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Sent via email

April 14, 2011
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy
1000 Independence Avenue, SW, EE-4A
Washington, D.C. 20585

ATTN: Dr. Jane Summerson

Subject: Comments: Draft Environmental Assessment for Nippon Paper Industries USA Company Biomass Cogeneration Project, Port Angeles, Washington (DOE/EA-1858D)

Following are our comments on the subject draft EA:

Summary of Comments (See body of comments for detailed discussions of items summarized here.)

1. Water use - The use of additional water from the Elwha River will occur at the critical low-flow months for fish that the US government is attempting to restore by spending more than \$325 million to remove the Elwha dams. It is documented that the Elwha flows are decreasing due to climate change. No analysis has been done to ensure that these threatened species will not be harmed by additional water removals. This was glossed over in the EIS and this EA by using monthly flow averages instead of daily flows, which are already reaching critically low levels.
2. Air emissions – The EA wrongly states that the that the existing system would continue to emit air pollutants that, in most cases, are higher than under the proposed project, and the 20 megawatts of electricity not produced would continue to be produced at some other location using fossil fuel, so there would be no reduction in greenhouse gas emissions. Neither of these assertions are true. Emissions of every type shown, except for PM, will be substantially increased from recent levels if the proposed plant is allowed to

proceed. And most of the electricity that would be produced will not displace fossil fuel energy production. Additionally, data used in Nippon's NOC has been proven wrong by recent tests.

3. Misleading information - The comparisons of emissions from the existing system to the proposed system contained in the EIS, and repeated in the EA, selectively used old data to make the proposed system look better than the existing system, when, in fact the opposite is true.
4. Major health issue ignored - Very fine particles (frequently referred to as "nanoparticles") are not currently regulated, but recent studies have shown these particles to be damaging to health and should be addressed in the EA.
5. Olympic National Park air quality – No analysis was presented to substantiate the claim that the air quality in the ONP would not be degraded. Incorrect data on open burning was presented to support the "opinion" that the air quality would not be degraded.
6. Washington State law requires the mill to meet future emission requirements. The US Environmental Protection Agency has stated that it will promulgate greenhouse gas emission requirements within three years for boilers such as will be used in this project. The risk and implications of Nippon not being able to meet these requirements should be addressed.
7. Carbon neutrality – The EA failed to recognize the controversy over whether or not burning wood is "carbon neutral". It also failed to account for differences in greenhouse gas emissions (and therefore the impact on climate change) by immediate burning of wood vs. slow decay on the forest floor.
8. Forest health – No analyses was presented to substantiate that taking large quantities of wood from the forests would not degrade the long-run forest health. This is a major concern that should have been addressed with detailed studies.
9. Availability of sufficient wood – The EA simply stated that both Nippon and the Department of Natural Resources were confident that sufficient wood was available without providing any facts to substantiate the assertions, although recognizing that the study to determine supply sufficiency was not yet completed.
10. Economics - No information is provided that demonstrates that the proposed project will help prevent the mill from closing and hence save jobs. And there is no recognition of the very real possibility that the mill will close and the power generation part of the project can continue to operate with only minor modifications. This would result in the mill job losses, misappropriation of millions of dollars of taxpayer money, increased pollution for local communities, and the profits from the power generation would leave the US.

Water Issue

Paragraph 2.2.2 indicates that as much as an additional 1.2 million gallons of water per day would be used by the proposed project during the summer months. This is the critical low water period for the Elwha River, with flows dropping below 200 cfs. Further, these low flows are expected to worsen due to global warming, which is already having effects of the Elwha River flows. See Elwha River: Impact of ongoing Glacier Retreat. On the web: www.nichols.edu/departments/glacier/ QUOTE: “The loss of glacier area has and will lead to ongoing significant changes in summer streamflow in the Elwha River. In the Elwha River from 1950-2006 summer streamflow declined by 25%, spring streamflow by 17%, and winter streamflow increased by 6%. Part of this change is due to the loss of glacier extent in the watershed.”

These low flows are already threatening habitat. See: Elwha-Dungeness Watershed Plan Water Resource Inventory Area 18 (WRIA 18) and Sequim Bay in West WRIA 17: Volume 1, page 2.4-13: “Haring (1999) summarized an extensive low flow study that was conducted in the summer of 1998, a low snow pack year (Orsborn and Orsborn 1999). The objectives of this study were to assess the effects of water diversions on the current channel morphology and fish habitat. The results showed that the lowest measured flows were between 260-310 cfs depending upon location within the lower river. Based upon the current river morphology, the authors found that, for flows in the wetted mainstem declining toward 300 cfs, habitat loss begins to occur and that at flows less than about 300 cfs the loss of surface area of the wetted channel will cause significant habitat loss. The authors emphasized that their study did not fully investigate the effects of flow reductions on habitat loss in side channels, did not evaluate effects of flow reductions on elimination of bank cover habitat, and did not examine the further potential impacts of the dynamics between reduced flow and increased water temperature. The potential for these aggregate impacts resulting from reduced flows has prompted the state, the Lower Elwha Klallam Tribe, the National Park Service, and the Bureau of Reclamation (which operates the dams, following federal acquisition) to agree that at flows less than 400 cfs, the Bureau will take action to augment flows, even at the expense of power generation.” But without controlled water releases when the dams are removed, listed species will not be protected from low river flows. The Elwha Restoration project EIS's and the Nippon EIS failed to examine the fish habitat effects of increased out-of-stream water diversions. The earlier Elwha documents were concerned mainly with sediment transport and guarding public water supplies from the increased turbidity.

The Nippon EIS glossed over the potentially serious impact on fish survival by using monthly averages of flows, which misleads the reader into thinking that there is no fish survival problem. Hourly and daily Elwha River flow data are required and

projections into the future based on climate change models should be computed. These data should be used to estimate the impact of fish survival. There has been no analyses of this very important issue by any agency or other entity, yet evidence indicates that it is a potentially serious problem. When considering that the US Government is spending more than \$325 million dollars to restore the fish runs in the Elwha River, such an analysis should be a mandatory part of the EA.

To summarize:

1. Low flows in the Elwha below 300 cfs causes significant habitat loss;
2. Flows below 300 cfs, and even below 200 cfs have been documented;
3. The low flows are getting worse with global warming and the retreat of glaciers that feed the Elwha River;
4. Evidence points to a potentially serious problem, yet no analyses have been done or any remedial actions proposed.
5. Such analyses should be done as part of this EA and remedial actions recommended if indicated.

Air Emissions

Paragraph 2.2.2 states that Nippon will meet all required air emission regulations. But Nippon has publically stated that they cannot meet the new EPA rule:

ENVIRONMENTAL PROTECTION AGENCY 40 CFR Part 63

[EPA-HQ-OAR-2002-0058; FRL-] RIN 2060-AQ25 National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

(See following article.)

2/27/11

PENINSULA DAILY NEWS

Challenging rules for Nippon mill

BY TOM CALLIS
PENINSULA DAILY NEWS

PORT ANGELES — It will be a challenge for the Nippon paper mill to meet new federal air pollution rules for its planned biomass cogeneration upgrade, said the facility's environmental manager.

The new boiler that Nippon Paper Industries USA plans to install next year would not meet new requirements for carbon monoxide and particulates, Paul Perlwitz said.

Less stringent

That's despite the new regulations, announced by the Environmental Protection Agency last week, being less stringent overall than those previously proposed.

Perlwitz said the \$71 million boiler has been designed to meet the regulations EPA was proposing last year, which were less restrictive when it came to emissions of carbon monoxide and particulates.

"We're getting to believe

that EPA may have made an error," he said.

The boiler — which would burn wood waste from mills and logging sites to produce steam and up to 20 megawatts of electricity, which the facility could sell credits for — isn't yet under construction.

Perlwitz said it's unknown what would have to be changed in the design.

He added that the mill would have 3.5 years to come into compliance.

"It does present some challenges," Perlwitz said.

"We have to study the rule more."

The emission rules are separate from the greenhouse gas regulations EPA enacted last month. Those new rules do not apply to biomass boilers.

PT paper mill

Port Townsend Paper Corp. is also planning a biomass boiler upgrade. The \$55 million project would generate up to 24 megawatts of power, which the facility could sell.

Company officials could not be reached for comment on the new EPA regulations.

A permit for Nippon's new boiler has been appealed to the state Shoreline Hearings Board by six environmental groups.

Perlwitz said hearings have been scheduled for April 7 and May 2-3.

The groups appealing the Nippon permit are No Biomass Burn, Port Townsend AirWatchers, World Temperate Rainforest Network, Olympic Environmental Council, Olympic Forest Coalition and the state chapter of the Sierra Club.

Five of the same groups — excluding the Sierra Club — also have appealed the Port Townsend mill's project.

The hearings board is scheduled to hear the issue June 2-3.

Reporter Tom Callis can be reached at 360-417-3532 or at tom.callis@peninsuladailynews.com.

Paragraph 2.3.2 addressing the existing conditions, states that: “Boiler 8 would continue to emit air pollutants that, in most cases, are higher than under the proposed project, and the 20 megawatts of electricity not produced would continue to be produced at some other location using fossil fuel, so there would be no reduction in greenhouse gas emissions.” Neither of these statements is accurate. Using Nippon’s own emission projections taken from the EIS and Nippon’s NOC application to ORCAA, yields the following table:

Pollutant	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009	New System	New Sys.minus 2009
CO	54.8	53.3	337.6	698.1	728	680.3	668.2	665.4	597.9	523.8	657.3	133.5
NOx	183	177.7	171.3	175.1	173.7	166.1	165.7	158.2	138.8	121.9	184	62.1
PM	44	43.2	72.2	114.8	117.7	108.4	107.8	106.8	94.8	82.7	52.3	-30.4
SO2	317	284.7	267.6	211.4	158.1	164.8	186.1	143.5	112.1	101	152	51
VOCs	0	0	0	0	0	0	0	0	0		35.8	35
Totals										829.4	1081.4	251.2

Emissions of every type shown, except for PM, will be substantially increased from recent levels if the proposed plant is allowed to proceed. Although Nippon is allowed to go back 10 years of plant operation to compare emissions to the proposed plant’s emissions (and they did for NOx and SO2 to get the highest numbers, so the new plant would look like an improvement to the public) this hardly seems like a valid assessment when the health of large communities are involved. It should be noted that Nippon’s numbers are questionable. Until 2010, no measured values had been measured since 2003. All the numbers presented by Nippon were calculated based on the types and quantities of fuels used. Nippon was supposed to measure the emissions in 2008, but they didn’t do it and were fined by ORCAA. Even so, no measurements were done until late 2010, and those measured values differed substantially from the values published in the NOC and EIS and used by DOE in the EA. Measured CO emissions from Nippon’s mill were 2 – 5 times higher than they were claiming in the Notice of Construction (NOC) for the existing plant, and NOx values were 36% higher. This raises questions regarding the accuracy of their calculations for the new plant and indicates that DOE should conduct its own analyses to verify Nippon’s claimed values for the existing plant and their projected numbers for the proposed project. (See Golden Specialty Air Quality Test Report Number NW10NIPPON100, dated February 7, 2011.)

It is also dismaying that Nippon used 2004 emission values in their EIS to compare to the proposed emission values, when they had data through 2009. As can be seen from the table, the emissions have been decreasing, and had they used recent values, the

results would have been opposite to the conclusion in the EIS (i.e. the proposed project will result in increases in almost all emissions, not decreases.) Some readers might believe that this was a deliberate attempt to misinform the public.

Additionally, although very fine particles (frequently referred to as “nanoparticles”) are not currently regulated, recent studies have shown these particles to be damaging to health and should be addressed in the EA. Refer to: Health Effects and Economic Impacts of Fine Particle Pollution in Washington, Washington State Department of Ecology Air Quality Program, December 15, 2009 Publication number: 09-02-021.

Nor is it true that “..the 20 megawatts of electricity not produced would continue to be produced at some other location using fossil fuel, so there would be no reduction in greenhouse gas emissions.” To begin with, well less than 50% of the electricity produced in BPA’s territory is produced by fossil fuels. Moreover, the amount of GHG emissions per kWh emitted by the generation of electricity with wood burning is higher than with natural gas or coal. Finally, the scientific community is very divided over the “renewable” nature of burning wood, since the biomass used would take up to 75 years to release its GHG. In summary, GHG emissions would be increased. The EA should provide a detailed analysis of the project’s impact on GHG emissions.

Washington State law requires the mill to meet future emission requirements. The US Environmental Protection Agency has stated that it will promulgate greenhouse gas emission requirements within three years for boilers such as will be used in this project. The risk and implications of Nippon not being able to meet these requirements should be addressed.

Paragraph 2.3.3 states: “Nippon considered a smaller boiler that could have provided adequate steam for the mill, but it would not have met project objectives of improving mill efficiency, retaining jobs through business diversification, and providing renewable power to the regional grid, nor would it have optimized the use of biofuel from the Olympic Peninsula.” No documentation is provided to show that this project will retain jobs at the mill. If the mill becomes uneconomic because of competition of lack of markets, it will shut down regardless of whether or not there is a power generation element on the property. Because of the generous subsidies provided by our tax dollars for the new boiler, the power generation part of the plant can continue to be operated by adding additional cooling to the plant, and all of the mill jobs will still be lost. Moreover, the efficiency of the power generation plant will be extremely low. The EA should provide the analyses to substantiate the statement that the project will retain the mill jobs.

Additionally, there is no analyses or other evidence provided that the project will “.. have optimized the use of biofuel from the Olympic Peninsula.” Such an analysis should be provided in the EA showing why extraction of the wood from the forest is superior to allowing it to contribute to the forest health or being used for Biochar or other uses. Producing unhealthy emissions hardly appears to be an optimized use of the wood.

Paragraph 3.2.2.1 Air Quality: The EA states: “DOE reviewed the information submitted by the applicant to the ORCAA, but did not perform independent modeling. The permitting process and associated ORCAA review will provide the ultimate test of the emissions estimates and the modeling results.” Does this mean that this EA cannot be finalized and a decision made regarding awarding the DOE funds until ORCAA has approved the project and all appeals have been adjudicated? (It should, since air quality and the associated health threats to Washington State citizens are at issue.)

Table 3-1: As mentioned previously, testing in late 2010 revealed CO levels much higher than claimed by Nippon. NOx values were 36% higher than claimed by Nippon, so the accuracy of the table is in question and the entire issue should be investigated and corrected. Further, the table reflects 2002 air quality data for Clallam County when the population of the area was lower, and thus emissions were lower than currently. This should be updated before issuing a final EA to reflect current ambient values. Again, human health is involved with this decision, and as shown earlier in this comment letter, emissions will increase if this project is approved.

Table 3-2: This table is structured so as to provide the public with the impression that most emissions will be decreased with the proposed project by using emissions from much earlier years from the existing system and comparing them to the proposed system. But as shown in this letter previously, the emissions from the existing plant are much lower in recent years. If recent year emissions are used, the emissions for the proposed plant are significantly higher for every emission type except PMs, and even for PMs, the very fine particles (nanoparticles) that are serious health hazards will increase, since they are approximately proportional to the amount of wood burned, and will not be filtered out by the proposed systems. While Nippon may be allowed to use the earlier years as criteria for having to obtain Federal permits, its use in this document when trying to assess actual environmental impacts is not appropriate. Table 3 should be redone to reflect recent year emissions. Additionally, since recent tests previously referred to in this letter yielded significantly different results than used by Nippon in their NOC, the entire emissions matter should be reexamined by independent DOE or ORCCA experts and the results reflected in

this document. This is particularly important because several of the emissions come very close to the maximum allowed values: ***“For nitrogen dioxide, the predicted level of 176.5 micrograms per cubic meter is 94 percent of its standard and for sulfur dioxide, the modeled result of 195 micrograms per cubic meter is 99 percent of its standard.”*** How can the public trust these values when Nippon’s previous projections have proven to be very inaccurate? If DOE is trying to accurately assess the environmental impacts, it should do an independent analyses of the emissions and present them in a manner that the public can understand.

Finally, in regard to Table 3-2, in addition to the remarks above, the emissions summaries should include the projected emissions from operating the old boiler up to 15 days per year as well as the increased emissions from the increased truck usage, as opposed to putting these factors in the narrative only.

The EA quotes the EIS conclusion that Olympic National Park air quality would not be adversely impacted. But the EIS incorrectly stated that 30,000 tons of wood was burned in Clallam County in 2006. Data provided by the Department of Natural Resources revealed that 25,894 tons were burned in 2006, and the average for years 2005 through 2008 was only 18.7 tons, which is a small fraction of the additional 80,000 tons per year that the new project will require to be burned within 6 miles of the Park. DOE should conduct a rigorous analysis of the potential impact on the Olympic National Park air quality impact from the project.

Regarding the discussion of greenhouse gases (GHG), the carbon neutrality of burning wood is seriously questioned by reputable scientists. Here is just one of numerous references: Clearcut Disaster: Carbon Loophole Threatens U.S. Forests by Mary S. Booth PhD with Richard Wiles Senior Vice President Environmental Working Group, June 2010. Burning wood is certainly not carbon neutral over the next 50 critical years, when all nations must reduce their GHG emissions. A claim of carbon neutrality should be substantiated with a time based analysis and contained in this EA.

On page 43, the availability of adequate biomass for the project is discussed, but no data is presented to justify the assertion that an adequate supply of biomass will be available for the project, nor is any analysis of the environmental impacts of removal of the biomass from the forests presented. Statements that Nippon and DNR are confident that the biomass will be available is not an environmental analysis as this EA is supposed to present. The report cited in the EA that of a statewide study to assess forest biomass availability and sustainability, will not even be completed until August 2011. And the EA does not analyze the forest

environmental impacts associated with the harvesting of the feedstock for the project. Much of the wood that would be harvested provides nourishment for the forest and habitat for living organisms. The EA should analyze these impacts since this is supposed to be an analysis of the environmental impacts of the proposed project. Additionally, the assumption that the production of 20 MW of electricity would reduce the production of CO₂ emissions by 93,500 tons of carbon dioxide equivalent by displacing fossil fuel burning is incorrect. For example, the Clallam County PUD's fuel mix is less than 6% fossil fuels.

The EA states: "DOE has made a No Effect Determination pursuant to the *Endangered Species Act* for the proposed project, thereby concluding that there would be no impacts to threatened or endangered species or critical habitat. Similarly, no adverse impacts to other biological resources would be expected." Where is the analysis of this determination found? We are particularly concerned about the impacts on fish in the Elwha River, forest habitat, and emission impacts on the waters surrounding the Nippon plant. On page 45, the EA states: "The DNR is actively collecting information and developing protocols that will allow it to consider forest biomass as another commodity of value in its efforts to sustainably manage forested State trust lands. One of the items targeted in the statewide forest biomass supply assessment described above is the "estimated volume, physical characteristics, and distribution of material, live and dead, under a reasonable range of on-site retention levels to protect soil productivity, water quality, fish and wildlife habitat, and other ecological functions" (DNR 2010b). This is a step to establish what biomass collection should look like (or what the site should look like after collection) in order to protect the ecosystem." How can DOE make a determination of No Effect until this work is completed?

On page 59 of the EA, it states: "Operation of the cogeneration plant would be likely to create a single direct job, but it could help to preserve current jobs at the mill site." The only basis provided in the EA that the project would help to preserve current jobs at the mill is because Nippon says so. No economic analyses of the market or Nippon's competitiveness is provided. None of the capital costs are devoted towards making the mill more efficient except for the steam generation – a very small factor in the overall costs of the product. With costs for wood in the Pacific Northwest increasing due to demand from China that will likely last for many years, and increasing competition from Asia, the mill may become uneconomic in the near future. But the boiler and turbine can be operated in a stand-alone configuration with addition of more cooling. Because of the generous subsidies and the treatment of the energy generated as "renewable" and therefore being sellable at high power purchase rates, it would be economic to shut down the mill and operate the power generation portion of the project, with the profits leaving the United States. Thus, the mill jobs

would be lost, the communities would be saddled with the emissions, and our US tax dollars would have been devoted to profits for a non-US company. The EA should contain a detailed analysis of why the large infusion of US tax payer money will guaranty that the mill jobs will be secured, if this is the case. If it cannot be shown to be the case, the EA should say so.

Thank you for the opportunity to comment on this Environmental Assessment.

Respectfully submitted,

Bob Lynette, Co-Chair of the North Olympic Group of the Washington State Chapter of the Sierra Club

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