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Presentation to the CEC review Louisiana Pacific plans to increase emissions at the Swan River facility July 25, 2009.

Introduction:

My name is Kenneth Sigurdson. I farm with my wife Bernice and three sons in the RM of Swan River. I am the former chair of Concerned Citizens of the Valley (1994 and 1995) and I am making this presentation on behalf of the Concerned Citizens of the Valley.

Viewing the CBC documentary "ILL WINDS"

The Ill Winds film was done just prior to the arrival of LP in the Swan River Valley.

The Olathe, Colorado plant mentioned in the Ill Winds video:

In 1998 LP was assessed a 37 million dollar fine the largest fine ever levied by the EPA. In addition the courts awarded damage compensation to the neighbors (including Margaret and Arthur Orjias). On May 27, 1998, the company pleaded guilty to eighteen felony counts and agreed to pay a \$31.5 million penalty for fraud and a \$5.5 million fine for willfully conspiring to violate the Clean Air Act, among other crimes. Two Louisiana-Pacific employees were also indicted for their participation in the scheme. Mill superintendent Robert Mann was fined \$10,000 and given home detention and probation, and mill manager Dana Dulohery was sentenced to five months in prison.

The penalty for Clean Air Act violations was the largest criminal fine in the twenty-eight-year history of the Act.

Link provided

http://findarticles.com/p/articles/mi_m1295/is_1998_Dec/ai_53281653/

EPA testimony at 1994 hearings: attached

These 1994 CEC hearings lasted several weeks and included testimony from the US Environmental Protection Agency (EPA). LP had received the largest fine ever levied by the EPA and the EPA had reached a consent agreement with LP to install RTO's at eleven of its thirteen US plants.

The hearings revealed that this plant would emit 920 tons of VOC's, 2002 tons of Carbon Monoxide, 620 tons of NO_x, and 484.4 tons of particulate matter. The EPA describes the threshold that they would require pollution controls. It should be noted that the current LP proposal still emits over 700 tonnes of VOC's.

Statement by EPA to CEC in June 16, 1994

MS . DOMIKE (EPA) : In other words, if one pollutant is expected to be emitted in excess of 250 tons per year, the -- we would require the facility to control emissions of other criteria pollutants if their emissions rate exceeds the following numbers. For carbon monoxide the threshold number is 100 tons a year, for nitrogen oxides the threshold number is 40 tons, for particulate matter, that threshold level is 25 tons per year for particulate matter or 15 tons per year for the smaller particulate matter as defined in the United States regulations. It depends on the size of the pieces of particulate; and for volatile organic compounds, the threshold level is 40 tons per year.

The EPA stated that a plant of this size in the US would require the best available technology RTO's or RCO's to control VOC's and Carbon Monoxide. The EPA stated that they would require low NO_x burners to control NO_x emissions.

Prior to the hearings conclusion Louisiana Pacific made a commitment to the install RTO's at the Swan Valley plant. RTO's then became a recommendation of the CEC and regenerative thermal Oxidizers were written into the license. The CEC also recommended that low NO_x burners also used to burn off the NO_x emissions. This recommendation (low NO_x burners) was never followed.

How can LP use reduction of the Greenhouse gas NO_x as a reason for turning off the pollution control when they have done nothing to control NO_x emissions?

At the 1994 CEC hearings LP made a commitment to the community to install RTO's. At the time opposition leader Gary Doer and local MLA Rosann Wowchuk spoke up in favor of RTO technology being installed.

Why is this commitment to the community being reneged on?

Citizens Advisory Committee formed after plant construction

The Concerned Citizens of the Valley attended three or four meetings of the Citizens Advisory Committee. One of the discussions I initiated was the location of the air monitoring stations (one is located west of the plant near the garbage dump and another is located north of the plant. It was agreed that these stations would provide little useful information and would need to be moved. This was never done. LP's air monitoring stations are good talking points but have no legitimate value in air monitoring.

Dr. Kay Wotten, Manitoba Health resigned from the committee and her reasons were given to the Committee. The CEC should request her letter of resignation from the Citizens Advisory Committee.

Enforcement of the license was a difficult task for example I phoned Mr. Doug Peterson the Manitoba Environments rep on the Advisory Committee to request information on why the government allowed LP to shut down the RTO's for long periods of time. Peterson's response was that RTO's were never a requirement of the Manitoba Government, so it didn't matter.

With the Manitoba government supporting LP's dumping of wood waste around the community we realized that little could be achieved by continuing to sit on this committee.

LP's plan to increase pollution at the Swan River Mill

Louisiana Pacific (LP) has received interim approval and has applied to permanently shut down the Regenerative Thermal Oxidizers (RTOs) at their Swan River operation. The reason, LP wants to reduce operating costs by removing the pollution control equipment. This will increase hazardous air pollution to the community.

A document prepared for the CEC "Background to the Swan Valley OSB plant investigation" compares the Environment Act license Number 1900 S4 to Louisiana Pacific proposed limits.

Under this proposal Volatile organic compounds from the dryers increase from 1.1 grams a second to 20.96 grams a second an increase of 19-fold. Phenol emissions increase from .05 grams a second to .5 grams a second a 10-fold increase. Formaldehyde emissions

increase from .085 grams a second to 4 grams a second a 47-fold increase. While Benzene emissions increase from .008 grams a second to .172 grams a second a 21-fold increase

Under LP's proposal press limit VOC's increase from .28 a second to 2.78 a second an increase of 10-fold increase. Formaldehyde emissions increase from .08 grams a second to 1.1 grams a second a 14-fold increase. Benzene emissions increase from .0003 grams a second to .089 grams a second a 65-fold increase. While MDI emissions increases 6 times from .0141 to .089.

This document does not list Carbon Monoxide emissions (2002 tones annually in 1994) and the proposed decrease in NOX emissions is minimal.

This huge increase in pollution is shocking for our community.

Hazardous Air Pollution or HAP

RTOs remove over 90% of the Volatile Organic Compounds (VOCs) coming from this OSB plant. The wood dryers, glues and resins (Methylene diphenyl diisocyanate and phenol formaldehyde) used to make Oriented Strand Board (OSB) produces numerous VOCs. The six most common and hazardous air borne pollutants coming from LP's OSB plants are acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. Three of these VOCs are known carcinogens. These VOCs, even in low quantities, cause health problems affecting the central nervous system and or respiratory system.

Manitoba only has guidelines on two of these highly toxic air borne pollutants (phenol and formaldehyde).

The US with a Clean Air Act recognizes OSB plants create a huge air pollution problem. In 2000 Willamett Industries another large United States OSB producer received a fine and was ordered to install pollution control equipment (RTO's) at 13 of its US plants. At the time Carol Browner EPA administrator stated, "Cleaning up the emissions from these plants will keep an average of 27,000 tons of pollution out of the air. That is the equivalent of taking 287,000 cars off the road; 287,000 cars is approximately the number of cars in the city the size of Portland."

In July 2004 the EPA issued more stringent rules on United States veneer- plywood-OSB companies and Louisiana Pacific continues to improve and upgrade their pollution control equipment in the United States.

Link at <http://www.epa.gov/EPA-AIR/2004/July/Day-30/a6298a.htm>

This document lists the pollutants coming off OSB plants. In addition to acetaldehyde (probable carcinogenic), acrolein (possible carcinogenic), formaldehyde (probable carcinogenic), methanol, phenol, and propionaldehyde other pollutants are emitted. They are Arsenic a human carcinogenic; Beryllium a probable human carcinogenic; Chromium- a human carcinogenic, manganese, nickel- a human carcinogenic, lead- a probable human carcinogenic; MDI- associated with asthma and reparatory illness; and Benzene- a human Carcinogen.

In 2006 the EPA introduced an even more stringent rule for OSB plants. There is no doubt that if the Swan Valley OSB plant was located in the US it would have to control

VOC's with RTO's, RCO's or bio filtration. A quick goggle search indicates that the Swan River, Manitoba Louisiana Pacific OSB plant is the only OSB plant in North American turning off the pollution controls. *Attached information on LP Plants*

Benzene

In September of 2007 LP requested that Manitoba Conservation approve a change from RTOs to RCOs (Regenerative Catalytic Oxidizers). In a letter of response, Tracey Braun, director Manitoba Conservation, stated in part. "Based on the fact that benzene is a known human carcinogen, it is the requirement of Manitoba Conservation that benzene emissions must be reduced or eliminated wherever possible. Therefore, we are not prepared to increase the benzene emission limit." *Braun letter attached*

This brings up some very serious questions.

Why did Tracey Braun deny LP an increase in emissions limits of benzene in September of 2007?

Also, why did Tracey Braun then in December of 2008 granted an interim license to allow LP to suspend the operation of the RTOs that control 90% of the VOC's including benzene.

What happened to Manitoba Conservations plan to reduce or eliminate benzene?

Why did LP abandon its plan to replace the RTOs with the newer RCOs in 2007?

According to the document "background to the Swan Valley OSB plant investigation Benzene emissions will increase 21 times from the dryers and 65 times from the presses. The removal of the RTO's will result in an additional 35 tonnes of Benzene being emitted annually by this plant.

Manitoba is part of a Canada wide standard on Benzene.

Link <http://www.manitoba.ca/conservation/cwsmb/index.html>

Quotes from this document

Benzene is a simple organic compound that is a volatile, clear, flammable, colorless liquid at room temperature with an aromatic odor. In all media it is not persistent or bioaccumulative. Benzene has been classified as carcinogenic to humans. ***It is a non-threshold toxicant – a substance for which there is considered to be some probability of harm for critical effects at any level of exposure.***

The primary long-term air quality management goal for non-threshold toxicants like benzene is to reduce exposure to the extent possible and practicable thereby reducing the risk of the adverse effects of this pollutant on human health.

NUMERICAL TARGETS and TIME FRAMES

The Canada-Wide Standard for Benzene: Phase 2 contains: For existing facilities addressed under Phase 1: A further 6-kilotonne reduction in benzene emissions (based on 1995 emission inventory levels) to be realized by the end of year 2010 from Phase 1 benzene emission reduction initiatives which continue beyond the end of year 2000 (end of Phase 1 CWS); AND ***For new and expanding facilities: minimize benzene emissions by the application of best available pollution prevention and control techniques.***

Additional links

http://www.ccme.ca/assets/pdf/benzene_cws_phase2_e.pdf

http://www.ccme.ca/assets/pdf/benzene_ph2_backgrounder_e.pdf

Braun's rejection letter and the quote from Canada wide standard on Benzene that states "Benzene is a non-threshold toxicant – a substance for which there is considered to be some probability of harm for critical effects at any level of exposure." And "applying the best available pollution prevention and control techniques"

This compares to the self-serving analysis and statement of Vicki Tatum of NCASI who states "The proposed RTO elimination does not represent any unacceptable risk of increased cancer associated with Benzene exposure

Formaldehyde and Acrolein

The assessment done for LP of formaldehyde for acute health risks, the maximum predicted 1-hour air concentration ($56.9 \mu\text{g}/\text{m}^3$) was compared against the Manitoba ambient air quality objective of $60 \mu\text{g}/\text{m}^3$. The reason for disregarding the lower ATSDR minimal risk level (MRL) of $49.1 \mu\text{g}/\text{m}^3$ is not provided. In fact, the maximum predicted 1-hour air concentration exceeds the guidelines endorsed by a number of agencies, including the ATSDR, OEHHA ($55 \mu\text{g}/\text{m}^3$) and TCEQ ($50 \mu\text{g}/\text{m}^3$).

Document 5, Page 3, Paragraph 1 refers to a US EPA reference concentration (RfC) of $0.5 \mu\text{g}/\text{m}^3$ for acrolein. This is incorrect. The correct IRIS RfC for acrolein is $0.02 \mu\text{g}/\text{m}^3$ (<http://www.epa.gov/ncea/iris/subst/0364.htm#refinhal>), which is 25-fold lower than the $0.5 \mu\text{g}/\text{m}^3$ suggested by NCASI. The criticism of the Ontario Standard by NCASI is similarly unfounded.

The US EPA has derived an inhalation reference concentration (RfC) of $0.02 \mu\text{g}/\text{m}^3$, based on nasal cavity respiratory effects in rats (US EPA, 2003b). EPA Regions III, VI, and IX (US EPA 1998a; b; c) and various U.S. state agencies have adopted this RfC value directly or have derived their guidelines based on the RfC. *Ontario Air Standards for Acrolein June 2005*

Synergic effect of Aldehydes

The models emissions for Acrolein are at $0.02 \mu\text{g}/\text{m}^3$ at the EPA reference guideline.

LP's assessment on formaldehyde emissions of $56.9 \mu\text{g}/\text{m}^3$ for acute health risks exceeds the maximum predicted 1-hour air concentration of other accepted guidelines.

Acrolein exists together with aldehydes, such as acetaldehyde and formaldehyde, and has been shown have synergistic effects with these aldehydes. Mixtures of these three aldehydes were found to be more severe and more extensive in inducing respiratory olfactory problems in rats, compared with the individual chemicals. *Ontario Air Standards for Acrolein-June 2005*

http://www.ene.gov.on.ca/envision/env_reg/er/documents/2005/airstandards/PA02E0013.pdf

The three aldehydes mentioned in the Ontario document are all emitted in large quantities (Acrolein and Formaldehyde at the maximum levels). Certainly the synergistic effects with these aldehydes will have an impact on Human Health of our community.

Particulate Matter

The Model does not make any calculation for background levels of any substance. PM of 2.5 microns is a known health hazard. Since there is large amount of diesel truck traffic around the mill then we can assume most of these background diesel emissions are of 2.5 microns or less. Why was this not calculated?

Louisiana Pacific threatens the community.

Remove the pollution controls or we will shut down. JOBS JOBS JOBS. How realistic are their threats? Thanks to the benevolence of governments the Swan River LP operation has the lowest cost wood supply in North America. Globally, LP had sales of 1.7 billion dollars in 2007. While LP may shut down because of the housing crisis in the US it is highly unlikely they would shut down based on the cost of operating pollution control equipment in the Swan River operation. LP recently shut down its OSB operations at St.-Michel-des-Saints, Quebec. This mill does not have RTO technology. The Swan river mill has been shut down since mid June, so LP's threat of shutting down has little validity

Louisiana Pacific web site also brags about the use of RTO's, at the Swan River plant.

The site has a picture of LP,s Derek Boychuk. Boychuck says he has a different name for the mill's Regenerative Thermal Oxidizers. "They're kind of my babies," he said. RTO's burn volatile organic chemicals, an important part of the mill's air quality system."

It appears Louisiana Pacific doesn't view air quality to be important issue in Canada anymore.

Finally the CEC hearing process of 1994 lasted 10 days and included testimony debate analysis and recommendations. There is no need to reinvent the wheel here, nothing has changed, and the LP plant remains a major emitter of thousands of tones of hazardous air pollution. For the CEC to have any credibility going forward they must reject this ill conceived plan by LP to enhance their profit by turning off the pollution controls.

Respectfully submitted by The Concerned Citizens of The Valley- Kenneth Sigurdson

**Information on LP Plants with pollution control
2007 EPA article on Jasper Texas OSB plant with RTO and RCO technology for
VOC's.**

<https://yosemite.epa.gov/opei/ptrack.nsf/vAPRViewPrintView/78EC34455F851F6985257458005571AD>

2008 EPA article Houlton ME plant with RTO technology for control of VOC's

<https://yosemite.epa.gov/opei/PTrack.nsf/vAPRViewPrintView/4ce66bb64b3d510f852574570068706a?OpenDocument&Click=>

**An article from the manufacturer that replaced the aging RTO at the Houlton ME
plant in 2008**

<http://www.specialtywoodjournal.com/index.php/Articles/LP-and-MEGTEC-revive-aging-RTO.html>

Information from LP's web site

Reducing Natural Gas Usage

In 2007 alone, LP spent more than 18 million dollars on natural gas to control particulate emissions associated with the production of our products. Usage and costs would have been much higher without projects completed in 2005 and 2006 to reduce gas usage through conversion of several Regenerative Thermal Oxidizers (RTOs) to Regenerative Catalytic Oxidizers (RCOs). By placing ceramic media impregnated with precious metals (platinum and palladium) in the unit to aid in the destruction of the emissions, the RCOs can operate at lower overall temperatures. On average, the conversion reduces natural gas requirements by at least 50% per unit.

As of 2007, LP facilities in Sagola, Michigan; Hanceville, Alabama; Jasper, Texas; and Carthage, Texas had converted to this energy-saving technology. At the end of 2007, for all facilities, 63.6% of LP's control units required to control press emissions were RCOs.

LP is not removing the pollution controls in these plants as they are doing here



Conservation

Environmental Stewardship Division
Environmental Assessment and Licensing Branch
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www.gov.mb.ca/conservation/envapprovals

September 13, 2007
File: 3741.00

Mr. Allan Hambley
Plant Environmental Manager
Louisiana-Pacific Canada Ltd.
Swan Valley OSB
P.O. Box 189
Minitonas, MB R0L 1G0

Dear Mr. Hambley:

Re: Conversion of Press RTO to RCO, Request for Emission Limit Increases

Thank you for your letter dated August 22, 2007 in which you have requested increases to the emission limits for formaldehyde and benzene from the Oriented Strand Board Press as listed in Clause 57 of Environment Act Licence No. 1900 S4. Our review of this request and the supporting documentation has concluded the following.

Based on the fact that benzene is a known human carcinogen, it is the requirement of Manitoba Conservation that benzene emissions must be reduced or eliminated wherever possible. This position is consistent with the Ontario Ministry of the Environment that rather than list a point of impingement criterion for benzene, directs industry to prevent or limit benzene emissions to the greatest extent possible. Therefore, we are not prepared to increase the benzene emission limit.

We understand that the conversion of the Press Regenerative Thermal Oxidizer (RTO) to a Regenerative Catalytic Oxidizer (RCO) is expected to increase the formaldehyde emissions from the press. Based on our review of the air dispersion modelling and health risk assessment of the anticipated increase in formaldehyde emissions, it appears that the environmental impacts will not be significant. Therefore, in accordance with Section 14(2) of The Environment Act, I hereby grant approval for the conversion of the Press RTO to an RCO. We defer our decision regarding the request for an increased emission limit for formaldehyde pending the demonstrated performance of the RCO through appropriate source testing.

If you have any questions regarding this matter, please contact Mr. Ryan Coulter of this office at (204) 945-7023.

Yours truly,

Tracey Braun, M. Sc.
Director
Environmental Assessment and Licensing

Manitoba
spirited energy