

EXHIBIT NUMBER: 0

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(Commission Secretary)

Subject of Presentation(s)

- 1) **CEC Hearing- August 1994: A Comparison of the Recommendations and Promises made with what actually happened.**
- 2) **A lay-person's overview of RTOs, RCOs, Biofiltration options (More to the issue than RCOs or nothing.)**
- 3) **Louisiana Pacific Corporation's Financial Outlook**
- 4) **Who is most susceptible to emissions from the LP mill, and why.**
- 5) **Our Common Future- Why our society has gone past the days of Jobs vs the Environment.**

Margaret Romik

CEC Hearings- August 1994

**A comparison of some of the recommendations
and promises with what actually happened**

(1)

“It is vital that the public’s interest and involvement in environmental reviews be supported and facilitated in the future.”

CEC Panel-1994 Hearings

1) The public was not informed that the RTOs had been shut off on an interim basis.

2) There was a very small notice placed in the newspaper, which most people did not see, to tell the public about the request that LP was making to have the RTOs shut off permanently, .

3) We have asked Minister Struthers, many times, for a full Public Hearing. We were denied.

(4)

4) We have asked Minister Struthers for intervener funding. We were denied.

The public has to fund its own research and work in their spare time to prepare for this CEC meeting.

Nothing in #1-4 sounds like what the CEC recommended.

Quotes from CEC Hearing- August 1994

(2)

Participants were concerned about environmental record of LP.
LP said it did not appreciate being depicted as a bad Corporation.

Let's look at Recommendation #12, from the CEC document:

Pollution control equipment shall not be by-passed during the operation of the plant, except under emergency conditions as specified in the licence.

Why would the CEC have put this into their recommendations?

Montrose, Colorado LP facility

-LP supervisor was fired when he refused to tamper with the mill's pollution monitoring equipment.

-Criminal investigation showed tampering with the Montrose mill's air pollution monitor on 12 occasions by inserting foil into the monitor, pulling a protective lens off the monitor, miscalibrating the monitor and turning it off.

multinationalmonitor.org/mm1998/98june/names.html

Admittedly, this occurred some time ago, under different management, but this is an example of why government must remain vigilant in its role as the people's first line of defense.

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Quotes from CEC Hearing- August 1994 (3)

Community Health Study

- comparing the health of residents before and after plant built
- compare with other regional, provincial, and national rates.
- LP estimated costs of Health Study
- resolve health-related issues which could arise in future
- lung tests for community, similar to those provided to its employees.

**Dr. Kay Wotton - was in charge, study dropped.
We are asking her for a report- it will be submitted.**

**Some residents blew into machine to test lungs before mill built, but nobody ever came back again.
Health Study was not done so LP saved almost \$1,000,000, over 15 years**

(6)

Was there a Health Study done on the employees of the mill?

Was there baseline data, or pre-employment health assessments done?

Has an assessment been done for each of the last 15 years on employees?

Are the employees aware of the research that has been done into risks posed by working in an OSB mill?

(Attachments)

Employees Health in OSB Mills

1. Knock on wood: nature as commodity in Douglas-Fir country - Google Books Result

(This site discusses the health effects on OSB employees...I could not copy it for you, so you'll have to go to this site yourself.)

by W. Scott Prudham - 2005 - History - 260 pages

These *health effects* include allergies, persistent breathing problems (including ... These risks are more acute in areas of *mills* where products are glued, ...

books.google.com/books?isbn=0415944015...

2. Workers in oriented strand board (OSB) manufacturing facilities may be exposed to methylene diisocyanate (MDI) and phenol-formaldehyde, which presents health hazards that must be addressed.

www.osha.org/pdf/pubs/fact_sheets/fs17.pdf

Baseline ambient air, water, soil, flora and fauna monitoring shall be taken to provide baseline data prior to the construction of the plant.

A schedule shall also be established to ensure ongoing monitoring of water, soil, flora, and fauna.

The Corporation said it would be prepared to cooperate with Manitoba Natural Resources which had proposed that sample plots be used to gauge any adverse impacts on vegetation. Manitoba Environment said a licence could require small plots be maintained in order to compare impacts on vegetation.

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Groundwater monitoring wells shall be installed and operated according to the requirements identified by Manitoba Environment. They could also take water samples from the Sinclair River.

Manitoba Government shall prescribe a reporting procedure for the environmental monitoring and ensure public access to the results.

**Perhaps all of these things were done.
Was there ever any independent monitoring done?**

Could we have a report if each of these promises were kept?

Monitoring

Compliance

Enforcement

Auditing

⑧

(7 pages)

- 1. Monitoring would be performed by both the Corporation and the Department.**
- 2. In some cases the Corporation would be responsible for its own monitoring, for which it could contract with companies with monitoring expertise. In these cases the Department would review the Corporation's methodology and audit the results.**
- 3. Independent monitoring would be important to ensure the plant operates within its licence. As such, a rigorous schedule for collecting and analyzing and for sharing results with the public should be established.**
- 4. The Department said it would perform its own pre-arranged and unannounced tests.**
- 5. The Corporation said one shift per week would perform preventative maintenance.**
- 6. The Corporation said the emission control equipment would be operational 99 percent of the time.**

(next page)

1) The two stations that were set up to capture samples of air emissions were placed in the wrong area.

Bezak, Dave (CON)

“It is our view that the current sample collection frequency for the above substances is just too infrequent to possibly ever capture an air sample that might be impacted by facility emissions and therefore, reflective of that impact.”

2) Even worse than this is the fact that Manitoba Conservation and LP were told that, right at the beginning.

For 15 years citizens have been saying this, and nothing was ever changed!

Now here are some quotes from LP's website:

“Spirit of openness and transparency”

“Gathering concerns and input from members of the community.”

“100% compliance-100% of the time.”

“ethical behavior at all times”

“high level of communications”

3) Manitoba Conservation promised that it would do its own testing as well...both pre-arranged and unannounced. When they were asked this year if they had in fact done any random tests, they said no.

Coulter, Ryan (CON)

My comments were specific to stack sampling, I am not aware of any 'surprise' stack sampling. I will discuss your question with the regional office and see if they have anything to add.

4) Does LP designate one shift per week to do preventative maintenance?

5) Were they running the emission control equipment (RTOs) 99% of the time?

To hear members of the community and others talk, the last statement is laughable. But how would we know?

It seems the government was not checking up.

Remember my conclusion at the end of Part 2 of this presentation?

“Admittedly, this occurred some time ago, under different management, but this is an example of why gov’t must remain vigilant in their role as the people’s first line of defense.”

(next page)

Quote from the CEC Hearing- August 1994

But, as much as people of the valley wanted the jobs and other economic spin-offs related to the proposed project, they were also well aware there could be impacts on the environment. A number of people at the hearings were very well informed about these potential impacts and offered the Panel well prepared, insightful presentations.

For the most part, residents were prepared to place their trust for their well being and the well being of their families in the hands of the government, believing that regulations and restrictions would be imposed on LP to ensure minimal health and environmental impacts from the oriented strand board plant.

Monitoring Compliance Enforcement Auditing

I think we are missing some key pieces in this equation.

**There's more to this issue than RTOs or
nothing**

**A Lay Person's Overview of RTOs, RCOs,
Biofiltration- Etc.**

Solutions to environmental problems are well within our grasp

Air and water pollution can be virtually eliminated by:

- redesigning manufacturing processes**
- switching to cleaner products**
- installing good control technology**
- recycling more**
- toxic chemicals replaced by safer ones.**

Problems are not technical--they are economic and political.

Our choices are to be victims of change, or to control that change to the benefit of ourselves and our children.”

**United Steelworkers Union
Securing our Children's World
Our Union and the Environment**

**I am not going to give technical information about
RTOs, RCOs, or Biofiltration.**

I am here to say there are choices out there.

**This is not just a matter of either the RTOs stay on
or they stay off.**

**In the 15 years since the mill here opened there
have been new and improved emission control
technologies developed.**

Summary:

**When LP says either the RTOs are shutoff or we
will consider closing the mill, they are not looking
at all the options out there. There are a variety of
choices to look at, a solution can be found, one
that is cognizant of the economics of the day and
one that will also protect the environment.**

There is a reason why sayings become famous:

“Where there is a will, there is a way.”

**Attachment: 14 websites that discuss pros and
cons of RTOs, RCOs, and Biofiltration.**

Attachment: 14 websites that discuss pros and cons of RTOs, RCOs, and Biofiltration.

1. LP Hanceville and Roxboro- WESP installation providing dramatic reductions of particulate emissions, which carry over to existing RTO. They were installed in 1997.

2-a LP New Limerick- RTO being changed to an RCO, with catalyst-impregnated materials on top of the existing saddles of the RTO and modifying the valving system. Reduction of combustion temperature means reduced fuel consumption. They can also operate as an RTO, if the catalyst has problems. Formaldehyde emissions will be higher.

2-b LP Houlton- (New Limerick, ME) When it was time to purchase new RTOs, they found the latest technology would provide benefits, one being a 20 % reduction on fuel consumption- raised housing which reduces footprint by 30%- and be MACT compliant.

3. LP Jasper (Texas)- “We also converted one RTO to an RCO, thus reducing natural gas consumption dramatically.”

4. The Plywood and Composite Wood Panel MACT requires mills to control greater than 90% of HAPs emissions coming from the dryers and presses at plywood, MDF, particleboard, hardboard and OSB mills by September 2007. The EPA approved technologies are Thermal Oxidizers (TO) and Biofilters. Due to the increase in natural gas costs, the wood products industry has been very interested in determining if a biofilter has the ability to degrade HAPs to a level that will meet the MACT and secondarily, if a biofilter can degrade the pinenes, terpenes and other hydrocarbons to a level that would allow biofilters to be a viable alternative for controlling VOC emissions www.globalspec.com/reference/13396/Bio-oxidation-Press-Emissions-Control-for-the-J-M-Huber-OSB-Mill-Broken-Bow - 43k -

5. ITP Forest Products: Implementing Strategies for Drying and

File Format: PDF/Adobe Acrobat -

oriented strand board (OSB) mills to control dryer and press emissions. These emissions were previously controlled by regenerative thermal oxidizers (RTOs). ...

www1.eere.energy.gov/industry/forest/pdfs/drying_pressing.pdf -

6. Volatile Organic Chemicals Emissions from OSB as a Function of ...

Emissions from industrial OSB panels made from mill-dried strands are also included in these ... sponding OSB mill products emission level. Also, the com- ...Using Urea to reduce emissions from OSB Pressing

www.reference-global.com/doi/abs/10.1515/HF.1999.073 -

7. EMISSIONS FROM WOOD DRYING The Science and the Issues. |

North ...

For *oriented strand dryers*, the values range from 0.7 to 1.8 lb. heat exchangers for energy recovery and *regenerative thermal oxidizers (RTOs)* use beds of *emissions* account for well over half of the *dryer and press HAPs*. organic compounds (VOCs) from *oriented strandboard (OSB)* samples were measured. ...

www.allbusiness.com/agriculture-forestry/.../710042-1.html -

8. AP-42: 10.6.1 Waferboard/Oriented Strandboard Manufacturing

Waferboard (WB) and *oriented strandboard (OSB)* belong to the subset of The primary *emission* sources at WB/OSB mills are wafer *dryers* and hot *press vents*. ... *controlled* using similar methods. These wood dust capture and collection systems are *Emission control device: RTO = regenerative thermal oxidizer; ...*

www.epa.gov/ttn/chief/ap42/ch10/final/c10s06-1.pdf

9. Meeting the Proposed Wood Products MACT with an Engineered

Bio ...

emissions from the new, *oriented strandboard (OSB)* continuous *press*. ... *dryer* would be *controlled* conventionally, with a *regenerative thermal oxidizer (RTO)*, ... MACT, as data from the earlier commercial units on panel *board mills* had few ... The OSB *press emissions control bio-oxidation unit* was designed not only ...

www.bioreaction.com/userfiles/files/papers/meeting_mact.pdf

10. Novell GroupWise WebPublisher

CN600127534. Site Name, *Oriented Strandboard Mill* GW#: 375610 ... industry to calculate VOC *emissions* from the *dryers, press, blending, and forming operations*. (WESPs) and then to two *Regenerative Thermal Oxidizers (RTOs)* before being ... No additional *control* was required from. either of those OSB Mills. ...

<https://webmail.tceq.state.tx.us/.../GWContentRoot?...%20OSB%20Mil>
l...

11. Abstracts of the Technical Forum Presentations

File Format: PDF/Adobe Acrobat - [View](#)

showed that *press formaldehyde emissions were* more sensitive to pressing time, while the formulation of resols for bonding *oriented strandboard (OSB)*. ... valuable data that can help *mills* better control Third generation *regenerative thermal/catalytic oxidizer (RTO/RCO)* equipment has inte- ...

www.forestprod.org/partabs.pdf -

12. Improving Dryer and Press Efficiencies Through Combustion of ...

RTO (Regenerative Thermal Oxidation) unit, which is energy-intensive above to a second *mill*. *VOC emissions* were collected on December 5, The pinene content of the wood tissue in *oriented strand board (OSB)* was determined us- ... For *these* small depths, heat transfer is *controlled* by slow conduction near ...

www.osti.gov/bridge/servlets/purl/875906-he2JmX/875906.PDF

13. CORRIM: Phase I Interim Report Appendix E ORIENTED STRANDBOARD ...

MILL SURVEYS *These strands* are *oriented*, not randomly placed, to create a final panel for both the *dryer* and heated *thermal oil* for the presses. ... devoted to air pollution control including *Regenerative Thermal Oxidizer (RTO)* (Results include *OSB* production only, no *emissions* were included for the ...

www.corrin.org/reports/phase1/appends/...e/Appendix%20E.pdf

14. Energy Efficiency

Michael Kanellos

June 10, 2009

Cleaning Air With Bacteria?

Yes, it sounds crazy, but Bio-Reaction Industries says it has devised a way to exploit bacteria to cleanse the air inside paint shops and factories.

Water, microorganisms, soil and a ball that could pass like a cat toy: Together, they can drastically cut the cost of air purification, according to Bio-Reaction Industries. The Tualatin, Oregon-based [company](#) has devised a novel system for filtering and cleaning the air in paint shops and other industrial workplaces that effectively relies on the ability of microbes to eat carbon-based molecules. Air containing volatile organic compounds (VOCs) gets passed through two different microbial reaction chambers and the end result is water vapor, heat, and carbon dioxide. (Pictured above: One of the company's "cat toys of the apocalypse," as far as VOCs are concerned. Microbes contained in the soil will break apart VOCs and thereby filter the air.) Although carbon dioxide is often produced in the process, the technique far more

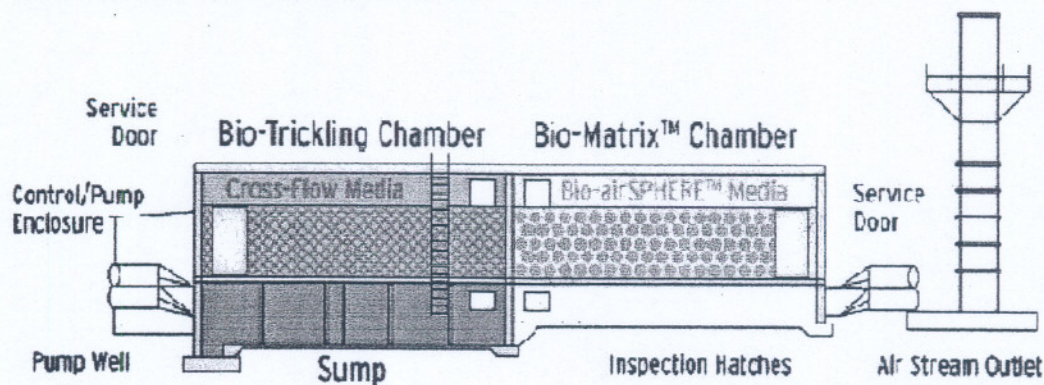
environmentally friendly and cheaper than the conventional technique for getting rid of VOCs, said Karl Mundorff, Bio-Reaction's CEO. Typically, paint shops eliminate VOCs by incinerating them in furnaces fueled by natural gas, which generates in NOx gases and far more carbon dioxide. Carbon taxes tip the balance further in favor of bio-oxidation. The technique can also be used to eliminate the overpowering smells emanating from industrial plants.

"We have 75 to 95 percent of the destructive effect but we save on natural gas," he said. "We lower the operating cost by 90 percent with the same capital costs.

Last year, Bio-Reaction installed nine systems in North America (bringing the country's total to 25 units) and two in China. Toyota and **Louisiana Pacific** are customers: The Louisiana Pacific system filters 160,000 cubic feet of air per minute. The company's systems start at around \$1 million, cost on average around \$2.5 million and can run as high as \$10 million to \$15 million, depending on the air flow requirements. The end result looks like a chemical processing plant. The Environmental Protection Agency has certified the plants in the U.S.

Bio-Reaction's process marks yet another milestone in growth of industrial microbiology. Yeast and other microorganisms have for centuries been used to produce cheese, wine and beer and in the 20th Century been exploited to produce antibiotics.

But In the last several years, a number of startups have proposed harnessing the metabolic process of natural, genetically enhanced and genetically manipulated to produce fuel (Amyris, Zechem), fertilizer (AgraQuest), industrial chemicals (Genomatica), semiconductor insulators (Cambrios) recyclable plastid (Bioplastech) and other materials. Scientists at Georgia Tech are also studying to see how microbes can be used to detect leaks at nuclear repositories and MIT has made battery components. Microbes, after all, are essentially little chemical factories that require less external energy than industrial boilers to perform reactions. They also don't need health and benefits packages, can endure difficult environments and be sacrificed by the thousands on a daily basis. Someday, they could be recognized as the employees of the century. The process works as follows. Air containing substances such as formaldehyde, benzene and/or methanol is captured, mixed with water vapor and channeled into what the company calls a bio-trickling chamber. This first chamber is filled with plastic strips coated in water infused with bacteria.



A diagram of how the process takes place. Water-soluble materials are eliminated in the first phase. In the second, soil microbes captured in balls gobble up non-soluble materials.

Water soluble compounds will have already been dissolved into the humidified air. When

these droplets come into contact with the moist strips, the bacteria come into contact with the compounds and oxidize the harmful substances.

"The microbe reaches through the water/water interface," Mundorff said. The company, in fact, started off trying to tackle the problem of storm water contamination.

Substances that aren't water soluble are metabolized by the wiffleball of destruction (otherwise known as the BioSphere Media) in the next chamber. The spheres – which measure about 1.3 inches in diameter – are packed with soil infested with microbes. The microbes employed by Bio-Reaction are somewhat common varieties. Genetic modification is not necessary.

"There is a microbe for any carbon molecule," Mundorff said. "They can eat alcohols at a 90 percent level in 6 to 12 seconds."

www.greentechmedia.com/articles/.../cleaning-air-with-bacteria/

Hansard

Ms. Rosann Wowchuk (Swan River): Madam Speaker, when the announcement was made by the Clean Environment Commission that the RTOs would be installed in the Louisiana-Pacific plant, everybody was very pleased that we were going to have the best possible controls.

LP's Financial Outlook

(12)

1st Article

March 23, 2009

LP has successfully managed through many business cycles and has strengthened its financial position in anticipation of the current downturn,” said Bank of America. This financing should give LP the financial flexibility to continue to expand its capacity and grow its market share during challenging economic times.

newsroom.bankofamerica.com/index.php?s=43&item=8358 - 68k -

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2nd Article

Feb 27, 2009

COMPANY OUTLOOK

"As we had anticipated, 2008 proved to be a very challenging year for our businesses and we expect 2009 to also be difficult," Frost said.

"Our goal this year is to position LP to emerge from the global economic crisis stronger than before."

Based on our actions and plans to enhance liquidity, we believe when this economic downturn subsides, we will be well positioned to compete and prosper," Frost concluded.

<http://www.reuters.com/article/pressRelease/idUS355940+27-Feb-2009+BW20090227>

Credit line completes LP's financing spree

By Geert De Lombaerde

Louisiana-Pacific has signed a deal for a \$100 million asset-backed credit line with Bank of America and Royal Bank of Canada.

“We believe that this capital availability, along with our previously announced actions to reduce costs and conserve cash, will allow us to get through these poor market conditions and position ourselves to take advantage of the economic rebound as it occurs.”

NashvillePost.com.