2001 Annual Green Permit Report

LP
Hines, Oregon

This report summarizes the year 2001 environmental activities and achievements of the LP Engineered Wood Products plant in Hines, an Oregon Department of Environmental Quality Green Permit facility. We received one of the first two DEQ Green Permits in December 2000, in recognition of our commitment to superior environmental performance. In accordance with Green Permit requirements, we continued to improve our environmental performance during 2001, achieving results that go beyond compliance. This report summarizes our environmental improvements, environmental compliance and community involvement activities. It also describes our Environmental Management System.

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LP Hines Environmental Management System

The LP Hines facility uses softwood veneer to produce Laminated Veneer Lumber (LVL) and I-Joists. LP acquired the plant in March 1997. It became the first LP Engineered Wood Products facility to participate in the Company's Environmental Management System (EMS) process.

LP's Environmental Management System is designed to continually evaluate processes to ensure environmental compliance. The EMS process also allows the facility to achieve defined environmental goals that exceed the specified standards of regulatory compliance. The primary goal of the corporate-wide EMS is to create consistent systems to manage environmental risks. The EMS requires systematic review of each aspect of environmental compliance and assigns responsibility to those individuals most directly involved.

LP has highly qualified personnel, who are trained and committed to tracking successes and looking for opportunities for improvement. Our EMS program involves every aspect of business management and production. Teams representing various segments of LP’s organizational structure form a communication and support network to help guide the progress of the EMS. Top-level commitment to the program is reinforced through the Corporate Sponsor Team, while Business Sponsor teams (management level) coordinate program development throughout their respective business lines.

Implementing EMS at the Plant Level

At the plant level, the Plant Business and EMS Core teams work to implement the EMS by writing Standard Operating Procedures (SOPs), organize employee and management training, and establish inspection and process change programs. The goal at each facility is to integrate compliance with identified environmental objectives into the daily work of every employee and to ensure that all individuals take personal responsibility for their actions.

Once a facility is deemed ready, the EMS Core Team receives instruction in environmental permits and regulations specific to their facility operations and training in the EMS 26-Step Process - a standardized means of program execution. Employees are also acquainted with programs designed to facilitate the rapid implementation of changes in the workplace.

As training continues, the next and most essential step is to generate Standard Operating Procedures (SOPs) that outline how individual job tasks will be carried out. Working with environmental professionals, SOPs are developed which incorporate permits, regulations, LP standard practices and other job-specific criteria, as applicable. The success of the program lies in matching personnel with job-specific training and safety requirements to carry out individual SOP responsibilities.

Once implementation of the 26-Step Process is complete, a comprehensive self-inspection program is executed to evaluate its effectiveness and a continuous improvement process is implemented.

EMS benefits

With its clear, easy-to-follow process, the EMS allows LP to enhance its environmental record while improving productivity, safety, and shareholder value. Most importantly, in taking an active role in the process, employees experience an exhilarating sense of empowerment. Not only do they realize the benefits of building upon their leadership and job skills, the workplace is made safer and performance is enhanced.

Local communities near LP's facilities also benefit from the EMS program. Adoptions of SOPs improve the operation and maintenance of environmental controls by identifying and tracking consistent maintenance activities, which enhance plant performance and product quality resulting in long-term economic stability.

Implementation of the EMS often is a collaborative effort that involves local regulators, members of the local community, and other interested parties such as environmental interest groups. This is the approach taken at the Hines facility.

The following highlights help demonstrate the successes of our EMS program:

Increased environmental awareness

The enhanced sense of environmental awareness resulting from the EMS program is leading to the development of new and innovative business practices throughout LP. Mill employees report that changes identified and implemented through the EMS have greatly improved individual performance and consequently that of the whole facility. Knowledge of and compliance with environmental regulations is at an all-time high.

Wood Debris Project

LP entered the Department of Environmental Quality (DEQ) Voluntary Cleanup Program when it purchased the facility in 1997. Since then we have been correcting problems from the past. One area that the team is particularly proud is the cleanup of the wood debris

and former boneyard located on the north end of the facility. The community lauded this effort.

The boneyard was cleaned up and the wood debris was used as soil amendment upon approval from the department. Grass and poplar trees were planted along with an associated maintenance program. This site will be used as a park and picnic area as well as a wildlife habitat.

The facility currently maintains a man-made wetland area and a pond stocked with bass. Duck, pheasant, deer, geese and many other types of wildlife occupy the area during the course of the seasons. With the addition of grass field and tree plantation, there seems to have been an increase in wildlife population including a pair of fox and kits sighted last spring.

The project had numerous benefits. They included the reduction of solid waste going to landfill, dust suppression, beautification and wildlife habitat.

LP Hines 2001 Objectives & Targets

As part of the Environmental Management System continual improvement process, we identified the following Objectives and targets for the year 2001:

- **Reduce water usage**
  Our EMS Team determined that the facility was using more water than necessary. The press non-contact cooling water had a continuous flow to the fire suppression pond 24 hours a day. A gasket was installed so that the cooling water only discharges when necessary. We know that the reduction in water consumption was substantial, but without installing a meter at considerable expense, we do not know if we achieved the 10% production-basis reduction set up as the target for this objective.

- **Reduce particulate emissions from the truck bin.**
  The facility uses air-handling systems to transport sawdust and wood shavings from various manufacturing areas to several wood waste storage bins. We replaced the old deteriorating truck bin with a new system containing a particulate handling device (baghouse), thus, improving air quality. For this objective, we achieved our target of no visible sawdust on the ground around the truck bin due to the air handling system. There is still some sawdust from loading of the sawdust to the trucks.

- **Improve community relations**
  The EMS team felt that the facility should work on its involvement in the community. The facility formed a 14 member Community Advisory Committee (CAC) that meets once a quarter. The CAC discusses LP's presence in the community, environmental issues, safety issues, and other topics of concern. We met our target of holding four CAC meetings in 2001.

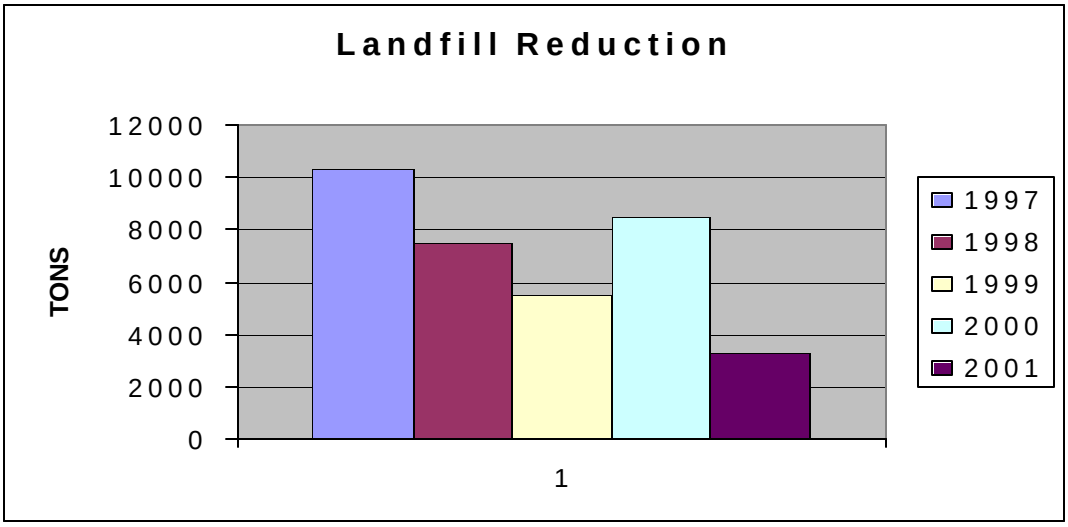
  In the spirit of giving back to the community LP formed a Contributions Committee. In 2001, LP donated $5000 worth of computers to the local schools, donated $1000 to help start a youth soccer program, and also donated to the Harney County Habitat for Humanity.

  And, as identified above, LP's beautification project (wood debris cleanup) resulted in a new park, picnic area and wildlife area.

  We exceeded our 2001 target of participating in or contributing to two activities that benefit the community and/or the environment.

- **Reduce landfill items**
  With landfill space at a premium, the EMS team decided resources should be spent on finding ways to reduce the amount of waste sent to landfills. The chart below shows the progress over the last 4 years.

  This year the team concentrated on the wood waste throughout the mill. By reducing the wood waste and by hogging the wood waste instead of taking it to landfill, the plant had a reduction of approximately 5219 tons less to the landfill than the previous year. This exceeded our 2001 target of a 10% reduction. Over the past four years the facility has significantly decreased the amount going to the landfill.



Note: In 2000, the plant had significant construction. This is identified in the chart as an increase.

- **Reduce potential spill from bulk off-loading areas.**
  The EMS team identified areas throughout the mill that would have potential to have spills from bulk off-loading. The EMS team put together written procedures and provided resources (such as buckets to catch drips) to the employees and truck drivers to reduce the potential of a spill. Procedures were posted at each area where bulk off-loading is done. As a result, there were no incidents in the year 2001 compared to three incidents in the year 2000. Of these three incidents all were inside on the concrete and no regulatory violations were realized. We met our 2001 target of no spills in these areas.

- **Reduce opacity exceedances from the boiler**
  The EMS team identified differences in the way employees start up and shut down the boiler. The EMS team wrote procedures to help minimize excess emissions during startup and shutdown of the boiler. There were no opacity exceedances due to startup and or shutdown in 2001, compared to three incidents in 2000. We exceeded our target of a 50% reduction in exceedances.

- **Reduce electrical consumption**
  The EMS team decided this was a very important part of the process and felt that there should be an effort made to cut down on the use of energy. Plans were put together to not start any equipment earlier than necessary throughout the plant. We also discontinued the use of 40 lights and put a smaller compressor into service. We believe the reduced electrical consumption was significant, but short of our 10% production-basis target, which was probably unrealistic. We plan to work with the plant electrician to identify additional reduction opportunities.

LP Hines 2002 Objectives and Targets

Through review of the EMS, our Objective and Targets for 2001, and the plant's activities, services and products, these Objectives and Targets were set for the year 2002.

Objective	Target
Improve community relations.	Four CAC Meetings in 2002.
Contribute to the community and the local environment.	Participate or contribute to two activities that benefit the community and/or the environment.
Conduct environmental training to build awareness and knowledge among our employees	Four hours of environmental training per employee/year
Reduce disposal to landfill	5% reduction per employee hour
Implement waste minimization project	One project to be implemented
Design and implement water project	Project to be completed by 12/01/02

LP Hines 2001 Environmental Permit Performance

Water Discharges

Storm Water

The Hines facility maintains a DEQ permit allowing the off-site discharge of storm water. This permit contains requirements to conduct periodic sampling and inspections. The permit does not contain specific limits on the quality of the discharge but instead lists benchmarks that the facility should not exceed. Table 1 lists those benchmarks. There was no discharge from the site in the fall of 2001.

Table 1 Storm Water

Pollutant	Benchmark	Fall Sample Result	Spring Sample Result
Copper	0.1 ppm	No Discharge	ND
Lead	0.4 ppm	No Discharge	ND
Zinc	0.6 ppm	No Discharge	.000014 ppm
pH	5.5-9.0	No Discharge	7.84
TSS	130 ppm	No Discharge	6 ppm
Oil and Grease	10 ppm	No Discharge	ND
Floating Solids	None	None	None visible
Oil Sheen	None	None	None visible

ppm: parts per million
ND: non-detect (below detection limits of prescribed US EPA sampling method)
TSS: Total Suspended Solids

Waste Water

The Hines facility operates a wood-fired boiler to provide steam to its operations. This boiler is permitted to discharge blow-down water provided it meets the listed permit limits. We are required to collect monthly samples of the boiler blow-down and send them to an analytical laboratory for evaluation. In addition to the monthly samples, the boiler operators monitor discharge quality on a regular basis and in some cases, a continuous basis. Table 2 lists the regulated pollutants, our DEQ permit limits, and our highest and lowest monthly sample results for year 2001.

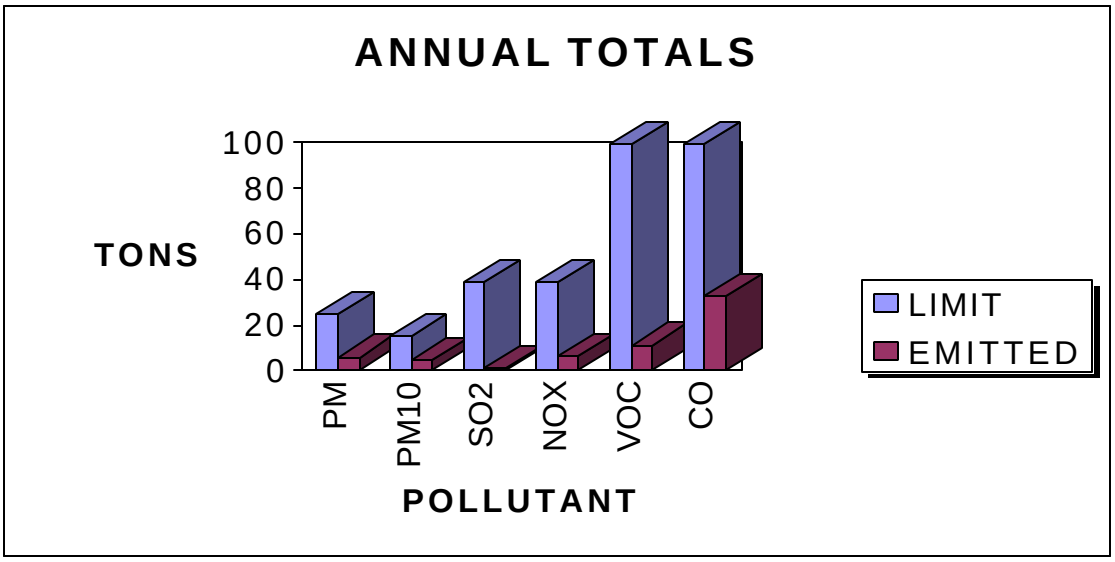
Table 2: Waste Water

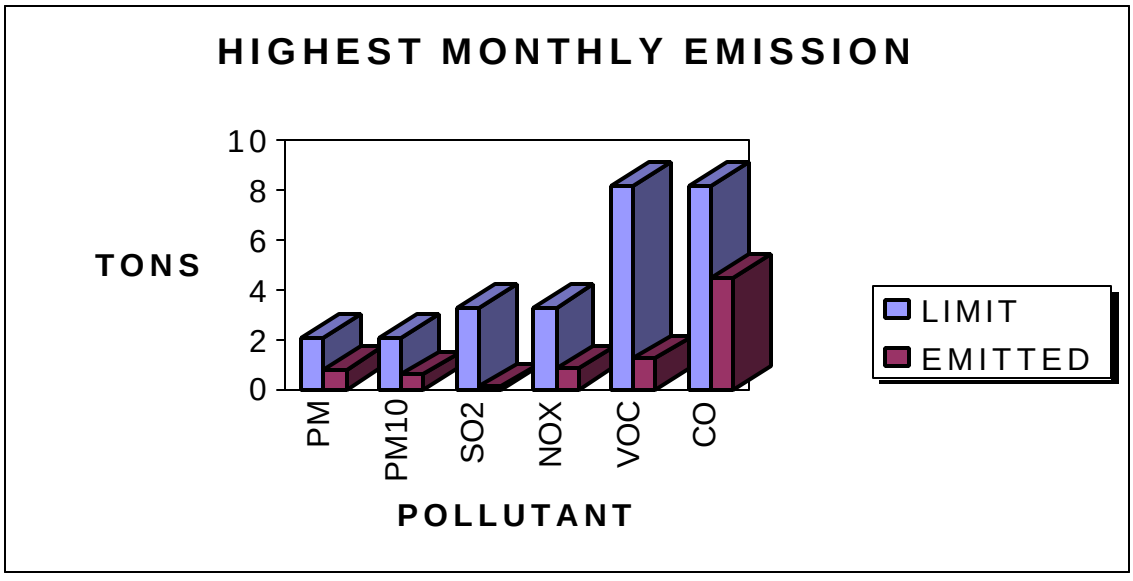
Pollutant	Limit	Highest	Lowest
pH	6.0-9.0	8.50	7.37
TSS	50 ppm	13 ppm	ND
Temperature	100°	95.9°F.	70
Flow	40 gpm	28 gpm	0

ND: Non-Detect
gpm: gallons per minute

Air Discharges

Our DEQ Air Contaminant Discharge Permit contains two types of emission limits: short term (monthly) and long term (annual). The types of pollutants released at the facility are summarized below. Chart 1 shows the annual permit limits compared to our actual annual emissions and Chart 2 shows our highest monthly discharge compared to our permit limit. Pollutants shown are particulate matter (PM), particulate matter of 10 microns or less (PM_{10}), sulfur dioxide (SO_2), nitrogen oxide (NO_X), volatile organic compounds (VOC), and carbon monoxide (CO)





EMS Deficiencies and Corrective Procedures

All environmental exceedances at LP Hines are recorded on an incident report form and kept on file. The Environmental Management System (EMS) Team works with plant employees and managers to identify and correct any deficiencies in EMS procedures that may have contributed to specific incidents.

In the year 2001 LP Hines identified 12 internal deficiencies. Seven of these were accidental releases on site. All were immediately contained and cleaned. Five deficiencies were exceedances of visible air emissions and particulate air emissions. All the incidents were taken care of immediately and DEQ notified. If needed, corrective action plans were then put in place to modify procedures and to train personnel on the new procedures. No regulatory violations occurred from these internal releases.

Year 2001 Environmental Compliance Summary

LP Hines is committed to full compliance with federal, state and local environmental regulations and works with regulatory agencies and the local community to achieve this important goal. During 2001, LP Hines received no notices of violation from a regulatory agency. During the year we performed regular in-plant self-audits through our EMS system to detect and correct regulatory and internal environmental policy problems.

The following sections of this report cover in detail the year 2001 environmental operating information for LP Hines permits from the Oregon Department of Environmental Quality (DEQ).

Year 2001 Annual Reporting information is provided for:

- Air Contaminant Discharge Permit No. 13-0016
- NPDES General Permit No. 500-J File No. 108558
- NPDES Storm Water Discharge Permit No. 1200-Z
- Hazardous Waste Generator Registration Verification Report

Note: "NPDES" in our DEQ water quality permits stands for "National Pollution Discharge Elimination System"

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LP Hines
Air Contaminant Discharge Permit
No. 13-0016

Highest Monthly Emissions

Month	Pollutant	Tons	Short-Term Plant Site Limits
January	PM (Particulate Matter)	0.81	2.1 Tons
January	PM10 (Particulate Matter in 10 microns or less)	0.60	2.1
March/August	SO2 (Sulfur Dioxide)	0.15	3.3
January	NOX (Nitrogen Oxide)	0.87	3.3
January	CO (Carbon Dioxide)	4.50	8.2
January	VOC (Volatile Organic Compounds)	1.28	8.2

Annual Emission Totals

Pollutant	Tons	Annual Plant Site Emission Limits (Tons)
PM	5.89	24.8
PM_{10}	4.37	14.8
SO_2	1.2	39
NO_x	6.44	39
CO	32.89	99
VOC	11.2	99

Planned and Unplanned Excess Emissions

Date	Time	Duration	Description	DEQ Log Number
3/12/01	0840	80-minutes	Boiler Opacity Exceedance	ERB-01-017
3/13/01	1115	45-minutes	Boiler Opacity Exceedance.	ERB01-019
5/17/01	0610	12-minutes	Boiler Opacity Exceedance.	ERB-01-036
5/20/01	0630	120-minutes	Boiler Opacity Exceedance	ERB-01-041
6/25/01	0830	15-minutes	Boiler Opacity Exceedance	ERB-01-057

Permanent changes made in the plant process or production that would affect air contaminant emissions:

High Pressure relay line was put in to by-pass old truck bin. This now takes particulate from sawing and sanding and runs it to a current bag house before going in to the truck bin.

List of all major maintenance performed on air pollution control equipment:

No major maintenance was performed on air pollution control equipment.

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NPDES General Permit No. 500-J
File No. 108558

LP Hines
NPDES General Permit No. 500-J
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Boiler Blowdown Monitoring Data

Date	Time	pH	TSS (mg/l)	Temp (F)	Flow (gpm)
1/24/01	0800	8.09	ND	70	20
2/26/01	0740	7.8	10	78.5	1
3/26/01	0805	7.74	6	78.3	28
4/19/01	0835	8.02	ND	88.2	25
5/21/01	0820	7.53	8	84.8	1
6/26/01	0845	7.56	13	89.1	28
7/26/01	0810	7.46	5	85.5	15
8/20/01	0830	8.50	5	86.9	21
9/24/01	0800	7.37	ND	95.9	20
10/23/01	0815	7.45	ND	87.3	24
11/26/01	0825	7.97	ND	87.3	0
12/27/01	0815	7.50	6	81.7	24

ND = Non-detect

Waste Discharge Limitations for Surface Water Discharge

Parameters	Limitations-Daily Maximum
Flow	40 gallons per minute (gpm)
Total Suspended Solids (TSS)	50 mg/l
Temperature	100 degrees Fahrenheit
pH	Shall be in the range of 6.0-9.0 S.U.

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LP Hines
NPDES Storm Water Discharge Permit
No. 1200-Z

LP Hines
NPDES Storm Water Discharge Permit No. 1200-Z
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Storm Water Monitoring Results

Pollutant Sample 2/Year at Monitoring point	Date of Sample	Sample Point SW-1
Total copper	No Discharge	
Benchmark 0.1 mg/l	2/20/02	ND
Total lead	No Discharge	
Benchmark 0.4 mg/l	2/20/02	ND
Total zinc	No Discharge	
Benchmark 0.6 mg/l	2/20/02	.000014 ppm
pH	No Discharge	
Benchmark 5.5 to 9.0 S.U	2/20/02	7.84
Total Suspended Solids	No Discharge	
Benchmark 130 mg/l	2/20/02	6 ppm
Oil & Grease	No Discharge	
Benchmark 10 mg/l	2/20/02	ND

ND = Non-detect

Monthly Visual Observations

Reporting Period: July 1, 2001 -March 31,2002

Parameter and Requirements	Monitoring Point SW-1	
	Sample date	**Results**
Oil and Grease Sheen - No visible sheen allowed. Monthly observation when discharging.		
January	1/23/02	No discharge
February	2/11/02	No discharge
March	3/11/02	None visible
April*	NA	NA
May*	NA	NA
June*	NA	NA
July	7/30/01	None visible
August	8/20/01	None visible
September	9/17/01	No discharge
October	10/22/01	No discharge
November	11/12/01	No discharge
December	12/28/01	No discharge
Floating Solids (associated with industrial activities)- No visible discharge allowed. Monthly observation when discharging.		
January	1/23/02	No discharge
February	2/11/02	None visible
March	3/11/02	None visible
April*	NA	NA
May*	NA	NA
June*	NA	NA
July	7/30/01	None visible
August	8/20/01	None visible
September	9/17/01	No discharge
October	10/22/01	No discharge
November	11/12/01	No discharge
December	12/28/01	No discharge

Note: The report cycle for Storm water annual reporting is July 1 through June 30, while the Green Permit annual report is submitted by April 1. That means that the visual inspection information for the months of April, May, and June will not be available on the 2001 Annual Green Permit report. The April, May, and June visual inspections will be included with the following year's report.

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LP Hines
Hazardous Waste Generator
Registration Verification Report
2001

LP Hines Registration Verification Report 2001

"If in any one calendar month in 2001 a facility generated more than 220 lbs. of hazardous waste or cleanup debris containing hazardous waste, or generated more than 2.2 pounds of acute hazardous waste, or accumulated more than 2,200 pounds of hazardous waste at any one time, the facility would be a Small Quantity Generator, or a Large Quantity Generator." OAR 340-102-0041

Summary of signed report filed with DEQ for 2001 verified that the hazardous waste generator status for LP Hines was Conditionally Exempt Generator.

LP Hines generated virtually no hazardous waste during 2001. We manage drained aerosol can residues as hazardous wastes because of their ignitability potential. This averages about 3 gallons per month. (Aerosol cans are punctured in equipment specially designed to eliminate their potential for reactivity. This generates the drained residues.) Most of our potentially hazardous waste, such as used oil, is excluded from regulation because it is recycled for energy recovery. Therefore, our plant is registered with DEQ as a Conditionally Exempt Generator of hazardous waste.