238-6671	
Kitchen Klassics		Bellefonte, PA 16823			814-353-8110	
Knisely Built		State College, PA 16801			814-237-5515	
Kunes General Contracting, Inc.		State College, PA 16801			814-234-5828	
Lindsay Construction		Boalsburg, PA 16827			814-466-7775	

MPM Builders		Boalsburg, PA 16827			814-466-0555	
Master Renovators & Builders, Inc.		State College, PA 16801			814-234-3066	
Mountainside Electric		State College, PA 16801			814-234-8447	
RJL Construction		Potter, PA			814-364-1020	
Reits Construction		Spring, PA			814-357-8122	
Remodeler s Workshop		Pleasant Gap, PA 16823			814-359-3207	
Sampsel Construction		Spring Mills, PA 16875			814-422-8919	
Shuey Construction		Pleasant Gap, PA 16823			814-359-2862	
Smith s Custom Builders		Spring Mills, PA 16875			814-422-8407	
Solartherm Remodelers Company, Inc.		State College, PA 16801			814-231-8855	
Veronesi Building & Remodeling, Inc.		State College, PA 16801			814-237-4514	
Witmer Construction, Inc.		State College, PA 16801			814-238-6062	

Logging Companies:

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Carl Emery Logging		Woodeard, PA			814-349-5737	
Fye Logging & Veneer, Inc.		Moshannon, PA 16859			814-387-6503	
Hoover Wood Products		Snow Shoe, PA 16874			814-387-0244	
Pine Creek Lumber, Inc.		Mill Hall, PA 17751			570-726-7795	
Superior Lumber		State College, PA 16801			814-234-1133	
Sustainable Forestry Initiative		State College, PA 16801			814-867-9299	
Thomas Timberland Enterprises, Inc.		Pleasant Gap, PA 16823			814-359-2890	

Wheeland Lumber Co., Inc.		State College, PA 16801			814-867-6475	
Doc s Dry Kilns		Rebersburg, PA 16872			814-349-5762	
Wetzel Palmer, Jr.		Jersey Shore, PA 17740			570-398-7771	

Lumber — Retail:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Alexandria Wood Products, Inc.		Alexandria, PA 16611			888-748-3952 814-669-4469	
Biddle s Jeff Woodworking		Boalsburg, PA 16827			814-466-7720	
Crain Lumber Company		Port Matilda, PA 16870			814-692-5020	
Eastern Wood Products		Williamsport, PA			800-445-5428	
84 Lumber Co.		Milesburg, PA 16853			814-355-1584	
Keystone Hardwoods		Julian, PA 16844			814-355-0953	
Lezzer Lumber Co		State College, PA 16801			814-237-3511	
Peachey s Wood Products		Reedsville, PA 17084			717-667-9373	
Penns Valley Building Supply		Spring Mills, PA 16875			814-422-7827	
Price C L Sawmill & Planing Mill		Cobum, PA 16832			814-349-4431	Office: Aaronsburg, PA 814-349-5505
Price Hardwood & Cabinetry, State College, PA 16801					814-231-0260	
Quehanna Millwork		Frenchville, PA 16836			814-263-4145	
Triangle Building Supplies & Services		Bellefonte, PA 16823			814-355-5885	
Wood Powell		Huntingdon, PA 16652			814-643-0691	
Woodcrafter s Supply		Altoona, PA 16601			814-943-2833	
Your Building Centers, Inc.		State College, PA 16801			800-585-3377 814-238-4971	

Lumber — Wholesale:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Kovalick Lumber		Snow Shoe, PA 16874			814-387-4230	
Lezzer Wholesale Supply		State College, PA 16801			814-237-5977	
Price Hardwood & Cabinetry		State College, PA 16801			814-231-0260	
Thomas Timberland Enterprises, Inc.		Pleasant Gap, PA 16823			814-359-2890	

Newspapers (waste newsprint):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Associated Press		State College, PA 16801			814-238-3649	
Blue White Illustrated		State College, PA 16801			814-234-1177	
Centre Daily Times		State College, PA 16801			814-238-5000	
Construction Data Corp.		State College, PA 16801			814-234-5120	
Pennsylvania Business Central		State College, PA 16801			814-867-2222	
Pittsburgh Post Gazette		Pittsburgh, PA			412-263-1100	
Voices of Central PA		State College, PA 16801			814-234-1699	

Nurseries — Plants — Trees etc (possible source of wood from prunings, dead stock etc):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Andreozzi s Posies		Port Matilda, PA 16870			814-692-4076	

Aquatic Jewells		Bellefonte, PA 16823			814-355-1271	
Black Bear Nursery		Winburne, PA 16879			814-345-6953	
Blackhawk Homestead Service		Centre Hall, PA 16828			814-364-9668	
College Gardens Nursery		State College, PA 16801			814-237-6801	
College Gardens Nursery		Port Matilda, PA 16870			814-234-3600	
Countryside Nursery		Warriors Mark, PA 16877			814-692-5288	
D & H Tree Farm		Kylertown, PA 16847			814-345-5055	
Fox Hill Gardens		State College, PA 16801			814-237-9087	
Garden Shed		State College, PA 16801			814-238-5090	
Holliis Garden Center & Greenhouse Nursery		Osceola Mills, PA 16666			814-339-6289	
Horseshoe Lane Nursery		Bellefonte, PA 16823			814-353-1644	
J. L. Farm		State College, PA 16801			814-237-9045	
K & K Flowers		Snow Shoe, PA 16874			814-387-0100	
KLR Landscaping		Milesburg, PA 16853			814-355-8211	
Narber s Landscaping & Nursery		Boalsburg, PA 16827			814-466-7905	
Nardozzo s Landscaping & Nursery		Potters Mills, PA			814-364-2770	
Nittany Enhancements Nursery & Landscaping		Boalsburg, PA 16827			814-466-6128	
Norse Paddle Company		Spring Mills, PA 16875			814-422-8844	
Sammis Greenhouse		Centre Hall, PA 16828			814-364-2881	
Tait Farm Trees		Boalsburg, PA 16827			814-466-6910	

Potato Chips — Wholesale:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Herr s Foods, Inc.		Hollidaysburg, PA 16648			800-328-4313	
Luse Distributing		Centre Hall, PA 16828			814-364-1216	
Utz Quality Foods, Inc.		Hanover, PA 17331			800-367-7629	

Recycling Centers:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Centre County Recycling Program		Bellefonte, PA 16823			814-238-6649	
Centre County Solid Waste Authority		Bellefonte, PA 16823			814-238-7005	
John Glenn Sanitation Service, Inc.		371 Struble Rd State College, PA 16801			814-234-0141	
Krentzman, Joe & Son, Inc.		Lewistown, PA 17044			717-543-5635	
P G Recycling, Inc. (paper)		Altoona, PA 16601			814-944-1210	
Sterda Recycling Systems (paper)		Bellwood, PA			814-742-8453	

Rubbish & Garbage Removal:

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Carson Fred Sanitary Disposal Service		State College, PA 16801			814-238-6895	
Chambers of PA		State College, PA 16801			814-235-1901	
John Glenn Sanitation Service		State College, PA 16801			814-234-0141	
Kline A M		Bellefonte, PA 16823			814-237-7468	

Love Aubrey Disposal Service		Lock Haven, PA 17745			570-748-2760	
Newman, B E, Inc.		Milesburg, PA 16853			814-355-4626	
Superior Waste Services		25 Decibel Rd State College, PA 16801	4		814-237-3713	
USA Waste Services of PA		2901 Stewart Dr State College, PA 16801			814-235-1901	

Septic Tanks - Cleaning & Repairing (possible source of biowastes):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Buckrun Farms		State College, PA 16801			814-234-8850	
Center Penn Service		Bellefonte, PA 16823			800-252-3846 814-355-2185	
Carson Sanitary Disposal Service		State College, PA 16801			814-238-6895	
McKee Excavation		Runville, PA			814-355-5574	
Robinson Septic Service, Inc.		Milesburg, PA 16853			814-355-4474	
Shawley Septic Tank Service		Boalsburg, PA 16827			814-466-6325	
Wilts Septic Service		Altoona, PA 16601			814-943-8232 814-742-8743	
Zooks Liquid Hauling		Millmont, PA 17845			570-922-1466	

Sewage Disposal Systems (possible source of biowastes):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
College Harris Joint Authority		State College, PA 16801			814-238-8370	
Ferguson Township Authority		Pine Grove Mills, PA 16868			814-238-0927	
Mid Centre County Authority		Milesburg, PA 16853			814-355-8435	

Mountaintop Area Municipal Authority		Snow Shoe, PA 16874			814-387-4321	
Patton-Ferguson Joint Authority		State College, PA 16801			814-238-9662	
Spring Creek Pollution Control Facility		State College, PA 16801			814-238-2259	
University Area Joint Authority		State College, PA 16801			814-238-5361	

Stables (possible source of manure & bedding):

Company Name	Tons/week available	Location	Miles to State College	FOBS/ton	Phone	Contact
Carousel Farm		State College, PA 16801			814-364-2512	
Centre Stables		Penna Furnace, PA			814-692-5530	
Eastwood Farms		Bellefonte, PA 16823			814-355-4523	
Graystone Stables		Port Matilda, PA 16870			814-692-4400	
Hillhaven Farm		State College, PA 16801			814-237-6003	
Jodon s Slab Cabin Farm & Tack		State College, PA 16801			814-237-8769	
Jodon s Stables		Port Matilda, PA 16870			814-692-7404	
Kocher Farms Stable & Tack Shop		Penna Furnace, PA			814-238-4124	
Lazy B Stables		State College, PA 16801			814-234-3610	
Nittany Mountain Trail Rides		Woodward, PA 16882			814-349-8300	
Nittany Mountain Trail Rides		Haines, PA			814-349-8300	
Perlick Queens Three Farm		Bellefonte, PA 16823			814-383-4781	

Tire Dealers (possible source of waste tires):

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Bastion Tire Sales, Inc.		State College, PA 16801			814-238-4955	
Bierlein Automotive		Potter s Mills, PA			814-364-1904	
Charlie s Tire & Service		Morrisdale, PA 16858			814-342-0819	
Cooper Tires		Pleasant Gap, PA 16823			814-359-4290	
Eddie s Tire		Lewistown, PA 17044			717-248-7510	
Firestone Tire & Service Center		State College, PA 16801			814-238-5505	
Forklifts, Inc.		State College, PA 16801			814-238-0508	
Fred s Tire Company		Bellefonte, PA 16823			814-353-0396	
General Automotive Service		State College, PA 16801			814-238-4427	
LMR Tires		Lamar, PA 16848			570-726-7981	
Lohr s Garage		State College, PA 16801			814-234-7888	
Lohr s Garage		Bellefonte, PA 16823			814-355-2323	
Long s Tire Service		Martinsburg, PA 16662			814-793-2083	
McCarthy Tire Service		Milesburg, PA 16853			814-355-2102	
Monro Muffler Brake		State College, PA 16801			814-234-2911	
Pep Boys Automotive Supercenters		State College, PA 16801			814-861-1680	
Raymond s Tire Distribution, Inc.		Pleasant Gap, PA 16823			814-359-4290	
Sears Auto Center		State College, PA 16801			814-231-5682	
Stewart s Auto Parts		State College, PA 16801			814-231-8125	
Tire Town, Inc.		State College, PA 16801			814-238-2190	

Walmart		State College, PA 16801			814-235-9407	
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Tire Retreading & Repairs (possible source of waste tires):

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Wagner, Inc.		Yeagertown, PA 17099			717-248-6210	
Valley Truck & Trailer Sales & Service, Inc.		State College, PA 16801			814-237-2464	

Tree Service:

Company Name	Tons/week available	Location	Miles to State College	FOB\$/ton	Phone	Contact
Aikey s Tree Service		State College, PA 16801			814-238-0665	
Aikey s Tree Service		Bellefonte, PA 16823			814-353-0360	
Allegheny Professional Tree Care					800-835-4541	
B & H Tree Service		Bellefonte, PA 16823			814-355-5441	
Centre Tree Care, Inc.		Centre Hall, PA 16828			814-364-2815	
Dave s Total Tree Service		Bellefonte, PA 16823			814-357-8333	
Dincher & Cincher Tree Surgeons					800-286-3090	
E-B Enterprises		Boggs, PA			814-355-2098	
Eco-Lawn		Pine Grove Mills, PA 16868			814-364-7336	
Evergreen Tree Care		State College, PA 16801			814-466-8733	
McDonough s Tree Service					800-585-9060	
Meek Tree Service & Landscape Maintenance		Julian, PA 16844			814-355-0538	

Moore Andrew Tree Surgeon		State College, PA 16801			814-234-0186	
Plant-Life		Centre Hall, PA 16828			814-364-9456	
Prescott s Tree Service		State College, PA 16801			814-867-1118	
Smith Tree Service		Boalsburg, PA 16827			814-466-2357	
Stout Tree Professionals		Philipsburg, PA 16866			814-342-7297	
Total Tree Service		Boalsburg, PA 16827			814-466-6650	
Warner Clarke Landscape Maintenance		State College, PA 16801			814-231-3253	

Waste Reduction, Disposal & Recycling Service — Industrial:

Company Name	Tons/week available	Location	Miles to State College	FOBS\$/ton	Phone	Contact
Centre County Solid Waste Authority		253 Transfer Rd Bellefonte, PA 16823	12		814-238-7005	
Superior Waste Services, Inc.		25 Decibel Rd State College, PA 16801	4		814-237-3713	

Windows (possible source of waste wood):

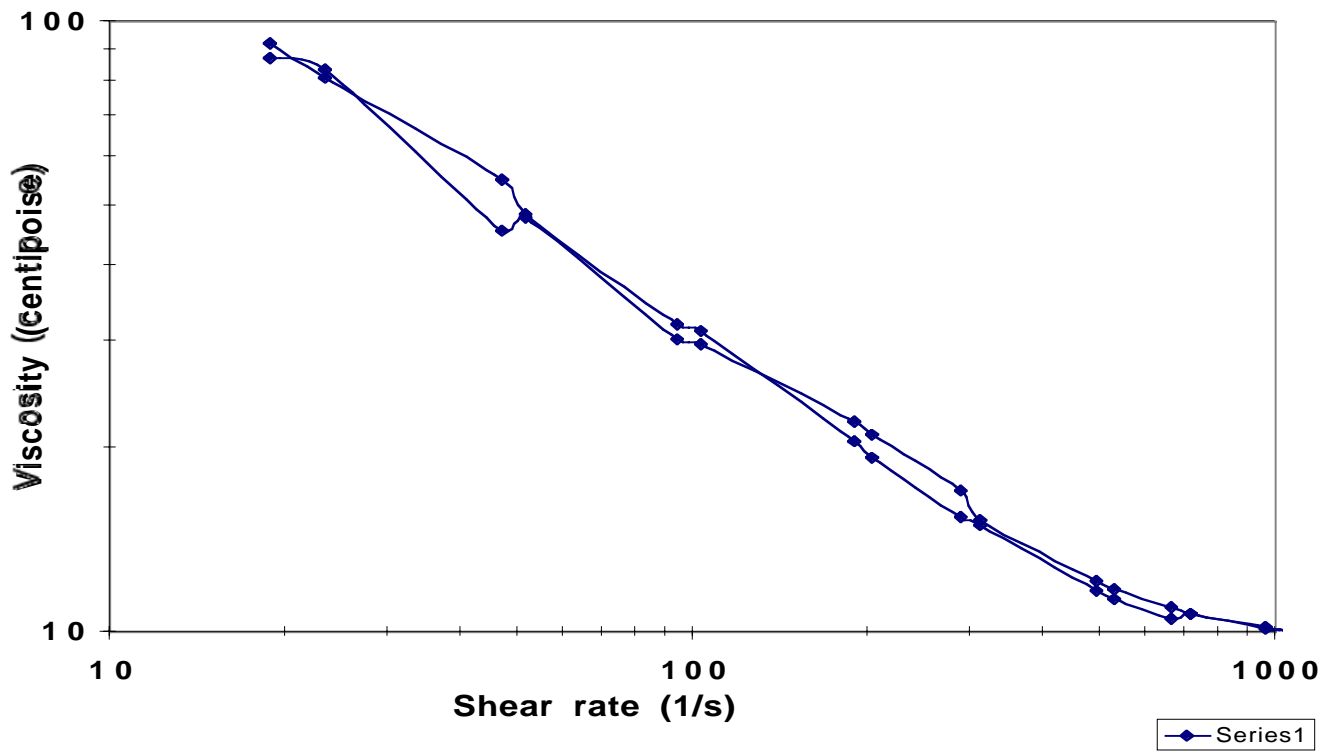
Company Name	Tons/week available	Location	Miles to State College	FOBS\$/ton	Phone	Contact
84 Lumber Company		Milesburg, PA 16853			814-355-1584	
Appleby Systems, Inc.					800-767-0200	
Bob Showers Windows Sunroom Enclosures					800-948-4262	
Cisney & O Donnell, Inc.		State College, PA 16801			814-235-9277	
Conklin Scott Builders, Inc.		Philipsburg, PA 16866			800-723-8753	
DJS Building & Remodeling		State College, PA 16801			814-231-0530	

Discount Remodelers, Inc.		Bellefonte, PA 16823			814-355-0680	
Haupt Home Improvement		Spring Mills, PA 16875			814-422-8138	
Johnson Construction, Inc.		Spring Mills, PA 16875			814-364-1436	
Mike s Window Service		Williamsport, PA			570-323-1848	
PA Door & Window Gallery					888-572-3667	
Pella Window & Door Company		State College, PA 16801			800-933-3694	
Penns Valley Windows		Centre Hall, PA 16828			814-364-2177	
Smith s Custom Builders, Inc.		Spring Mills, PA 16875			814-422-8407	
Solarshield, Inc.		Altoona, PA 16601			800-862-2000	
Solartherm Remodelers Company, Inc.		State College, PA 16801			814-231-8855	
Spring Lake Vinyl		Miles, PA			814-349-4405	
Triangle Building Supply & Service		Bellefonte, PA 16823			814-355-7073	
Triangles Home Showcase		State College, PA 16801			814-867-2400	
Veronesi Building & Remodeling, Inc.		State College, PA 16801			814-237-4514	
Wineland & Son, Inc.		Martinsburg, PA			800-870-7992	
Witherite Home Improvement & Siding		Boalsburg, PA 16827			814-466-7465	

12/11/00

**Appendix F. ANALYSIS AND PHOTOGRAPHS OF POTENTIAL
FEEDSTOCKS**

Digester Effluent



28-31 cp at 100/s

WWTP Sludge

2,708 tons/yr @ 11.6% solids = 314 dry tons/yr

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	77.2	76.9	84.4	76.2
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	49.6	48.3	N.D. ^c	N.D.
Ash	46.9	48.2	N.D.	N.D.
Fixed Carbon	3.5	3.5	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	30.3	N.D.	N.D.	N.D.
Hydrogen	4.3	N.D.	N.D.	N.D.
Nitrogen	4.1	N.D.	N.D.	N.D.
Sulfur	1.1	N.D.	N.D.	N.D.
Oxygen	13.3	N.D.	N.D.	N.D.
HHV (Btu/lb)	4,325	5,268	4,678	N.D.
Bulk Density^b (g/cc)	1.0			
(lb/ft³)	62.4			

^aDry Basis

^bDetermined from Entire Sample

^cNot Determined

Pine Chips



Composition assumed same as pine shavings
Bulk density = 0.10 g/cc

Pine Shavings

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	45.0	46.3	46.2	N.D. ^c
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	84.7	83.0	82.1	81.9
Ash	0.1	0.0	0.2	0.0
Fixed Carbon	15.2	17.0	17.8	18.1
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	49.1	N.D.	N.D.	N.D.
Hydrogen	6.4	N.D.	N.D.	N.D.
Nitrogen	0.2	N.D.	N.D.	N.D.
Sulfur	0.2	N.D.	N.D.	N.D.
Oxygen	44.0	N.D.	N.D.	N.D.
HHV (Btu/lb)	8,502	8,422	8,197	N.D.
Bulk Density^b (g/cc)	0.19			
(lb/ft³)	11.9			

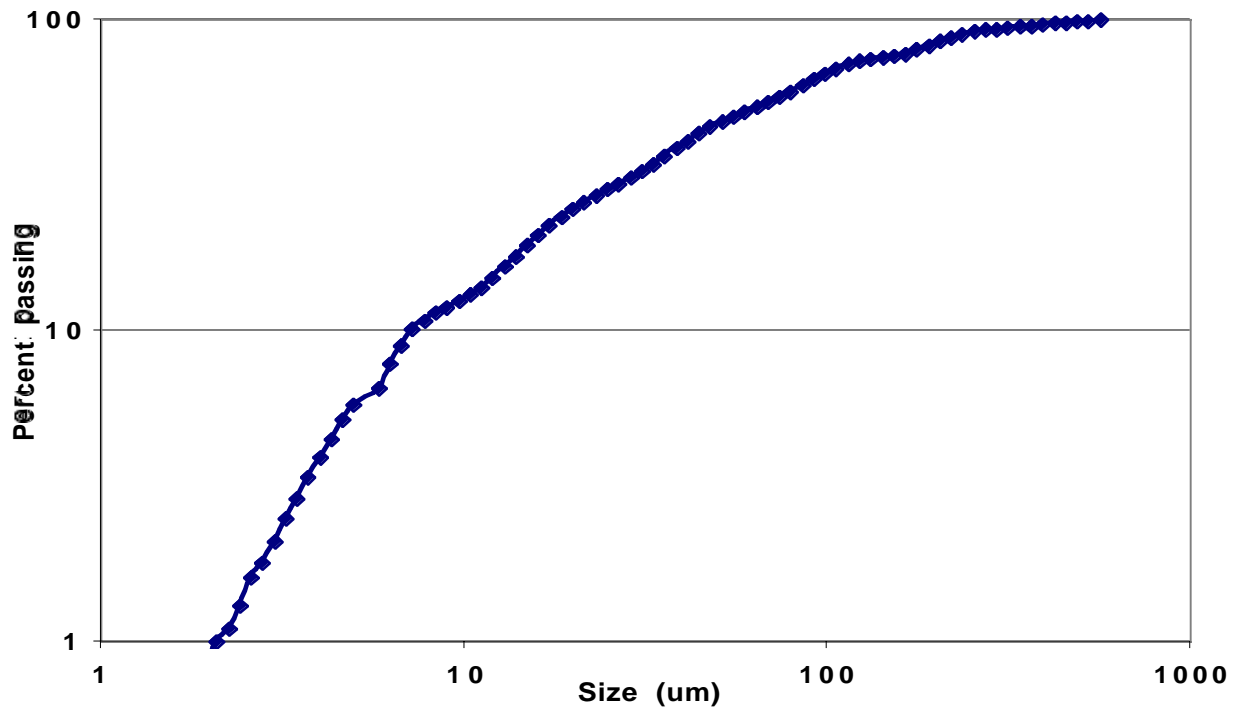
^aDry Basis^bDetermined from Entire Sample^cNot Determined

Fly Ash

1,445 tons/yr

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	22.8	24.5	23.8	N.D. ^c
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	8.5	7.2	8.0	8.2
Ash	73.8	74.1	72.2	73.4
Fixed Carbon	17.7	18.7	18.1	17.5
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	22.0	23.5	22.7	21.0
Hydrogen	0.3	0.1	0.1	0.1
Nitrogen	0.3	0.2	0.3	0.2
Sulfur	1.2	0.9	0.7	0.6
Oxygen	2.4	1.2	4.0	4.6
HHV (Btu/lb)	1,737	1,700	1,520	1,436
Bulk Density^b (g/cc)	0.72			
(lb/ft³)	11.9			

^aDry Basis^bDetermined from Entire Sample^cNot Determined

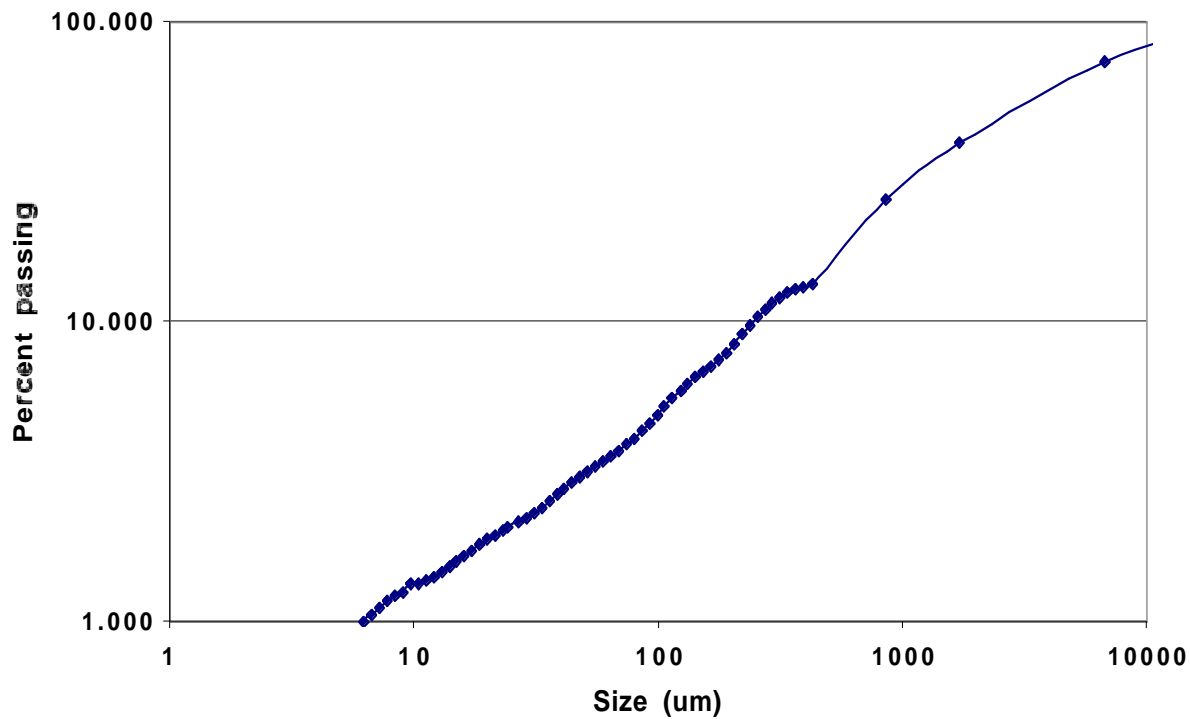


Bottom Ash

6,990 tons/yr

	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Moisture	4.9	4.8	4.9	N.D. ^c	N.D.
<u>Proximate Analysis (wt. %, d.b.^a)</u>					
Volatile Matter	1.9	1.8	0.8	1.4	N.D.
Ash	73.4	73.1	72.4	72.1	N.D.
Fixed Carbon	24.7	25.1	26.8	26.5	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>					
Carbon	31.5	31.3	28.0	26.7	26.9
Hydrogen	0.0	0.1	0.1	0.0	0.0
Nitrogen	0.6	0.5	0.6	0.4	0.3
Sulfur	0.2	0.2	0.2	0.2	0.2
Oxygen	-5.7	-5.2	-1.3	0.6	N.D.
HHV (Btu/lb)	2,341	2,076	1,863	1,798	N.D.
Bulk Density^b (g/cc)	0.84				
(lb/ft³)	52.4				

^aDry Basis^bDetermined from Entire Sample^cNot Determined



Hard Plastic (from horticulture dept.)**400 lb/yr**

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	0.2	N.D. ^b	N.D.	N.D.
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	96.1	96.6	N.D.	N.D.
Ash	3.8	3.4	N.D.	N.D.
Fixed Carbon	0.1	0.0	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	86.2	87.4	80.6	86.1
Hydrogen	10.9	10.9	14.0	11.8
Nitrogen	0.2	0.2	0.1	0.1
Sulfur	0.1	0.1	0.1	0.1
Oxygen	-1.2	-2.0		
HHV (Btu/lb)	18,240	18,549	18,500	N.D.
Chlorine Content (ppm)	216	N.D.	N.D.	N.D.

^aDry Basis^bNot Determined

Plastic Bags (from horticulture dept.)

2,000 lb/yr

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	0.1	N.D. ^b	N.D.	N.D.
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	96.9	96.5	N.D.	N.D.
Ash	2.7	3.3	N.D.	N.D.
Fixed Carbon	0.4	0.2	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	86.1	81.4	74.8	78.9
Hydrogen	14.0	13.3	14.1	13.0
Nitrogen	0.3	0.3	0.2	0.1
Sulfur	0.0	0.0	0.0	0.0
Oxygen	-3.1	1.7	N.D.	N.D.
HHV (Btu/lb)	19,474	19,170	19,230	N.D.
Chlorine Content (ppm)	334	N.D.	N.D.	N.D.

^aDry Basis^bNot Determined

Dairy Tie-Stall Manure

13,200 tons/yr along with Dairy free-stall manure and mulch hay and mulch leaves

	Rep 1	Rep 2	Rep 3
Moisture	64.7	64.4	66.1
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	76.0	74.6	N.D. ^c
Ash	6.0	5.7	N.D.
Fixed Carbon	18.1	19.7	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	48.6	48.1	N.D.
Hydrogen	5.8	5.8	N.D.
Nitrogen	1.4	1.1	N.D.
Sulfur	0.1	0.1	N.D.
Oxygen	38.1	39.2	N.D.
HHV (Btu/lb)	8,203	7,850	N.D.
Bulk Density^b (g/cc)	0.40		
(lb/ft³)	25.0		

^aDry Basis

^bDetermined from Entire Sample

^cNot Determined

Dairy Free-Stall Manure



13,200 tons/yr along with Dairy tie-stall manure and mulch hay and mulch leaves

	Rep 1	Rep 2	Rep 3
Moisture	69.8	69.6	71.5
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	30.1	31.1	N.D. ^c
Ash	62.5	62.2	N.D.
Fixed Carbon	7.4	6.7	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	22.6	21.7	N.D.
Hydrogen	2.9	2.8	N.D.
Nitrogen	1.1	1.1	N.D.
Sulfur	0.1	0.1	N.D.
Oxygen	10.8	12.1	N.D.
HHV (Btu/lb)	3,644	3,953	
Bulk Density ^b (g/cc)	0.81		
(lb/ft ³)	50.5		

^aDry Basis

^bDetermined from Entire Sample

^cNot Determined

Mulch Hay**Mixed into Dairy tie-stall and Dairy free-stall manure**

	Rep 1	Rep 2	Rep 3
Moisture	19.5	19.3	18.3
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	77.6	77.5	N.D. ^c
Ash	5.3	5.0	N.D.
Fixed Carbon	17.1	17.5	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	46.5	46.3	N.D.
Hydrogen	5.7	5.8	N.D.
Nitrogen	1.7	1.6	N.D.
Sulfur	0.2	0.2	N.D.
Oxygen	40.6	41.1	N.D.
HHV (Btu/lb)	8,058	8,221	N.D.
Bulk Density^b (g/cc)	0.041		
(lb/ft³)	2.6		

^aDry Basis^bDetermined from Entire Sample^cNot Determined

Mulch Leaves

Mixed into Dairy tie-stall and Dairy free-stall manure

	Rep 1	Rep 2	Rep 3
Moisture	19.5	26.8	20.7
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	71.1	70.3	N.D. ^c
Ash	9.7	10.0	N.D.
Fixed Carbon	19.2	19.7	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	48.4	48.8	N.D.
Hydrogen	5.6	5.6	N.D.
Nitrogen	1.4	1.2	N.D.
Sulfur	0.1	0.1	N.D.
Oxygen	34.8	34.3	N.D.
HHV (Btu/lb)	8,000	7,975	N.D.
Bulk Density^b (g/cc)	0.082		
(lb/ft³)	5.1		

^aDry Basis

^bDetermined from Entire Sample

^cNot Determined

Bale Tarp

800-1,000 lb/yr

	Rep 1	Rep 2	Rep 3	Rep 4
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	92.4	92.5	N.D. ^b	N.D.
Ash	7.4	7.3	N.D.	N.D.
Fixed Carbon	0.2	0.2	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	66.4	71.8	73.0	71.5
Hydrogen	11.5	12.7	11.8	13.6
Nitrogen	0.3	0.4	0.4	0.3
Sulfur	0.0	0.0	0.0	0.0
Oxygen	14.4	7.8	N.D.	N.D.
HHV (Btu/lb)	18,085	20,181	N.D.	N.D.

^aDry Basis^bNot Determined

Silo Bunker Cover**800 lb/yr**

	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
<u>Proximate Analysis (wt. %, d.b.^a)</u>					
Volatile Matter	97.3	96.8	N.D. ^b	N.D.	N.D.
Ash	2.6	3.1	N.D.	N.D.	N.D.
Fixed Carbon	0.0	0.1	N.D.	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>					
Carbon	75.5	78.8	76.5	79.9	77.7
Hydrogen	12.8	13.7	14.1	11.8	13.1
Nitrogen	0.2	0.2	0.2	0.2	0.2
Sulfur	0.2	0.1	0.0	0.1	0.1
Oxygen	8.7	4.1	N.D.	N.D.	N.D.
HHV (Btu/lb)	19,202	19,223	N.D.	N.D.	N.D.

^aDry Basis^bNot Determined

Miscellaneous Manure (from covered manure barn)

	Rep 1	Rep 2	Rep 3
Moisture	46.1	55.9	49.6
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	21.2	22.3	N.D. ^c
Ash	74.0	73.1	N.D.
Fixed Carbon	4.9	4.6	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	19.1	20.1	N.D.
Hydrogen	2.4	2.5	N.D.
Nitrogen	1.0	1.0	N.D.
Sulfur	0.1	0.1	0.1
Oxygen	3.4	3.2	N.D.
HHV (Btu/lb)	3,144	2,974	N.D.
Bulk Density^b (g/cc)	0.70		
(lb/ft³)	43.7		

^aDry Basis^bDetermined from Entire Sample^cNot Determined

Sheep Manure

265 tons/yr

	Rep 1	Rep 2	Rep 3	Rep 4
Moisture	47.8	45.8	35.0	42.8
<u>Proximate Analysis (wt. %, d.b.^a)</u>				
Volatile Matter	65.2	65.1	N.D. ^c	N.D.
Ash	20.9	20.4	N.D.	N.D.
Fixed Carbon	14.0	14.6	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>				
Carbon	40.6	40.1	N.D.	N.D.
Hydrogen	5.1	5.1	N.D.	N.D.
Nitrogen	2.1	2.2	N.D.	N.D.
Sulfur	0.6	0.6	N.D.	N.D.
Oxygen	30.7	31.6	N.D.	N.D.
HHV (Btu/lb)	6,895	6,610	N.D.	N.D.
Bulk Density^b (g/cc)	0.37			
(lb/ft³)	23.1			

^aDry Basis^bDetermined from Entire Sample^cNot Determined

Red Oak Shavings

	Rep 1	Rep 2	Rep 3
Moisture	25.4	28.8	29.0
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	79.4	79.5	N.D. ^c
Ash	1.6	1.5	N.D.
Fixed Carbon	19.0	19.0	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	52.4	51.6	N.D.
Hydrogen	5.7	5.8	N.D.
Nitrogen	0.8	0.5	N.D.
Sulfur	0.0	0.0	N.D.
Oxygen	39.5	40.6	N.D.
HHV (Btu/lb)	8,199	8,069	N.D.
Bulk Density^b (g/cc)	0.18		
(lb/ft³)	11.2		

^aDry Basis^bDetermined from Entire Sample^cNot Determined

Beef Barn Manure**1,033 tons/yr****Rep 1 Rep 2 Rep 3 Rep 4 Rep 5****Moisture****Proximate Analysis (wt. %, d.b.^a)****Volatile Matter****Ash****Fixed Carbon****Ultimate Analysis (wt. %, d.b.)****Carbon****Hydrogen****Nitrogen****Sulfur****Oxygen****HHV (Btu/lb)****Bulk Density^b (g/cc)
(lb/ft³)****Chlorine Content (ppm)**^aDry Basis^bDetermined from Entire Sample^cNot Determined

Swine Waste**2,505 tons/yr @ 2.2% solids****Analysis Report for Manure and Composts**

October 30, 1998

RESULTS

Rep	pH	Solids — % —	P	K	NH ₄ N	Org-N	Tot-N	Volatile	Tot-C	C/N*
1	NR	2.22	2.66	5.25	NR	NR	13.64	70.51	40.90	3.00
2	NR	2.20	2.38	5.16	NR	NR	9.77	70.41	40.84	4.18
Average	NR	2.21	2.52	5.20	NR	NR	11.71	70.46	40.87	3.59

NR - Not requested

One dry ton of this material is equivalent to 10,852 gallons of wet material or 45.3 tons of wet material.

1.99 dry tons of this biosolid to supply 100 lbs of phosphorus.

0.43 dry tons of this biosolid will supply 100 lbs of total N.

Estimated carbon/nitrogen ratio. Carbon estimated as 58% of volatile solids.*PRIMARY NUTRIENT CONTENT****% on Dry Weight Basis**

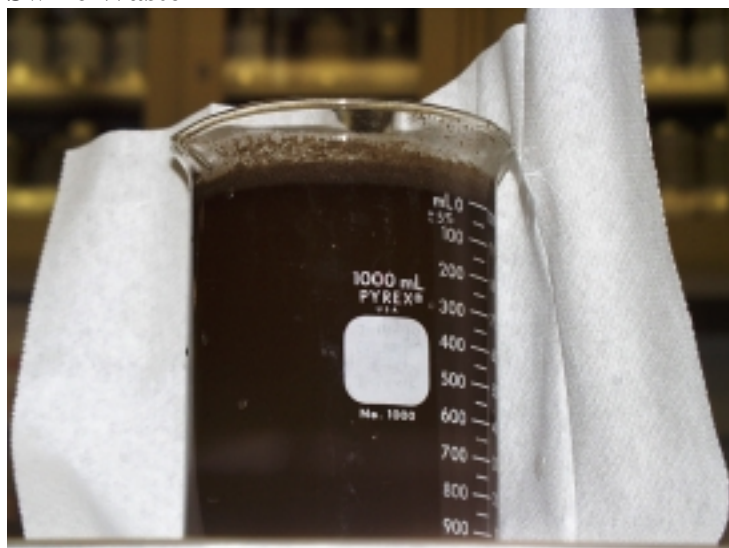
	Level	0- - - - -2- - - - -4- - - - -6- - - - -8
Total N	11.71	*****
P ₂ O ₅	5.77	*****
K ₂ O	6.24	*****

On As Is Basis

Tot-N	P ₂ O ₅	K ₂ O	Tot-N	P ₂ O ₅	K ₂ O	NH ₄ N	
— lbs/ton —			— lbs/100gal —			— lbs/ton —	— lbs/100gal —
5.18	2.55	2.76	2.17	1.07	1.16	0.00	0.00

COMMENTS

Swine Waste



	Rep 1	Rep 2	Rep 3
Moisture	97.8	97.8	97.8
Moisture (after drying)	1.0	N.D.	N.D.
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	59.6	N.D.	N.D.
Ash	33.1	N.D.	N.D.
Fixed Carbon	7.3	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	38.0	N.D.	N.D.
Hydrogen	5.5	N.D.	N.D.
Nitrogen	3.2	N.D.	N.D.
Sulfur	0.6	N.D.	N.D.
Oxygen	19.6	N.D.	N.D.
HHV (Btu/lb)	7,328	7,521	7,465
Bulk Density^b (g/cc)	1.0	N.D.	N.D.
(lb/ft³)	62.4	N.D.	N.D.
Chlorine Content (ppm)	N.D.	N.D.	N.D.

^aDry Basis

^bDetermined from Entire Sample

^cNot Determined

Reed Canary Grass**600 tons/yr**

	Rep 1	Rep 2	Rep 3
Moisture	65.2	74.9	70.1
Moisture (after drying)	1.3	N.D.	N.D.
<u>Proximate Analysis (wt. %, d.b.^a)</u>			
Volatile Matter	76.1	N.D.	N.D.
Ash	4.1	N.D.	N.D.
Fixed Carbon	19.8	N.D.	N.D.
<u>Ultimate Analysis (wt. %, d.b.)</u>			
Carbon	45.8	N.D.	N.D.
Hydrogen	6.1	N.D.	N.D.
Nitrogen	1.0	N.D.	N.D.
Sulfur	0.1	N.D.	N.D.
Oxygen	42.9	N.D.	N.D.
HHV (Btu/lb)	7,103	7,290	7,325
Bulk Density^b (g/cc)	0.05	N.D.	N.D.
(lb/ft³)	3.12	N.D.	N.D.
Chlorine Content (ppm)	N.D.	N.D.	N.D.

^aDry Basis^bDetermined from Entire Sample^cNot Determined