ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR
PERMIT SECTION

JUNE 2008

RESPONSIVENESS SUMMARY FOR PUBLIC QUESTIONS AND COMMENTS ON THE CONSTRUCTION PERMIT APPLICATION FROM ROBBINS COMMUNITY POWER LLC FOR A WOOD FUELED POWER PLANT IN ROBBINS, ILLINOIS

Source Identification No.: 031270AAB
Application No.: 07060081

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DECISION

On June 23, 2008, the Illinois Environmental Protection Agency (Illinois EPA) issued an air pollution control construction permit to Robbins Community Power LLC, to re-activate the former Robbins Resource Recovery facility in Robbins, Illinois as a wood fueled power plant. In response to public comments, the issued permit include a number of additional requirements for the proposed plant compared to the draft permit, as well as various clarifications to conditions,.

Copies of the documents can be obtained from the contact listed at the end of this document. The permits and additional copies of this document can also be obtained from the Illinois EPA website www.epa.state.il.us/public-notices/.

BACKGROUND

On August 17, 2007, the Illinois EPA, Bureau of Air received a construction permit application from Robbins Community Power LLC, requesting a permit to re-activate the former combustors at the site where Robbins Resource Recovery previously operated in Robbins, Illinois. The proposed plant would be used to generate electric power using wood as the principal fuel. The key emission units of the plant would be two wood-fueled boilers and their controls, associated wood and ash storage and handling systems with baghouses, and various ancillary and support operations.

The construction permit issued for the plant identifies the applicable rules governing emissions from the plant, and establishes enforceable limitations on its emissions. The permit also establishes appropriate compliance procedures, including requirements for emissions testing, continuous emission monitoring, recordkeeping, and reporting. Robbins Community Power will be required to carry out these procedures on an ongoing basis to demonstrate that the plant is operating within the limitations established by the permit and that emissions are being properly controlled.

COMMENT PERIOD AND PUBLIC HEARING

The Illinois EPA Bureau of Air evaluates applications and issues permits for sources of emissions. An air permit application must appropriately address compliance with applicable air pollution control laws and regulations before a permit can be issued. Following its initial review of Robbins Community Power's application, the Illinois EPA Bureau of Air made a preliminary determination that the application met the standards for issuance of a construction permit and prepared a draft permit for public review and comment.

The public comment period began with the publication of a notice in the Southtown Star on February 23, 2008. The notice was published again in the Southtown Star on March 1 and 8, 2008. A public hearing was held on April 8, 2008 at the Kellar Junior High School in Robbins to receive oral comments and answer questions regarding the application and draft construction permit. The comment period was originally scheduled to close on May 8, 2008. The comment period was extended by order of the Hearing Officer and closed on June 3, 2008.

AVAILABILITY OF DOCUMENTS

The permit issued to Robbins Community Power and this responsiveness summary are available on the Illinois Permit Database at www.epa.gov/region5/air/permits/ilonline.htm (please look for the documents under All Permit Records (sorted by name), Construction Permit Records). Copies of these documents may also be obtained by contacting the Illinois EPA at the telephone numbers listed at the end of this document.

QUESTIONS AND COMMENTS WITH RESPONSES BY THE AGENCY

1. Where will the wood fuel for the proposed plant come from?

   The wood fuel for the plant would come from sources in the Greater Chicago metropolitan area, with most fuel coming from within 60 miles. The wood fuel would include green wood from trimming and clearing of trees, clean wood from wood product manufacturing facilities, and clean wood that is separated out from construction and demolition waste by facilities that process this waste to recover recyclable materials. Wood for fuel must be selected and managed so that it does not include contaminated wood (preservative treated, painted wood, particle board, etc.) and non-wood "foreign materials." The facilities that supply wood fuel to the proposed plant would have to operate in accordance with a Wood Fuel Quality Control Plan or Wood Fuel Plan.[1] This plan has been developed for the wood fuel supply for the proposed plant to assure that the wood fuel for the plant is prepared and handled so that only clean wood fuel is supplied to the plant and used as fuel. At the plant, Robbins Community Power must inspect each load of wood fuel delivered to the plant before it is accepted to verify that the load only contains clean wood.

2. Will Robbins Community Power be buying its wood fuel?

   Robbins Community Power indicates that the financial planning for the plant is based on purchasing wood fuel. However, it is possible that under certain circumstances it might be paid to accept green wood fuel, for example, when the volume of fallen trees exceeds the routine capacity of local municipalities to handle such material after a major storm.

3. Is Robbins Community Power going to get a diversion credit for wood fuel that is taken out of the stream of waste that would otherwise go to landfills?

   Robbins Community Power indicates that while it will not be getting a diversion credit or rebate for diverting waste from landfills, there are certain provisions under state and federal law that help support the economics of the project. For example, state law has a so-called portfolio standard that sets certain goals for use of renewable

[1] **The Wood Fuel Plan was made available for public review and comment as it was part of the draft permit (Attachment 4). It is also part of the issued permit.**

energy for the generation of electricity.

4. Where will the electricity from the plant go?

   Robbins Community Power would be an independent power producer and the electricity generated by the proposed plant will be put onto the grid under power supply contracts with purchasers of the power.

5. Along with wood fuel, this plant would burn natural gas as an auxiliary fuel. Natural gas is already in short supply in the Midwest and the use of natural gas by this plant would contribute to higher home heating bills because of limited supply and pipeline capacity.

   The amount of natural gas that would be used as an auxiliary fuel at the proposed plant would not be sufficient to have a discernable effect on the cost of natural gas. The plant is a relatively small power plant and the cost of natural gas is driven by market factors that are far larger than the amount of natural gas used at a single power plant. In any event, use of natural gas as the auxiliary fuel for the boilers, to assist in their operation with wood fuel, is appropriate as natural gas is the preferred auxiliary fuel for solid-fuel fired boilers.

6. Although waste tires should be recycled,[2] they are also a fuel resource that is used to supplement the coal fuel supply at some coal-fired boilers. Why doesn't the plant use waste tires to replace or minimize its use of natural gas?

   As a practical matter, waste tires cannot be substituted for the use of natural gas at the proposed plant. This is because natural gas would be used as the auxiliary fuel for the boilers. When waste tires are used in coal-fired boilers, they take the place of some of the coal used by the boilers, but do not substitute for the oil or natural gas used as the auxiliary fuel for the boiler.

7. What is the difference between an incinerator and a boiler?

   As defined by Illinois' regulations, 35 IAC 211.3070, an incinerator is "a combustion apparatus in which refuse is burned." A boiler is a fuel combustion emission unit, which is defined at 35 IAC 211.2470 as "any furnace, boiler, or similar equipment used for the primary purpose of producing heat or power by indirect heat transfer." The combustors at the proposed power plant will be boilers because they will not be burning refuse, but fuel, and will be used for the purpose of producing power, i.e., electricity, by indirect heat transfer.

8. How many people would work at the proposed plant when it begins operating? Are these jobs guaranteed to go to residents of the Village of Robbins?

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[2] The preferred use of waste tires should involve recycling of the rubber content of the tires. For example, waste tires can be shredded to make crumb rubber, which can be used in asphalt paving to improve its durability and reduce the number of potholes.

Robbins Community Power has indicated that the proposed plant would have between 32 and 34 permanent, full-time jobs. While it would seek to employ local residents, relevant training and experience would be essential to work at the plant.

The number of jobs that the plant would provide and whether it employs local residents is outside the scope of the permitting administered by the Illinois EPA, which addresses the environmental impacts of sources and projects.

9. A portion of the former Robbins Resource Recovery facility is currently operating as a transfer station for municipal waste. What measures will prevent contamination of the wood fuel for the proposed plant by garbage that is also being handled at the site?

The proposed plant would be a separate source from the existing waste transfer station. Fuel handling for the plant would not take place in the waste transfer station. The transfer station, which is operated by Allied Waste, is located in a building at the back of the site that was originally used by Robbins Resource Recovery for unloading trucks and initial inspection and storage of incoming municipal waste. The wood fuel for the proposed plant would be received and stored in other parts of the site that are currently idle, including another building in which Robbins Resource Recovery stored processed municipal waste. Municipal waste would not be handled in these areas or any of the areas of the site that Robbins Community Power would operate.

10. The proposed plant is unwise given its emissions of particulate matter and nitrogen oxide, which is an ozone precursor. The air quality in the Greater Chicago Area does not currently comply with the National Ambient Air Quality Standards (NAAQS) for either $PM_{2.5}$ or ozone.

The Illinois EPA shares the concerns expressed by this comment about the current air quality in the Greater Chicago Area. However, current air quality is being appropriately addressed by activities to lower emissions and come into compliance with the NAAQS. These activities are separate from the permitting of the proposed plant and must proceed irrespective of the proposed project to bring the area into attainment. In this regard, the health and well-being of the public is generally addressed by the process that starts when an area is designated nonattainment, which requires the State and/or USEPA to take needed measures to reduce emissions, improve air quality, and bring the area into attainment. This process includes a detailed evaluation of the role that different sources and categories of sources have in contributing to nonattainment status, so as to allow a comprehensive set of control measures to be developed that will prove both effective and feasible in achieving the ultimate result of attainment. This detailed evaluation is a critical step in the process, as the contribution of sources to nonattainment status may be affected by their location and influenced by specific sets of meteorological conditions, so that certain reductions in emissions are more effective in actually improving air quality. For example, a key action to improve air quality both on a regional basis and throughout the eastern United States has been the adoption of the Clean Air Interstate Rule (CAIR) by USEPA. CAIR addresses the emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x) from coal-fired power plants, as NOx is a precursor to the

formation of ozone in the atmosphere and SO_2 and NO_x are precursors to the formation of $PM_{2.5}$ and contribute to the levels of ozone in urban areas like Chicago.

This process to bring an area into attainment does not include a prohibition on the construction of new emission units in the area. The provisions of the federal Clean Air Act accommodate construction activity in a nonattainment area as economic activity is also important to the well-being of the public. Instead, additional requirements are imposed on major projects by the rules for Nonattainment New Source Review (NA NSR), which ensure that a proposed major project will not interfere with the ongoing work to bring the area into attainment. This project has met the requirements of NA NSR.

11. The plant should not be permitted because it would be in an area in which the air quality is already compromised. The Chicago Metropolitan Area recently made the American Lung association's list of 25 Metropolitan Areas Most Polluted by Short-Term Particle Pollutants (24-hour $PM_{2.5}$). The addition of this plant will certainly not improve Chicago Area's standing on this list.

The existing air quality in the area is not a basis to deny the permit for the proposed plant. The computer modeling conducted for the particulate matter emission of the plant, which was conducted in terms of emissions of PM_{10}, shows that the plant will not have a significant impact on $PM_{2.5}$ air quality. The application for the plant appropriately addresses the additional requirements that must be met for a major project in a nonattainment area where air quality is compromised. In addition, the "responsibility" for nonattainment lies with existing sources, whose emissions must in any case be lowered to come into attainment. Effort should be and is being focused on existing sources to reduce their emissions. However, as the proposed plant meets the stringent requirements for a new plant in a nonattainment area, the proposed plant should not be rejected out of hand. This is particularly true as the Village of Robbins, which would benefit economically from the plant, should not be penalized for the impacts of those existing sources which are outside the Village and from which it receives no revenues.

12. The anticipated levels of emissions of particulate matter will further degrade air quality in an area where there are already serious air quality issues. The permit would allow the plant to emit nearly 100 tons of particulate matter on an annual basis.

The air modeling analysis for the proposed plant shows that emissions of particulate matter from the plant would not have significant impacts on ambient air quality. In addition, while the Village of Robbins is in the Greater Chicago area, which is designated nonattainment for $PM_{2.5}$, recent ambient monitoring suggests that actual air quality in the area in which the Village is located would comply with the $PM_{2.5}$ air quality standards.[3]

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[3] The air quality measured in 2006 at the Illinois EPA's ambient air monitoring station in Alsip would comply with the National Ambient Air Quality Standards for $PM_{2.5}$. In 2006, the annual average air quality for $PM_{2.5}$ was 13.2 microgram per cubic meter ($\mu g/m^3$) compared to the standard of 15.0 $\mu g/m^3$. The four highest daily values were 33.1, 31.3, 28.1 and 27.6 $\mu g/m^3$compared to a daily standard of 35.0 $\mu g/m^3$.

13. In addition to particulate matter, wood smoke contains various irritant gases such as nitrogen dioxide, sulfur dioxide, hydrochloric acid and formaldehyde; chemicals known or suspected to be carcinogens, including polycyclic aromatic hydrocarbons and dioxin/furans; and carbon monoxide.

The application for the proposed plant meets the standards for issuance of a permit, including demonstrating that the plant will be developed so emissions meet applicable regulations.

14. The draft permit for the proposed plant anticipates and allows emissions of toxic metals. The permitted annual emissions of 0.22 tons of lead per year is a great concern, as the plant could emit close to a pound of lead per day. The University of Cincinnati recently published a study correlating lead levels in children with future incarceration. Not only do high levels of lead impair brain development, but, lower levels of lead impair lead to poor decision-making abilities and reduced emotional control.

It is appropriate that the permit explicitly address emissions of lead and other heavy metals as they are present in trace levels in all wood fuel and the emissions of the plant. While the plant will be allowed to emit metals, it may only do so within prescribed limits.

As observed by this comment, the threat to children's and public health from lead is both real and serious. However, in the case of the Chicago area, this risk does not arise from the very low levels of lead in the ambient air.[4] Rather, lead poisoning typically results from the presence of lead-based paints in the home, which may be eaten or inhaled by children as chips or dust. The public health programs to prevent and reduce lead poisoning focus on testing the level of lead in children's blood accompanied by specific actions to reduce or eliminate exposure to lead in the home when high levels of lead are identified.

15. This plant will adversely affect the quality of life for nearby residents due to additional dirt accumulation on outdoor furniture, play equipment and home siding and the offensive odor of rotting or burning wood.

The plant should not affect the quality of life for nearby residents in the manner suggested by this comment. The nuisance effects described by this comment would reflect improper handling of the wood fuel stock-piled at the plant. Robbins Community Power must handle the wood fuel stock-piled at the plant to prevent such effects. For this purpose, Robbins must develop and maintain a Fuel Management Plan that sets forth the specific practices that would be followed for the wood fuel stored at the plant to comply with applicable emission control requirements,

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[4] **The current levels of lead in the ambient air near the proposed plant are about 0.01 microgram per cubic meter (μ/m^3), quarterly average, based on data collected from the ambient monitoring station in Alsip. This is well below both the current air quality standard of 1.5 μ/m^3 and the lower standard that USEPA is currently evaluating and has proposed to be in the range of 0.10 to 0.30 μ/m^3.**

including prevention of an air pollution nuisance.

16. The emissions of the plant would further affect and exacerbate allergy and asthma issues.

The emissions from the boilers will not affect individuals with allergies or asthma, as the effects of the plant on air quality, as addressed by the air quality impact analysis, are not significant. However, as improper fuel management could potentially affect nearby residents who have allergic or asthmatic sensitivity to wood dust, this is another reason why wood fuel at the plant must be managed properly, in accordance with a Fuel Management Plan. In addition, as should be the case for any individual with asthma, nearby residents with asthma should of course continue with appropriate medical supervision and treatment for their asthma.

17. The emissions of the proposed plant are excessive because Robbins Community Power had to purchase emission offsets.

The fact that Robbins Community Power was required to obtain emissions offsets does not mean that its emissions are excessive.[5] The obligation to obtain offsets is a requirement under the Clean Air Act for a source to obtain a construction permit for a proposed project that is major for a pollutant for which the area is designated nonattainment. The offset requirement serves to ensure that the project will not delay attainment of the air quality standard by requiring a reduction in emissions that have been relied upon to achieve attainment, so that the airshed will experience a net reduction in emissions with the project.

18. Because the Greater Chicago Area is already a nonattainment area, would the proposed plant be allowed to operate during air pollution advisories or alerts?

At the present time, the special actions that should be taken to reduce emissions to avoid or mitigate days with poor air quality are addressed by Illinois' Clean Air Action Program.[6] This program targets actions by the general public and sources on days with poor air quality to reduce localized, ground level emissions that would directly contribute to even poorer air quality.[7] In contrast, the emissions of the proposed plant must be well controlled and minimized at all times, by proper operation of its control systems, as its emissions generally contribute to both local and

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[5] **Robbins Community Power was required to obtain offsets for the permitted annual emissions of nitrogen oxides (NOx) from the proposed plant at a ratio of 1 to 1.15. That is, each ton of NOx that the plant is permitted to emit must be offset by a reduction of 1.15 tons per year of NOx emissions elsewhere from existing source(s) in the Chicago area.**

[6] **For several decades, the air quality in Illinois has not exceeded the values that would constitute Air Quality Episodes and trigger actions under pursuant to the Episode Action Plans required by 35 IAC Part 244.**

[7] **The "Top 10 Tips List for Air Pollution Action Days," on the Illinois EPA Internet site for the Clean Air Action Program at http://www.cleantheair.org/overview.shtml, includes he following recommendations: 1) Limit driving. rideshare, walk or bike; 2) Take public transportation; 3) Avoid excessive idling and abrupt starts; 4) Use E85 in your flexible fuel vehicle; 5) Use a charcoal chimney or electric starter instead of lighter fluid when grilling; 6) Limit use of household products that cause fumes; 7) Conserve energy at home to reduce demands on power plants; 8) Do not burn leaves and other yard waste; 9) Avoid burning wood in fireplaces; and 10) Avoid using lawnmowers and other gasoline-powered equipment.**

regional air quality. Moreover, on days of poor air quality, it could be preferable that this plant operates because its emissions rates, in lbs/MW-hour of electricity generated, are lower than those of other existing power plants in the area.

19. Although the proposed plant will be burning wood, a renewable resource, it should not be considered a "green" power plant. Burning of wood still has emissions. While it is better environmentally than trash burning that previously occurred at this plant when it was operated by Robbins Resource Recovery, wood burning is still cause for concern because of its emissions of particulate matter.[8]

The proposed plant is appropriately considered a "green" facility because the primary fuel for the plant would be renewable fuel rather than fossil fuel. In addition, this comment mischaracterizes the burning of wood fuel in the boilers at the proposed plant as it compares the proposed plant to burning of wood for home heating and fireplaces, citing certain emission data for the burning of wood in fireplaces. (Refer to Footnote 2.) Because of its high levels of emissions, residential burning of wood for heating in a populated area, if common, can contribute significantly to the local air quality in an area during cold weather. Residential burning of wood does not utilize sophisticated equipment and operational monitoring to ensure that efficient combustion occurs. Add-on control devices are also not used for particulate matter or other pollutants. However, the boilers at the proposed plant will utilize modern combustion technology for efficient combustion and be equipped with add-on emission control equipment, including scrubbers and baghouses for emissions of particulate matter. As a result, the particulate matter emissions of the boilers at the proposed plant will be a fraction of those cited by this comment when appropriately compared in the same terms.[9]

20. It is not clear that Robbins Community Power has done an analysis of the air quality impact of emissions of hazardous air pollutants (HAPs) on the people who live near the plant to ensure that there is not a health impact on people who live in Robbins and nearby communities.

The application for the proposed plant included an analysis of the potential impacts of its emissions of HAPs on local air quality. The Illinois EPA This analysis showed that the emissions of the plant would not pose a significant risk to public health.[10]

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[8] According to *Burning Issues*, wood burning emits significantly more fine particles than residential gas or oil furnaces. Fireplaces emit 30 and 59 grams/hour when burning hard wood and soft wood, respectively, whereas residential natural gas or propane furnaces and oil furnaces emit 0.001 and 0.02 grams/hour, respectively.

[9] **The proposed plant must emit less than 0.1 gram of particulate matter per pound of wood fuel, whereas the emission rates cited by this comment reflects emissions of 1.0 and 2.0 grams per pound for wood.**

[10] **For emissions of metals, which are of greatest concern based on their predicted impacts, the calculated annual values for cancer risk from this assessment were: Arsenic = 0.00000083 (8.3 E-07); Beryllium = 0.00000046(4.6 E-07); Cobalt = 0.00000054 (5.4 E-07); Nickel = 0.00000004 (4.0 E-08); and Chromium VI = 0.00000078 (7.8 E-07) based on hexavalent chromium making up 34% of the total emissions of chromium. As a group, emissions of these metals would contribute to a cumulative lower respiratory system annual risk of 0.0000027 (2.7 E-06).**

21. The emissions of the proposed plant will disproportionately affect poor and minority populations who live in the Village of Robbins and nearby communities. The fact that this plant would be in the Village of Robbins is environmental racism, plain and simple. One would not see a wood fired power plant in the northern suburbs of Chicago.

The plant should not be considered to have a disproportionate or disparate impact on nearby residents. This is because the plant should not have significant impacts on air quality. The modeling conducted for the plant for emissions of criteria pollutants, as submitted by Robbins Community Power in its application, shows that the impacts of the plant will be below the levels that USEPA has defined as significant. In order to address the potential for significant adverse impacts from emissions of hazardous air pollutants (HAPs) from the proposed plant, Robbins Community Power was also required to use the results of dispersion modeling assess air quality impacts for HAPs. The results of this dispersion modeling were then compared to screening criteria developed by the Illinois EPA Toxics Assessment Unit based largely on criteria and information health impacts previously generated and assembled by the USEPA. These screening criteria addressed acute and chronic health impacts due to short-term and long-term inhalation exposures to the HAPs of potential concern. The analysis showed that the impacts of the proposed plant would not be excessive when compared to these criteria.

Regarding the location of the proposed plant, the Illinois EPA does not control or dictate where a source can or should be located. Rather, the Illinois EPA evaluates whether a proposed source will be able to comply with all applicable laws and regulations in the location that has been proposed by the applicant. Robbins Community Power elected to take advantage of the existing infrastructure at the site in the Village of Robbins in order to develop a project that would be economically viable. The emission standards that this plant must meet at its location in the Village of Robbins are the same as if the plant were located elsewhere in the Chicago area.

Finally, an important component of environmental justice is the opportunity for public participation in the permitting process. Oral comments from the public hearing and Written comments from the public led to inclusion of certain conditions in the construction permit that were not present in the draft permit, as discussed elsewhere in this document. In addition, the public participation process identified local support for the proposed project. In particular, the Illinois EPA has received letters from the mayor of the Village of Robbins, representing the Village Board, that express support for the proposed project.

22. The analysis of potential impacts of HAPs did not include the proposed plant <u>in combination</u> with other existing sources of HAPs. In the absence of this analysis, the Illinois EPA cannot fulfill its obligations under Title VI of the Civil Rights Act of 1964 to ensure its actions will not lead to a significant, adverse and disproportionate impact on the minority residents living immediately adjacent to the plant.

An assessment of the proposed plant in combination with existing sources is not needed for the Illinois EPA to address its obligations under Environmental Justice.

This is because the plant would not have significant impacts on air quality and thus cannot have disparate impacts on air quality. In addition, the source that was previously of great concern in the area, the Premcor, Blue Island oil refinery, ceased refining operations several years ago. As such, the current air quality in the area in the vicinity of the proposed plant should be considered similar to general levels of background air quality in the greater Chicago area.

23. Wood fuel separated out from demolition debris should not be burned at the proposed plant. The plant would be a new major source of emissions for the Chicago area's already compromised air, affecting the quality of life for the people in this area.

The proposed plant would only be allowed to use clean wood removed from the demolition debris. A study by the New England States Consortium on Air Use Management (NESCAUM) that found that "while public perception and response to the use of C&D wood chips for power generation has been strongly negative, a review of the data shows that the use of appropriately processed C&D wood is similar in its emissions profile to that of virgin wood [harvested trees]."[11] As a general matter, the emissions from the plant are a consequence of it being a power plant. Robbins Community Power has met the standards for issuance of a permit for a power plant and its emissions would be significantly lower on a MW basis than the emissions of a coal-fired power plant.

24. It reasonably can be anticipated that the burning of treated wood would occur under the permit and will present a substantial but undisclosed health risk to the community. The only reliable alternative available is to prohibit the burning of demolition debris.

The boilers and their emissions control systems would be able to handle the additional pollutants that would be emitted if the plant were allowed to included treated wood as part of its fuel. In particular, the boilers were originally designed to burn municipal waste and are equipped with scrubbers and baghouses to control emissions of the hazardous air pollutants that accompany burning of municipal waste. The permit for the plant does not address use of treated wood because Robbins Community Power is not proposing to use such material and did not submit applications to the Illinois EPA that would provide for the use of such material.

25. Wood from construction sites and demolition debris would be used as fuel at this plant. There appears to be no other wood burning power plant located in a comparable urban setting that burns construction and demolition debris, which can realistically contain arsenic (from wood preservatives), lead, etc.

There are other wood-fueled power plants located in developed areas, notably the Genesee Power Station in Flint, Michigan, and the Schiller Power Station in Portsmouth, New Hampshire. In addition, the proposed plant has not been permitted to burn waste or contaminated wood.

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[11] **NESCAUM,** ***Emissions from Burning Wood Fuels Derived from Construction and Demolition Debris,*** **May 2006.**

26. The draft permit relies on the Wood Fuel Quality Control Plan to ensure that wood fuel for the plant does not contain hazardous constituents. If the wood fuel is less toxic, in turn, the emissions will be correspondingly less hazardous. This is consistent with the approach recommended by NESCAUM. However, the wood fuel plan contained in the draft permit does not appear to be as stringent as the NESCAUM recommendations in some important ways. For example, the plan prohibits the use of "foreign materials" including plastic, wiring and insulation; this prohibition should be expanded to include roofing materials, including roofing plywood.

The Wood Fuel Plan already excludes wood roofing plywood and all non-wood materials from the wood fuel supply for the plant. Plywood would be contaminated wood and roofing material would be foreign material, as those terms are defined by the Wood Fuel Plan. (Refer to the Glossary of Terms.) The listings of specific materials provided in the definitions of contaminated wood and foreign materials are examples of such materials and not exclusive listings of such materials. In addition, plywood is a type of "laminated wood," which is actually included in the listing as an example of contaminated wood.

27. The NESCAUM Report emphasizes the importance of the removal of very small material or "fines" from construction or demolition debris before such material is used as fuel of burned. The report states that the fines have the highest concentration of metals and dioxins, and that they can be removed by processing the materials over a No. 4 Sieve. The Wood Fuel Quality Control Plan for wood fuel suppliers for the proposed plant does require them to screen and remove fines; but there is no description of the required process.

The Wood Fuel Plan does not need to further describe the screening process for a mixed wood stream. This is because the Wood Fuel Plan does not rely solely on screening to remove fines, which would be an unacceptable material in the wood fuel, from the stream of material that is being processed. Screening would only be one in a series of processes that would be used to prepare the material stream for the selection step, in which wood fuel that is acceptable for use as fuel would be sorted out from the remainder of the stream. In addition, there are several designs for screening equipment, with the suitability of the different designs determined by the general nature of the incoming material that is being processed and the rate at which material is to be processed.

As a general matter, the Wood Fuel Plan is designed to ensure that only clean wood is being processed into a wood fuel product and that waste is excluded. However, because Robbins Community Power will have several suppliers processing wood from several sources into fuel, the plan does not establish a single process that every supplier regardless of its operations and wood sources. Rather, the Wood Fuel Plan sets the essential elements for preparation of wood fuel. For facilities processing mixed wood, a key element of fuel preparation is contained in Section 4.0 of the Plan, which requires that a positive sort be performed in which clean wood is removed from unacceptable material in the stream of material that is being processed. With a positive sort, fines generally will remain with the unacceptable material.

Incidentally, the NESCAUM Report does not indicate that fines can be removed from a mixed wood waste stream by "processing over a No. 4 Sieve." The reference to the sieve size in the report merely describes the size of material that was considered fine material for the purpose of the report. The report is silent of the specific techniques that should be used to screen a mixed wood fuel stream to remove fines.

28. There is no evidence in the record that treated and contaminated wood can be recognized visually. There is also no evidence that such wood, once chipped, can be visually differentiated from other chipped clean wood. Thus, the plant will be unable to visually identify whether its wood fuel supply contains treated and contaminated wood.

As discussed, the permit for the plant does not rely on visual inspection of wood after it is chipped to ensure that the wood fuel for the plant does not contain treated or contaminated wood. Sorting of wood is to be conducted before chipping when treated and contaminated wood should be readily differentiated from clean wood. To address the challenges that may be present for identification of such material after chipping, the permit establishes a very rigorous procedure for acceptance of wood fuel at the plant. In addition, the record includes information indicating that visual inspection can be used as a technique to review the quality of chipped wood. Visual inspection is used as a quality control method at the Genesee power plant in Michigan, as was discussed in other comments.

29. Arsenic treated wood would be considered contaminated wood and would not be acceptable for use as fuel. Can arsenic treated wood be visually identified throughout its lifetime? In my experience after arsenic treated wood ages and weathers, it looks the same as untreated wood. Is there a document that addresses identification of treated wood?

Arsenic treated wood can usually be identified by visual inspection of the surface. Visible characteristics which may be used to help identify treated wood include surface color (a distinct, greenish color); stamps or tags on the wood; the physical surface of the wood (treated wood may be incised to facilitate penetration of the treatment, untreated wood is not); location of the wood within a project; wood species; and dimensions of the wood (e.g., certain uses of wood such as poles, ties, posts, landscape timbers frequently use similar configurations and dimensions and are often treated). While USEPA does not have a document that addresses the visual identification of treated wood, USEPA provides several links to documents that describe procedures for visual identification of treated wood.[12] These confirm that dimensional treated lumber (such as 2 x 4's) that has been treated may not be distinguishable from untreated wood based on surface inspection after it has weathered. However, the presence of an arsenic treatment can be identified when the wood is sheared or broken to reveal the interior. This is because the treatment penetrates into the wood for up to an inch. Initial shearing of construction and

[12] **These include fact sheets from the Vermont Department of Conservation (T=VTDEC Publication #WM-1001), Florida Department of Environmental Protection and California Environmental Protection Agency.**

demolition debris is a standard industry practice for incoming material to break wood into manageable pieces to facilitate the handling and sorting of the material.

30. What would the training be for people who sort mixed wood and must identify contaminated wood? I searched the Wood Fuel Plan, using the version on the Internet. While it discussed training, it doesn't actually say what the training is. As contained in the plan, training is actually a penalty. If two loads of contaminated wood are identified, then Robbins Community Power can require training for that supplier.

The provisions for training personnel at the wood fuel supply facilities handling mixed wood are in Section 4.3.6 of the Wood Fuel Plan. Appropriate training of personnel is required and the minimum elements of such training are specified.[13] The nature of training is not specified in more detail, as the extent of training needed at different facilities would vary based on the nature of the material streams that are being handled. The supervisory personnel at each facility should also be able to develop a training program for their employees that is more effective than a "generic" training plan and would also appropriately integrate other aspects of employee training, such as safety and hygiene.

In addition, as mentioned by this comment and addressed in Section 7.4.3 of the Plan, if a supplier ships loads of wood fuel to the plant that are unacceptable and must be rejected, the supplier must conduct additional training for the personnel at the facility that prepared those shipments. While this may have punitive aspects, it should be viewed as a direct and logical consequence of sending acceptable loads of material to the proposed plant.

31. The wood fuel plan does not ensure that treated wood will not be used as fuel at the plant. The only method required by the plan to identify and separate treated wood from clean wood is visual inspection.[14] However, the Illinois EPA offers no evidence that visual inspection is an adequate means to identify and extract treated wood. To the contrary, the Illinois EPA-recognized the inadequacy of visual inspection to remove treated wood. In a email dated December 11, 2007, Ed Bakowski, Manager of the Illinois EPA's Air Permit Section, acknowledged that visual inspection of treated wood may not suffice to separate such wood from untreated wood suitable for fuel. Mr. Bakowski wrote that, "Once ground, there is little chance of picking out treated chips from raw wood chips…*even treated pieces prior to chipping may be indiscernible*." Robbins Community Power also admitted on the draft wood fuel plan dated November 2, 2007, that excluding particle board and "oil or chemical stained wood" through visual inspection is not "practically enforceable." Thus the plan is an inadequate to prevent the plant from burning contaminated wood.

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[13] **These minimum elements include training in the classification of loads of material coming to the facility and the identification of prohibited materials, foreign materials and contaminated wood by appearance as part of initial training of personnel. Periodic follow-up training and education must also be provided. Personnel training to classify loads and identify prohibited materials, foreign materials and contaminated wood must include observing representative loads running through the sorting system at the facility. Periodic training of existing and new employees must be used to maintain the control of fuel quality.**

[14] See Wood Fuel Quality Control Plan, Sections 4.3.3, 4.3.4, 4.3.5, 5.1.1 and 5.1.3. The use of water baths, air separators and magnetic belts are all left as optional. See Wood Fuel Quality Control Plan, Sections 4.2.7, 4.3.3.

The Wood Fuel Plan includes reasonable measures to ensure that contaminated or treated wood will not be present in the wood fuel supply for the proposed plant. As observed by this comment, it is difficult to identify treated wood once it has undergone final chipping or shredding to size. Accordingly, the Wood Fuel Plan for the proposed plant focuses on the processing and preparation of the wood fuel by the suppliers of that fuel, before the wood fuel undergoes final shredding. As these fuel suppliers are handling waste, these facilities have been and will continue to be subject to inspection and oversight by the Illinois EPA. The frequency of such inspections can be increased as certain facilities would be processing a mixed wood stream to supply wood fuel to the proposed plant, e.g., the Illinois EPA initially plans to conduct quarterly inspections of these facilities.

The Wood Fuel Plan also sets stringent requirements for Robbins Community Power to ensure the quality of the wood fuel that it accepts at the proposed plant. Each load of wood fuel delivered to the plant must be inspected before it is accepted. These inspections must include three photographs of each load at separate points in the load at actual scale to document the quality of the load. In addition, to ensuring that each load is closely scrutinized to identify contaminated wood or foreign material in the load, these photographs will also enable the Illinois EPA to periodically conduct an independent review of any load of wood fuel accepted at the plant.

32. The Wood Fuel Plan would not adequately guard against the combustion of foreign materials at the plant, the combustion of which is also directly correlated to emissions of hazardous air pollutants. Specifically, the plan does not require several non-visual inspection methods that other facilities use to separate acceptable wood fuel from unacceptable materials. For example, the wood-fired Genesee power plant in Flint, Michigan, requires the use of a water bath, an air separator and a magnetic belt to ensure that contaminated and foreign materials are removed from the fuel stream prior to combustion. In contrast, the only method the proposed wood fuel plan requires for the separation of foreign materials from acceptable fuel is visual inspection. The Illinois EPA provides no explanation as to why those additional sorting methods used at the Genesee plant are not required

While the Wood Fuel Plan for the proposed plant is based on the similar plan for the wood fuel supply for the Genesee plant, it is not appropriate that this Plan be identical. This Plan contemplates that an air separator or water bath may be used to process mixed wood streams for the proposed plant. However, as these devices generate their own emissions or wastewater discharges, it is not appropriate to mandate that such devices be used, especially as clean wood can be extracted from the mixed wood stream by other means.

It is also significant that the Wood Fuel Plan for the proposed plant establishes more stringent specifications for the wood than those for the Genesee power plant, as accompanied this comment. In particular, the Genesee power plant is allowed to accept a individual load of wood fuel that contains up to 3 % painted wood and up to 4.5 % painted wood and incidental materials, as determined by a visual inspection

method. The limits for painted wood and painted wood and incidental materials, on a monthly average basis, are 1.5 and 2.5 %, respectively. In contrast, the Wood Fuel Plan for the proposed plant requires that wood fuel be prepared using a "positive sort" to select wood for fuel and does not allow any treated wood or foreign materials in the wood supply for the proposed plant.

33. With respect to processing of the would fuel stream for the plant with magnetic separation, in January 2008, the Illinois EPA's own internal review suggested that a magnetic belt, in particular, is crucial to the removal of ferrous materials.[15] Since visual inspection was already envisioned by the draft plan in January, it appears that no alternative to magnetic separation was ever created in the wood fuel plan.

The use of magnetic separation to remove iron and steel objects from non-ferrous material streams is a common practice to protect downstream equipment.[16] As such, the final conclusion of the Illinois was that the wood fuel plan need not further address the details or extent of magnetic processing that will occur at the fuel supply facilities that will process mixed wood streams to prepare fuel for the proposed plant.

34. Despite several statements by Robbins Community Power that the quality specifications for wood fuel would include specifications for moisture content, the wood fuel plan does not specify the acceptable moisture content of the wood fuel. Wood with high moisture content burns less efficiently than drier wood, and inefficient combustion leads to greater emissions of CO. If CO serves as a surrogate for HAPs, and the plant produces excess CO as a result of the inefficient combustion of high-moisture wood fuel, then the plant will create excess HAPs as well. Without regulation of the moisture content of its wood fuel, Robbins Community Power will be unable to adequately manage its emissions of CO and HAPs. Absent a requirement to sample and control moisture content, Robbins Community Power would not employ a critical tool to assess and control its emissions. The permit for the plant should impose specifications for the moisture content of wood fuel and require associated sampling or monitoring to verify that the specification is met.

A specification is not needed for the moisture content of wood fuel for the proposed plant. This is because the plant would blend wood fuel received from different suppliers to maintain a uniform heat content in the wood fuel as it is fed to the boilers. Thus, the amount of high moisture content "wet" wood fuel that can be handled by the plant is determined by the amount of lower moisture "dry" wood fuel that is available. Thus a value cannot be set for the moisture content of the wood fuel that is supplied to the plant. Then, as discussed in this comment, monitoring of CO

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[15] On a January 31, 2008, draft of the plan, Mark Wight, an attorney with the Illinois EPA commented: "We believe the magnetic belt should be mandatory unless Robbins Community Power has an alternative to replace its function…"

[16] **Because of the damage that an iron or steel object can do to conveying and processing equipment and the potential for ferrous object to be inadvertently introduced into bulk material streams, magnetic separators are routinely used to remove any such objects that may have inadvertently been incorporated into the material stream. It would be used at the proposed plant as one of the final steps in preparing acceptable wood fuel for use in the boiler. In this regard, the permit for the plant, while prohibiting processing of mixed wood streams at the plant, as will occur at supplier facilities, does allow for magnetic separation at the plant as one of the steps in final preparation of wood fuel for use. (Refer to Condition 2.1.5-1.)**

emissions serves as a surrogate for monitoring of emissions of organic materials, including organic HAPs. While the moisture content of the wood fuel as burned in the boilers could be a factor that could affect the efficiency of combustion, it would be reflected in the changes in levels of CO emissions that are monitored. However, as this is the case, i.e., the effect of the moisture content of the wood fuel is reflected in the monitored CO emissions, the moisture content of the wood fuel fed to the boilers need not be separately specified or restricted by the permit. Moreover, the boilers are fluidized bed boilers with the ability to efficiently burn fuels with a wide range of heat content. The moisture content of solid fuel supply to the boilers should not significantly affect the combustion efficiency of the boilers and their emissions if the plant is properly operated to maintain a consistent fuel supply to the boilers with the air and exhaust flows of the boilers appropriately managed.

While this comment does not support establishment of a specification for the moisture content of the solid fuel supply for the proposed plant, provisions have been added to the issued permit related to the moisture content of solid fuel. In particular, the provisions of the issued permit for sampling and analysis of solid fuel also require analysis for the moisture of the fuel. These provisions will facilitate consideration of the moisture content of the fuel supply to the boilers by the Illinois EPA as a factor in their operation in the event that such consideration would be needed.

35. Additional specifications for the wood fuel used at the plant should be established including: (1) minimum and maximum particle size, (2) maximum moisture content, (3) amount of fines, and (4) amount of contaminants.

The permit for the proposed plant appropriately sets specifications for the wood fuel supply for the plant to ensure that it is composed of clean wood. This is the relevant concern for the wood fuel under the laws and rules that govern the permit. As such, the permit need not and should not set specifications that would accommodate certain levels of contamination or foreign material in the wood fuel supply, as suggested by this comment. This is more stringent than the specifications for wood fuel that were initially proposed by Robbins Community Power, which would have allowed for some treated wood and foreign material to be present in the wood fuel supply for the plant.

Specifications should also not be set in the construction permit for the proposed plant for other aspects of the wood fuel supply such as its size or moisture content as these parameters relate to the functionality of the boilers, rather than the fundamental nature of the fuel. These other "operational" aspects of the fuel for the plant are not routinely addressed as part of the permitting of a power plant or boiler. This is because they do not directly relate to the emissions or other aspects of environmental law that are addressed with permitting but instead relate to the physical capabilities of a boiler to handle certain fuels.[17]

[17] **As a general matter, the Illinois EPA only interjects itself into the boiler-related specifications for a fuel when a source demonstrates that it is unable to operate a boiler with fuels that are within its physical capabilities without external assistance, direction and oversight from the Illinois EPA.**

36. The draft permit would not establish a specification for the wood fuel that would be used at the plant. As such, the permit would allow disposal of waste without compliance with federal and state regulations for waste disposal.

The permit establishes detailed specifications for the wood fuel for the proposed plant as it addresses how such fuel must be prepared and what it can contain. (Refer to Conditions 2.1.5.1(a) and (b) and the Wood Fuel Quality Control Plan.) These specifications include provisions to assure that the wood fuel used by the plant does not contain waste, as waste would be present as either contaminated wood or foreign materials in the fuel, neither of which are allowed in the wood fuel supply.

37. I am concerned about the effectiveness of visual inspection as a means to identify entrained contaminants, especially considering the volume of material that will flow through the plant. The permit requires an analysis of the wood fuel for metals only every two years. The permit only requires that the emissions of the boilers be tested once, within 180 days of startup and, thereafter, only if specifically requested by the Illinois EPA. Until Robbins Community Power can establish that there is a reliable correlation between its fuel specifications, visual inspection, fuel sampling and actual HAP emissions, sampling and analysis of wood fuel and testing of emissions should be more frequent.

In response to this comment, the issued permit requires more frequent analysis of the wood fuel supply for the plant and follow-up testing for the emissions of the boilers. In addition to analysis of fuel samples collected during emissions testing, the wood fuel supply to the boilers must be analyzed for metals on at least a quarterly basis during the first two years that the plant operates and at least annually thereafter. The initial "performance" testing for the emissions of the boilers must be followed by further "follow-up" emissions testing conducted between 15 and 24 months after the initial emission tests. These provisions would enable the collection of a reasonable body of information to confirm the effectiveness of the wood fuel plan and the control systems on the boilers for emissions of HAPs.

The frequency of subsequent emissions testing after these two initial tests need not be addressed by the issued permit as it is only the construction permit for the proposed plant. The compliance procedures for various units at the plant in the issued permit can be supplemented and enhanced in the Clean Air Act Permit Program (CAAPP) operating permits for the plant if such action is deemed appropriate or found to be necessary based on actual experience with the operation of the plant.

38. Testing for either moisture or heat content should be included in the Wood Fuel Quality Control Plan, as the heat content of wood can vary from dry wood to wet wood. This will help to ensure that the maximum wood throughput limits in the permit are met.

A specification is not needed for the moisture content or heat content of wood fuel received at the proposed plant. This is because the plant would blend wood fuel received from different suppliers and "dry" and "wet" wood to maintain a uniform heat content in the wood fuel fed to the boilers.

However, in response to the comment, the limit in the issued permit for the amount of wood fuel (solid fuel) used by the plant is expressed in terms of the weight of fuel, rather than in terms of its heat content. This action was taken to enable this restriction on the operation of the plant to be readily enforced in terms of a single parameter, weight of wood fuel used. A limit expressed in terms of heat content would require information on both the amount of wood fuel used and its heat content, which would have to be determined by periodic sampling and analysis of the fuel.

39. The permit should provide for continuous sampling of the wood fuel supply for the plant,

At this time, the Illinois EPA is not aware of a meaningful method for continuous sampling of the wood fuel supply for the plant for the aspects of the fuel that are relevant, i.e., the presence of contaminated wood or foreign materials. Accordingly, a visual record is required for the fuel supply.

40. The draft permit would not contain provisions for "outside" monitoring to prevent the presence of contaminated wood or foreign material in the wood fuel supply for the plant,.

"Outside" inspection and enforcement activities need not be addressed by the permit as these activities would be conducted by the Illinois EPA and other governmental agencies, and not by Robbins Community Power. With respect to the Illinois EPA, field personnel from both the Bureau of Air and the Bureau of Land would conduct inspections of the proposed plant and the facilities supplying wood to the plant. The Bureau of Land, which has historically taken the lead on oversight for waste processing and recycling facilities, initially plans on inspecting the wood fuel supply facilities quarterly to verify that wood fuel is properly prepared and inspected, with additional inspections performed as needed.

41. The plant would be more perfect if there were independent fuel inspection, funded by the plant, staffed by local residents, and supervised by a consortium of environmental groups, such as the Sierra Club, 1Sky, Union of Concerned Scientists, and Blacks In Green.

The system of inspections suggested by this comment is not possible under current law. It is also not clear that the environmental groups identified in this comment would cooperate in the implementation of this suggestion. As the goal of these organizations is to influence local, state and national policy to protect and improve the environment and public health on a local, national and global scale, they do not necessarily seek to duplicate or supplant the traditional role of government and private industry in implementing those policies.

42. The ash from the boilers should be sampled and analyzed for compounds that would not normally be present in virgin wood.

In response to this comment, the issued permit requires sampling and analysis of the fly ash from the boilers for the levels of certain metals. Elemental analysis is required because metals in the wood fuel supply would not be destroyed by combustion like organic compounds present in the fuel. While the specified metals are also present in

virgin wood, high levels of metals in the ash from the boilers could indicate improper preparation of certain fuel for the plant and trigger corrective action. The condition requires that sampling of the ash occur on at least a quarterly basis for the first two years that the plant operates and on least an annual basis thereafter. The samples may either be grab samples or composite samples collected over a period of no more than a week.

43. The permit for the proposed plant should provide for designated individuals, e.g., concerned residents or a community activist, to be privy, invited and welcomed to examine the plant, not at an appointed time but at any time, for monitoring, testing or whatever.

The Illinois EPA encourages Robbins Community Power to work with the Village of Robbins to provide for local review and oversight of plant operation, as generally suggested by this comment. However, the Illinois EPA does not have the authority to impose such a requirement on Robbins Community Power or the authority to require that the Village of Robbins participate in such a program. Moreover, if operating experience with this plant reveals that more oversight is required than can be readily provided by the Illinois EPA, in coordination with the Cook County Department of Environmental Control and USEPA, the Illinois EPA would have to solicit the assistance of individual(s) with relevant technical training and experience to assist in the oversight activities for the plant.

44. I am very concerned about burning wood from demolition debris that is prepared at off-site facilities. Personnel at those facilities are supposed to be able to recognize contaminated wood by visual inspection. Those facilities have a monetary interest in sending wood fuel to the proposed plant. The plant has a monetary interest in burning wood. When wood fuel arrives at the plant, it's already been chipped, so that it would be very difficult to identify the presence of contaminated wood in the fuel. To leave the wood fuel quality program up to Robbins Community Power and wood fuel suppliers, who have a monetary interest to pass contaminated wood through, is ridiculous because they have a monetary interest to violate the rules.

The permit for the plant establishes an appropriate approach to the wood fuel used at the proposed plant. The Illinois EPA must start from the position that Robbins Community Power and its Plan Participants will make a good faith effort to comply with the requirements established by the Wood Fuel Plan, subject to routine oversight by the Illinois EPA's field inspection program. If non-compliance is revealed, permit modifications and enforcement actions are available to the Illinois EPA to restore compliance and facilitate future compliance. As part of any enforcement action, in addition to penalties, the State of Illinois would routinely seek to recovery any monetary gain from non-compliance. This practice is well established to compensate or eliminate the financial interest that sources may otherwise have to operate in violation.

45. The permit should provide for public monitoring of the off-site facilities that process demolition debris to supply wood fuel for the plant. The public should not have to rely on those facilities, Robbins Community Power, or the Illinois EPA to ensure that

contaminated wood has been removed from the fuel stream. .

The Illinois EPA does not have the authority to establish a program of public oversight for the facilities supplying wood to the proposed plant, as sought by this comment. However, if Robbins Community Power wishes to work with the Village of Robbins or interested parties to establish such as program, it is free to do so.

46. What role did personnel from the Illinois EPA's Bureau of Land have in the review of the application for the proposed plant and what was the basis for or science for its review?

The Bureau of Land's participation with the Bureau of Air in the review of the application for the proposed plant entailed assistance with the review and further development of the Wood Fuel Plan submitted by Robbins Community Power. This was because of the potential waste management issues arising from the processing of waste wood into wood fuel. The Bureau of Land's participation included exchanges of several draft versions of the plan with Robbins Community Power and participation at meetings to discuss the plan. The Bureau of Land's technical staff relied primarily on their experience with other types of recycling facilities in evaluating and commenting on the drafts of the Wood Fuel Plan. The legal review was based on Illinois law with regard to solid waste management, which includes as a fundamental principle that materials can be salvaged from waste and turned into usable products. This has subsequently been supplemented by inspections of actual facilities that process mixed wood.

47. It is unclear whether the draft permit reflects LAER because the Illinois EPA has not provided its independent analysis of why selective catalytic reduction (SCR) is not LAER for the boilers at the proposed plant. The rationale contained in the Project Summary is inadequate because it discounts SCR because it is "… economically cost-prohibitive, and thus, infeasible." The Illinois EPA makes this assertion despite its determination that SCR is deployed in facilities that are comparable to the proposed plant. The Illinois EPA also acknowledges that, although expensive, a retrofit for SCR is technically feasible for the plant. According to USEPA guidance, the fact that a comparable facility employs a technology creates "de facto evidence" that this technology should be applied as LAER. For the boilers at the proposed plant, SCR systems are not "technically infeasible." While use of SCR systems would require reheating of the flue gas from the baghouses, such re-heating is not technically infeasible. It is only very costly. Of course, this entire issue is far less important if the NOx emission rates as applied to the proposed plant are comparable to facilities employing SCR.

The Illinois EPA addressed and generally explained its rationale for the proposed NOx LAER limit for the boilers at the proposed plant in the Project Summary that accompanied the draft permit. The general limit set for the NOx emission rate of the wood-fired boilers at the plant is 0.070 lb/mmBtu,[18] which is lower than the NOx

[18] To address startup of a boiler, when the SNCR system on the boiler would not be operational due to the startup for a significant portion of the 24-hour daily compliance period on which LAER limit is set, an alternative LAER limit is set for periods of startup. This limit reflects operation without the SNCR system, with a rate of NOx emissions that only reflect combustion control, i.e., 0.20 lb/mmBtu. As the SNCR system

limits for new wood-fired boilers that have been permitted elsewhere in the country over the last few years. It is specifically based on the NOx emission rate, 0.075 lb/mmBt, set for Unit 5 at the Schiller Power Station in Portsmouth, New Hampshire, which is a new fluidized bed boiler firing wood with an electrical output of 50 MW and which incidentally uses SNCR for control of NOx. As a general matter, this is a very stringent emission limit, in the range that is being set for much larger new coal-fired boilers equipped with SCR systems.[19] The Illinois EPA did not intend to suggest in the Project Summary that SCR would enable a lower limit to be set for the NOx emissions of the boilers, much less a limit that would be significantly lower.[20]

As noted by this comment, the technical and/or financial challenge for use of SCR systems on the boilers at the proposed plant would be the need to locate them after the baghouses in the control train, with reheat to bring the temperature of the flue gas back up the operating range of the SNCR. This is considered to be infeasible as the boilers were originally not designed for reheat and use of SCR. The retrofit of SCR systems to the existing combustors would necessitate extensive changes to existing ductwork and the induced draft fans, even assuming that there is sufficient space for these changes to be made and that changes could be designed that would maintain the draft characteristics of the boilers, which are of fluidized bed design. These circumstances would be encountered at any existing fluidized bed boiler not initially designed for reheat and would likely make retrofit of re-heat SCR problematic for any existing boilers. While these circumstances would not be present for use of SCR on a new wood-fired boiler that has not yet been built and constructed, their presence was considered to make use of SCR infeasible for the existing boilers at the proposed plant. Even if use of SCR systems was theoretically possible at the proposed plant, a requirement for such system would destroy the viability of the project, which is based on utilizing the existing infrastructure.

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could not be operated for as many as 12 hours during a cold startup of a boiler, compliance with the "standard" LAER limit of 0.070 during any 24-hour daily period in which a cold startup occurs. Given the shorter duration of SNCR outage during a hot startup, when the operation of a boiler is only temporarily interrupted, it is expected that the standard startup could be limit could still be met if there were only a single hot startup in a day. However, if there were two hot startups in a day, compliance with the standard limit cannot be considered to be achievable.

[19] For example, the construction permit issued by the Illinois EPA in April 2005 for the two 7,450 mmBtu/hr coal-fired boilers at the Prairie State Generating plant set BACT at 0.07 lb/mmBtu, 30 day average.

[20] Part of the confusion about the difference in effectiveness of SCR and SNCR arises because most of the experience with these technologies involves coal-fired boilers. On coal-fired boilers, SCR is commonly is considered the "top" NOx control technology. Compared to wood-fired boilers, coal-fired boilers generally have higher or much higher "uncontrolled" emissions in the flue gas than wood-fired boilers. This is because coal is a higher Btu-fuel and coal-fired boilers are typically not of fluidized bed design, which generally have relatively low levels of NOx. By way of reference, AP-42 provides an uncontrolled NOx emissions factor of about 0.5 lb/mmBtu for a low-NOx design boiler, while the NOx emission factor for a general wood fuel-fired boiler is 0.22 lb/mmBtu. Thus, catalyst designs for hot side SCR systems, located before the particulate matter control devices, on coal-fired boilers are well developed. An SCR system is commonly used on a new coal-fired boiler to knock down its NOx emissions. In contrast, wood-fired boilers generally have lower uncontrolled NOx. SNCR is effective at reducing this NOx further, to about the same range as SCR for a coal-fired boiler. In addition, SNCR can be applied without the additional engineering challenge of reheat, which would be needed if SCR were attempted as the technical problems with hot-side SCR systems located before the particulate matter control device on a wood fired have not yet been solved.

There is another factor that influences this determination. Reheat would noticeably reduce the energy efficiency of the boilers as electrical power would not be generated from the energy used for reheat, which would be discharged with the exhaust from the plant. It would also likely increase usage of natural gas by the plant. As such it would be contrary to the general objective of improved energy efficiency of power plants and the specific objective of developing a plant is that relies on wood or other biomass fuels.

While there is USEPA guidance that minimizes the role of economic considerations in a LAER determination, that guidance is not as simply applied as this comment suggests. First, that guidance would suggest that an emission limit should not be considered achievable for LAER if its cost "…is so great that a new source could not be built or operated…, i.e., no new plants could be built in the particular industry due to the economic constraints incurred by a particular control technology." These are not the circumstances of the proposed plant, as it involves the reactivation of an existing boilers and infrastructure, not construction of an entirely new plant. Second, this guidance did not consider the specific circumstances of wood-fueled power plants or electric power plants generally. The cost of electricity varies significantly across the nation as do the incentives for generation electricity with renewable energy. For example, the NESCAUM Report indicates that a significant regulatory driver in Massachusetts are renewable energy credits, which make wood fueled power plants "...increasingly appealing and profitable…"[21] In states in which electricity is either fully or partially regulated, there are also laws that may guarantee recovery of the investment in a power plant. While the appropriate treatment of such differences from state-to-state is unclear, they should not simply be ignored. Lastly, as the proposed plant would use a renewable fuel, it has certain benefits for the global environment and the future of Illinois. While those benefits would not justify the absence of readily applied emission control technology, this is not the situation that is presented at the proposed plant. The plant's emissions of NOx would and must be very well controlled given the limit that has been set as LAER for NOx.

48. The draft permit would not provide LAER for the wood-fired boilers at the plant because Selective Catalytic Reduction (SCR) is LAER, as SCR is more effective in controlling NOx than SNCR. Robbins Community Power itself acknowledged in a supplement to the application that SCR reduces NOx more effectively than SNCR, observing that "SCR could result in a NOx emissions rate of 0.60 lbs/mmBtu (80 % control), compared to the currently proposed rate of 0.70 lb/mmBtu (76.75 % control)."

The NOx limit for the proposed plant reflects a reasoned assessment of the circumstances of the boilers at the proposed plant, as discussed above. The statement by Robbins Community Power cited by this comment should certainly not be considered to demonstrate that a lower limit should be set as LAER for NOx. The

[21] **The NESCAUM Report, which was released in 2006, reported that at that time, Renewable Energy Credits were being traded time in Massachusetts at $51 per MWHr, with the credit going to the generating company. This would provide a substantial economic subsidy for a wood fueled power plant in Massachusetts, potentially supporting use of emissions control that would not be affordable in the absence of such credits.**

statement must be considered in the context in which it was made, i.e., a further discussion of why SCR technology should not be used at this plant. For this purpose, Robbins Community Power evaluated the cost-effectiveness of SCR based upon the assumption that SCR could achieve an emission rate that was 0.01 lb/mmBtu lower than the emission rate proposed with SNCR, to demonstrate that the costs with SCR control would be extraordinary. Robbins Community Power did not continue this discussion to further explain why use of SCR would be inappropriate, presumably because it considered that this had been adequately demonstrated. As such, the statement by Robbins Community Power should not be interpreted to mean that Robbins Community Power recognizes that SCR is feasible or that use of SCR would actually enable compliance with a lower NOx emission rate than 0.07 lb/mmBtu.

49. SCR is a technology currently used in the energy generation industry by comparable wood-burning facilities. According to information in the application, the Sauder Woodworking Cogeneration Facility in Archibald, Ohio, uses SCR to control the NO_X emissions from its wood fuel fired boilers.

The boilers at the Sauder manufacturing facility in Ohio, cited by this comment, do not demonstrate that SCR systems should be used on the boilers at the proposed plant. Based on the information gathered for the Sauder plant, the emissions of its two 57 mmBtu/hour wood-fired boilers are only controlled by cyclones, SCR systems and electrostatic precipitators (ESP), with the SCRs located between the cyclones and ESPs. The applicable emission limits for NOx and PM are 0.20 and 0.10 lb/mmBtu, respectively. As such, those boilers have older, low-efficiency SCR systems, as would be dictated by their placement upstream of the main particulate matter control device. They do not demonstrate the feasibility of SCR with reheat, as would be needed at the proposed plant, given the NOx emission rate that must be achieved at the proposed plant and the use of baghouses, which as compared to ESPs, are generally considered low-temperature particulate control devices.

50. The permit should set emission limits that apply on 30-day rolling average for the boilers for each criteria pollutant. All emissions, including emissions during startup, shutdown and malfunction, should be recorded and accounted for by these limits. Notably, the projected NOx emission rates for the boilers already include 30-day rolling averages, including periods of startup, shutdown and malfunction. However, the draft permit does not set a "30-day rolling average" limit for NOx.

The permit sets appropriate compliance time periods to accompany the various short-term emission limits that are set for the boilers, i.e., either a daily or 24-hour average for pollutants that are continuously monitoring or a three-hour average for pollutants for which emissions testing would be performed to verify compliance. These compliance time periods, which are far shorter than 30-days, appropriately focus on proper operation of the boilers and their control systems while accounting for normal variation in operation. These limits are also enforceable as a practical matter.

This comment appears based on the erroneous assumption that the short-term emission limits that have been set for the boilers do not account for emissions during

startup, shutdown or malfunction and that "30-day limits" are needed to account for emissions during these events. This is not the case, as emissions during these events can be addressed by limits with compliance time periods that are shorter than 30 days and by work practices that directly address these events, as has been done in the permit for the plant. The 30-day NOx emission rate for the boilers cited in this comment certainly does not provide support for setting limits on a 30-day average. That NOx rate, 0.075 lb/mmBtu, is less stringent than the NOx emission rate set for by the permit for routine operation of the boilers, 0.070 lb/mmBtu, 24-hour average. In addition, limits applying on a 30-day average are only practical if continuous emissions monitoring is conducted for the pollutant. Otherwise, the limit is not enforceable as a practical matter. Thus, the potential scope of limits applying on a 30-day average, which was broadly recommended by this comment, is restricted to at most SO2, NOx and CO.

51. The draft permit would not provide the Lowest Achievable Emission Rate (LAER) because it is not as stringent as the permit previously issued to Robbins Resource Recovery for the operation of the same combustion units.[22] Under that permit, an automatic feed cutoff would occur if a combustion unit, air pollution control equipment or monitoring equipment was not operating properly. Under these circumstances, where the risk of excess emissions was the greatest, the operator was automatically prevented from continuing to feed waste into a unit. Normal operations could resume only after the condition was addressed. For the boilers, the draft permit would not include any automatic waste feed cutoff provisions, so that it is not as stringent as the earlier permit. Under these circumstances, the draft permit would not provide LAER.

It is not appropriate for a variety of reasons for an automatic fuel feed cutoff to be an element of the LAER determination for the NOx emissions of the boilers at the proposed plant. First, as related to emissions of NOx, such a provision would be counterproductive as it would interrupt the combustion process and disrupt the control of NOx emissions by the SNCR system. This comment does not show any benefit related to control of NOx emissions or other pollutants from an automatic fuel feed cutoff system that is linked to NOx emissions. Second, as related to control of emissions generally, provisions for automatic feed cutoff are typically imposed on incinerators, in circumstances where operation of the unit is maintained by the auxiliary fuel and only the waste feed to the unit is cutoff. Provisions for automatic fuel feed cutoffs are not typically present on the boilers at power plants, for which cutoff of fuel feed would act to disrupt the operation of the boiler. Third, the LAER determination for the boilers has resulted in appropriate limits for NOx emissions and those limits are sufficient by themselves to provide LAER for emissions of NOx. The limit set as LAER for NOx for the boilers is significantly more stringent than the limit that was previously set as Best Available Control Technology (BACT) for the

[22] Specifically, on pages 8 and 9, the 1997 permit includes an automatic waste feed cutoff system that prevents the continued feeding of fuel into a combustor under several conditions likely to lead to excess emissions of pollutants, including NOx.

combustors at Robbins Resource Recovery.[23] Finally, boilers at power plants are appropriately considered to be in a separate category of source than incinerators. The boilers at the proposed plant are not bound to the BACT determination previously made for Robbins Resource Recovery, which set a BACT emission limit that was significantly higher than the limit that is now being set.

52. The provisions of the draft permit for operation of the boiler during startup and malfunction and breakdown do not comply with requirements that originate in the Clean Air Act. The draft permit would provide virtually unlimited authorization for violations during startup periods. It would also not set any limits on duration of startup periods, any limits on the number of allowable startups, any limits on the number of exceedances during startup/malfunction periods, or any limits on how far permit limits may be exceeded.

This comment grossly misrepresents the provisions of the draft permit, which in fact appropriately address operation of the boilers during startup and during malfunction and breakdown and are fully consistent with applicable regulations. The only standards that the permit authorizes to be "violated" during startup and malfunction/breakdown are the applicable state emission standards for CO and NOx, 35 IAC 216.121 and IAC 217.121, respectively. These rules set limits on the relative rate of emissions in ppm or lb/mmBtu, on an hourly basis, but do not limit the mass rate of emissions, in pounds per hour, from the boilers.

For emissions of CO, the authorization for excess emissions during startup is provided because it may not be possible during startup to maintain continuous or reliable compliance with the standard of 35 IAC 216.121, which was originally set as a reflection of normal, steady-state operation of a boiler. (It should be noted that this authorization, which was inadvertently omitted from the draft permit, is included in the issued permit.) During startup, the flows of fuel and air into the boiler must be increased from zero to a level at which stable combustion is maintained, with coordinated operation of the multiple operational controls for the flow of fuel and air at different points in the boiler. The transition from the separate auxiliary burners fired with natural gas to full firing of solid fuel, is a further complication as it entails a constant compromise between the distinctly different conditions in the boiler that are preferable for combustion of each fuel. These circumstances for startup are not unique to the boilers at the proposed plant. As compliance with the CO limit is dependent on proper functioning of the various elements of the combustion system, malfunctions of those elements could also result in excess CO emissions. Within the regulatory framework of 35 IAC Part 201, Subpart I, authorization for excess emissions or "violations" is warranted as exceedances of the CO standard, which applies on a hourly basis, could occur that could not be readily prevented. In the case of malfunction and breakdown, immediate shutdown of a boiler would pose risks for personnel and equipment that could be avoided by a more orderly response to such

[23] **For the boilers at the proposed plant, LAER for emissions of NOx is set at 0.070 and 0.20 lb/mmBtu, 24-hour average, for normal operation and startup, respectively. For Robbins Resource Recovery, the BACT limit for NOx was set at 130 ppm, at 7 % oxygen, 24-hour average, which is equivalent to about 0.22 lb/mmBtu. While the permit contained a provision for a lower BACT limit to be set under an Optimization Program for the SNCR System, this did not occur before the facility was closed.**

incidents. In addition, as the plant is a power plant, it could be providing an essential service if alternative supplies of power are not available. Even though the permit "authorizes" excess emissions, in day-to-day practice, Robbins Community Power is required to undertake all reasonable efforts to minimize or prevent any exceedances of the CO standard. For this purpose, Robbins Community Power is required to operate and maintain the boilers in accordance with a Startup, Shutdown and Malfunction Plan, which it prepares and maintains, that sets forth the measures that will be used to minimize emissions of CO and other pollutants during startup, shutdown and malfunction. The quantity of CO emissions from the boilers is still limited as each boiler must still comply with the mass-based emission limit for CO set by the permit, which apply on a daily basis and also account for all emissions.

For emissions of NOx, the authorization for excess emissions during startup is provided because the SNCR system, which is a critical part of the control system for NOx, can only effectively control NOx when the flue gas at the point of urea injection has reached the necessary minimum temperature for the de-NOx reaction to occur. If injection of urea would occur during startup, before this minimum temperature is reached, the injected urea would convert to ammonia, most of which would be emitted to the atmosphere. Accordingly, during startup, before this minimum temperature is reached, the NOx emissions of a boiler could potentially exceed the applicable state standard, which applies on an hourly basis. As the SNCR system needs urea to function, the system would also not be effective in the event of a malfunction in the equipment that supplies to the SNCR system or the injection system. Compliance with the NOx standard could also be affected by failure of the fan for flue gas recirculation. Like emissions of CO, within the regulatory framework of 35 IAC Part 201, Subpart I, authorization for violations is warranted in the permit as exceedances of the state NOx standard, which applies on a hourly basis, could occur that could not be readily prevented. This authorization triggers an ongoing obligation for RCP to operate and maintain the boilers and the relevant systems to minimize, if not eliminate, any such excess emissions of NOx during these periods. This includes operating in accordance with a Startup, Shutdown and Malfunction. The quantity of NOx emissions from the boiler is limited as each boiler must still comply with the applicable federal standard for NOx emissions (40 CFR 60.44b(d)), which applies on 30 day average, and accounts for all NOx emissions, including emissions during startup, shutdown and malfunction. In addition, NOx emissions are limited as each boiler must comply with daily mass-based emission limits set by the permit, which account for all NOx emissions.

53. The provisions of the draft permit relating to emissions of hazardous air pollutants (HAPs) are inadequate. Emissions of carbon monoxide (CO) would be monitored as a surrogate for monitoring emissions of HAPs. As described by Robbins Community Power during the public hearing, because CO is an indicator of combustion efficiency, it directly correlates with emissions of organic material, including certain highly toxic, but not continuously monitored or separately controlled HAP like dioxins. Despite this, the draft permit authorizes excess CO emissions during periods of startup or malfunction, without limiting the number of exceedances, the duration of startup periods, or the levels of emissions during these periods. Consequently, any strategy for controlling emissions of

HAPs using CO as a surrogate is ineffective during the startup and malfunction periods authorized by the draft permit.

As a general matter, all emissions of CO from the boilers, including emissions during periods of startup and malfunction, are addressed by the permit as the permit sets a daily limit on the CO emissions of the boilers. In addition, the boilers must be operated and maintained in accordance with procedures that serve to minimize emissions of CO, and indirectly emissions of HAPs, during such periods. If the permit were to address periods of startup or malfunction by setting limits on the duration or levels of emissions during such periods, it would be contrary to the objective of minimizing CO emissions. The establishment of such limits in the permit would suggest that certain levels of excess CO emissions during such periods are considered acceptable, without any consideration of the nature of the events or their causation. The establishment of limits on the number of such events would also be contrary to the objective of proper operation and minimization of emissions. It would again indicate that a certain number of events with excess CO emissions are acceptable, without opportunity for case-by-case evaluation of particular events. It could further act to discourage shutdown of a boiler in circumstances in which it was appropriate, because the shutdown of the boiler would eventually be accompanied by another startup that would have to be counted when considering compliance with a limit on the number of startups. Moreover, it is generally in the self-interest of the plant to minimize the number of startup that occur at a base-loaded power plant, like the proposed plant. In summary, the permit appropriately addresses the potential for excess emissions of CO boilers during startup and malfunction of the boilers as it provides for continuing review of any such events to ensure emissions are minimized without predetermined levels of acceptable excess emissions.

54. The provisions of the draft permit for startup and malfunction are not legally adequate. They are inconsistent with the USEPA's guidance regarding excess emissions during startup, malfunction, and shutdown.[24] When measured against well-established USEPA interpretation on the circumstances, if any, that a permit may allow emission exceedances during startup and malfunction periods, the draft permit is clearly legally inadequate.

The provisions of the draft permit with respect to startup and malfunction are not contrary to the USEPA guidance cited in this comment, as has been discussed in response to other comments. In addition, compliance with the state emission standards in question is not needed during startup or malfunction to protect ambient air quality. Air quality in Illinois readily complies with the applicable ambient air quality standards for CO and NO_2, and will not be affected by any excess emissions of CO or NOx from the proposed plant.[25] Finally, the relevant state rules that provide that a permit may authorize a violation of a state emission standard during startup or malfunction and breakdown do not provide that such standard does not apply during

[24] Refer to Memorandum by Kathleen M. Bennett, "Policy on Excess Emissions During Startup, Shutdown, Maintenance and Malfunctions," September 28, 1982.

[25] **The highest value of NO_2 monitored in the Greater Chicago area in 2006 was 0.028 ppm annual average, compared to the standard of 0.053 ppm. The highest values for CO were 3.4 and 3.0 ppm on a 1-hour and 8-hour average, respectively, compared to the standards of 35 ppm and 9 ppm, respectively.**

such events. It only provides that any such authorization establishes a prima facie defense to an enforcement permit alleging a violation of such standard provided that the source was in full compliance with the relevant terms and conditions associated with such authorization. (Refer to 35 IAC 201.165.)

55. The provisions of the draft permit for operations during startup, malfunctions and breakdowns are less stringent than the permit application. For example, the draft permit does not provide that continuous emissions monitors must be operational during startups and that emissions during startups or malfunction must be considered when determining compliance with annual emission limits. It does not provide that preventative maintenance must be conducted to minimize malfunctions. The draft permit also does not include information on the predicted number and estimated duration of startups or the estimated durations of malfunctions.

The provisions of the permit are not less stringent that the application, as suggested by this comment. The various observations made by this comment presume that certain statements in the application are significant and must be memorialized in the permit. However, the statements in the application are not significant as they merely restate applicable law or have no binding effect. For example, monitoring systems must generally be operated at all times, in accordance with good monitoring practice. The permit does not include any provision that would suggest that monitoring systems do not need to be operated during startup. Preventative maintenance is generally required to minimize emissions and need not be specifically addressed for malfunctions. Predictions in the application for the number and nature of events in the application are not binding on the plant, as they are just predictions. It should also not be presumed that the predictions in the applications for these events should be considered acceptable, which will only be able to be meaningfully determined based on actual operating experience with the plant. What should be considered acceptable for these events should also become more stringent over time as the plant gains experience and new measures are identified that can be implemented to minimize the amount of emissions associated with these events.

56. In Condition 2.1.5-3(a), the draft permit, the term "malfunction" is defined by reference to the definition of malfunction in 40 CFR 63.2. This would mean that the term would be restricted to equipment failures that are infrequent and not reasonably preventable or caused by poor maintenance or careless operation. While these are the only type of malfunctions that should ever occur at the plant, Robbins Community Power should be required to take actions to prevent all equipment failures that would lead to excess emissions and to appropriately respond to all such equipment failures that do occur.

In response to this comment, the issued permit provides that Robbins Community Power must address all types of malfunctions with its Start Shutdown and Malfunction Plan. The permit also indicates that for purposes of the recordkeeping, notifications and reports for malfunctions required by the permit, equipment failures must be handled as malfunctions irrespective of the cause of the failures.

57. Pursuant to Section 173(a)(5) of the Clean Air Act, a permit for a major source in a

nonattainment area may only be issued if "…an analysis of alternative sites, sizes, production processes and environmental control techniques for such proposed source demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as result of its location, construction, or modification" The Illinois EPA should provide its complete, independent analysis of alternatives to this plant, along with an opportunity to comment prior to making its final decision on the application.

As a general matter, this comment contemplates an analysis of alternatives to the proposed plant that is much more extensive than is needed considering the nature of the project. The proposed plant would take advantage of certain idle equipment and facilities at an existing site and the economic feasibility of the plant is predicated upon this. There is not any other site or boiler technology for the proposed plant. Thus the two basic alternatives for the project are either the project fundamentally as proposed or "no project." The Illinois EPA has concluded that the "project alternative" is preferable to the no project alternative for the various reasons set forth by Robbins Community Power in the analysis of alternative that it submitted in its application. In particular, the proposed plant would use wood, which is a renewable fuel, for generating electricity. This would occur in fluidized bed boilers, which are capable of efficiently combusting wood. The boilers would be equipped with the requisite control systems for emissions of the various pollutants that could be present from burning wood fuel. The appropriate use of wood fuel should be generally pursued because of the impacts of the use of fossil fuel on global warming.[26] In addition, this plant would utilize an existing wood resource, as it would use wood that is culled and trimmed from the Chicago area' urban forest and from clean wood that is recovered from streams that might otherwise not be recycled and would have to be handled as wastes. As reflected in oral comments made at the hearing, including statements by representatives of the Village of Robbins, and in written comments that were received, the public generally concurred with this assessment of the proposed plant. Statements from the public supporting the proposed plant also referred to the economic benefits that it would provide to the host community, the Village of Robbins, and to others living in the region. This comment does not dispute this basic conclusion with respect to the relative weights of the benefits of the project and its impacts To the extent that there were general concerns from the public about the environmental impacts of the proposed plant, they related to its effects on air quality. The plant would be in an area that is designated nonattainment. However, even though the plant qualifies as major source for emissions of NOx, it is still a relatively small source of emissions and should not affect the dates by which attainment of the air quality standards is achieved. The plant also should not have a measurable effect on local air quality in the area surrounding the plant.

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[26] Use of renewable energy sources, includingbiomass fuels such as wood, is widely endorsed as an appropriate policy from an environmental perspective. It is reflected in Illinois' so-called portfolio standards, goals and standards, in state law such as the Illinois Power Agency Act, for generation of electricity in Illinois by means other than fossil fuels contained. It is also one of the recommendations for Illinois from the Climate Change Advisory Group recently convened by Governor Blagojevich. This is not a new policy goal, for example, refer to Michael Brower et al, *Powering the Midwest: Renewable Electricity for the Economy and the Environment,* 1993.

58. Apart from broad statements in the Project Summary, the Illinois EPA has not explained how it conducted its analysis of alternatives to combusting recycled construction and demolition material (with the resulting air impacts), particularly in light of readily available recycling and reuse options for this material[27] or the analysis for landscape waste. This suggests that there may be environmentally more benign alternatives for the fuel that would be used at the plant.

This comment further suggests that the nature of the fuel supply for the proposed plant is a relevant consideration in the analysis of alternatives for the proposed plant, with particular focus on wood fuel that is recovered from construction and demolition debris. This was not an aspect of the project that was considered by the Illinois EPA in its preliminary analysis of alternatives nor is it clear that it is appropriately within the scope of an analysis of alternatives.[28] It is also not clear that this comment raises any significant issues for the general analysis of alternatives, as discussed above. However, assuming for purposes of argument that this comment is relevant, the suggestion that is made is that the wood in construction and demolition debris should not be allowed to be used as fuel at the proposed plant because such wood can be readily recycled. However, even the comment indicates that only 50 % of the wood in construction and demolition waste can be "recycled, leaving the remaining material potentially available for use as fuel. In fact, the comment does not demonstrate that even 50 % of the wood in construction and demolition debris can be recycled. This is because wood material is only one component in this debris, which can also includes concrete, brick, soil, rock, plaster, paving material, glass, plastics, electrical wiring, etc. The ability to recycle this material in aggregate is not the same as the ability to recycle particular fractions of this waste. Moreover, the material supplied with this comment identifies processing of wood material for use as boiler fuel as one way in which wood in this waste can be recycled. More generally, as the proposed plant would be restricted to use of clean wood from construction and demolition debris, one should not presume that there are significant implications for emissions from the use of this fuel. In conclusion, as a certain portion of the wood in construction and demolition debris, while acceptable for use as fuel, may not be suitable for other "preferred" recycling options, it is appropriate to accommodate the use of that material as fuel. Indeed, as this creates another option for recycling of wood, it could act to increase the overall rate of recycling.

The analysis for use of landscape wood is simpler than that for wood from construction and demolition debris. It is clearly the policy of the State of Illinois, as reflected in the provisions of state law, to maximize recycling of landscape waste and minimize the amount of landscape material that must be sent to landfills. While

[27] A large percentage of construction and demolition waste can be recycled. In the region from which the proposed would obtain its wood fuel, there are more than 40 facilities that are available to recycle this waste. In keeping with this local recycling market, the City of Chicago is requiring 50 % recycling of waste from demolition projects. In 2004, McHenry County reported a recycling rate of 47.6 % for construction and demolition waste.

[28] **Fuel cleaning and clean fuels are not identified as being within the scope of the analysis of alternatives for a proposed major project in a nonattainment area by Section 173(a)(5) of the Clean Air Act, , whereas these measures are specifically identified for being within the scope of a determination of Best Available Control Technology under the PSD Program, by Section 169(3) of the Clean Air Act.**

landscape wood does not pose the concerns for contamination that are present with construction and demolition debris, composting facilities all too often have nuisance impacts on local residents. Accordingly, it is appropriate to allow another means for recycling of the landscape wood.

59. Where would Robbins Community Power obtain the NOx offsets for the proposed plant?

Robbins Community Power plans to obtain its NOx emission offsets from Corn Products International in Bedford Park. Corn Products recently had a large reduction in the actual NOx emissions, over 2200 tons per year, at its Bedford Park plant from the installation of a modern fluidized bed coal-fired boiler, which replaced three old coal-fired boilers and several gas-fired boilers. Robbins Community Power would only take credit for 278 tons per year of this reduction to meet its obligation to provide offsets for its permitted emissions.

60. Why is the proposed plant not considered a major source for emissions of hazardous air pollutants (HAPs)?

The proposed plant is not a major source for HAPs because the permitted emissions of HAPs from the plant are below the applicability thresholds for a major source, i.e., emissions of 10 tons per year of any individual HAP or emissions of 25 tons per year for total emissions of HAPs. This determination was based on the data provided in the application for emissions of HAPs and must be verified by emission testing, monitoring and recordkeeping under the permit. As a general matter, status as a non-major source is to be expected given the size of the plant, the use of wood fuel, and the emission control systems for the boilers.

61. Why is the proposed plant not considered a major source under the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21?

The proposed plant is not a major source for purposes of PSD because the permitted emissions of the plant are below the relevant applicability threshold for a major source, i.e., emissions of 250 tons per year of any NSR pollutant. This is based on information in a supplement to the application that shows that the plant's annual emissions of NOx and CO will also be below 250 tons/year, like the emissions of other NSR pollutants. Robbins Community Power has also confirmed that the plant's heat input capacity for fossil fuel would be less than 250 mmBtu/hr, so that the plant should not be considered a fossil fuel fired power plant.[29] The permit accordingly

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[29] The original application for the plant was based on it being a major source under PSD when compared to a major source threshold of 100 tons per year, as applicable for a fossil fuel-fired steam electric generating plant of more than 250 mmBtu per hour heat input. The proposed emissions of NOx and CO were 260 and 277 tons per year, respectively, and PSD would have been applicable for NOx, CO and several other NSR pollutants. Robbins Community Power subsequently realized that the permitted NO_X and CO emissions could be slightly lower, so that they would each be less than 250 tons per year. At these levels of emissions, the plant would not be a major project if it was properly characterized as a non-fossil fuel-fired power plant for purposes of PSD. In particular, as the plant's heat input capacity for natural gas would be less than 250 mmBtu per hour, the plant was neither a fossil fuel-fired power plant nor a collection of boilers with fossil fuel heat input of 250

limits annual emissions of NSR pollutants from the plant to less than 250 tons each and the capacity of the plant to fire natural gas to less than 250 mmBtu/hour to ensure that the plant is not a major source for purposes of PSD.

62. Why is the Indiana Dunes National Lakeshore in Indiana not considered a Class I Area under the PSD rules, so that an analysis of the proposed plant's impacts on visibility on that area, which is only about 35 miles to the east, was not conducted?

The Indiana Dunes National Lakeshore is not a Class I Area because it did not meet the criteria in Section 162 of the Clean Air Act for "automatic" designation as a Class I Area by act of law.[30] This National Lakeshore also has not been redesignated as a Class I Area by the State of Indiana under Section 164 of the Clean Air Act. Thus, the Indiana Dunes National Lakeshore is a Class II Area under the PSD rules.[31]

For this National Lakeshore, visibility, i.e., the extent to which long range vistas at the Lakeshore are impacted by anthropogenic emissions, is generally being addressed by the reductions in emissions and improvements in air quality in Northern Indiana and the Greater Chicago Area to attain and maintain the National Ambient Air Quality Standard (NAAQS) for PM_{10}, $PM_{2.5}$ and ozone. Visibility is also being explicitly addressed under Section 169A of the Clean Air Act, pursuant to which USEPA is requiring states to adopt requirements for additional control of emissions from existing sources that significantly contribute to regional haze. The effects of the proposed plant on visibility are fully addressed as its emissions are well controlled.

63. It is not clear from the permit how testing for emissions of dioxins and furans, polycyclic hydrocarbons, and benzo-a-pyrene, which are highly toxic, will be conducted or how emissions of these compounds will be monitored on a regular basis.

USEPA Method 23 is to be used for testing emissions of these organic compounds. (Refer to Condition 2.1.7-1(b) of the permit.) Monitoring for emissions of these compounds will be performed indirectly, with continuous monitoring of CO emissions and operational monitoring to confirm proper operation of the boilers and their control systems. Emission monitoring technology is not currently available to directly address these compounds.

64. Mass flow spectrometer technology should be used on the boilers at the proposed plant to provide real-time emission data for compounds that could conceivably include PCBs and numerous other cancer causing compounds.

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mmBtu per hour, so that the relevant applicability threshold under PSD for a major source would be permitted annual emissions of 250 tons, rather than 100 tons.

[30] **There are no Class I areas in Illinois. The nearest Class I areas to Illinois are the Wilderness Area in the Mingo National Wildlife Refuge in Missouri, Mammoth Cave National Park in Kentucky, and certain portions of the Forest County Potawatomi Community's reservation in Wisconsin, which only recently became a Class I area at the request of the Forest County Potawatomi Community.**

[31] **Status of an area as a Class II Area under the PSD rules is generally considered to allow for moderate economic growth and development, rather than the very limited development that may be possible in an area that is designated a Class I Area.**

Mass flow spectrometer technology has not yet been developed to the level that it could be used to monitor emissions of various pollutants from the boilers. Continuous emissions monitoring would be used on the boilers for emissions of sulfur dioxide (SO_2), nitrogen oxide (NOx) and carbon monoxide (CO). These are pollutants emitted from the boilers for which continuous emissions monitoring can currently be conducted using analytical techniques other than spectrometry.

65. The permit should provide for real-time access by the public to the emissions monitoring data for the plant. For numerous reasons, including the previous experience with the Robbins Resource Recovery facility and the fact that Robbins Community Power is a limited liability corporation, with no operating experience, at the very least, to provide public confidence, the output from the plant's monitors should be observable via webcam on the Internet.

Direct readout of the monitoring data for the plant, as recommended by this comment, would not be appropriate. The plant monitors will provide large volume of data whose meaning or significance would not be commonly understood by members of the public. In addition, real-time data provided by webcam would not directly indicate compliance or non-compliance as applicable emission standards and limits for various pollutants and opacity apply on a six-minute, hourly, daily and 30-day average basis. It would also not enable the ready identification of any non-compliance as it would be obscured by the enormous volume of data showing that the boilers are in compliance. In summary, the performance of the plant is better assessed and understood by the general public from periodic reports that summarize and provide key information from the detailed data collected by continuous monitoring systems at the plant.

66. Webcam technology should show results from all remote ambient air monitoring stations.

Air quality data for different areas of Illinois, expressed as an Air Quality Index, is available from a number of sources, including the Illinois EPA's Internet site. The air quality data is expressed as a daily Air Quality Index to make it easier for the general public to understand the potential implications of the current air quality for their health and to take appropriate precautionary actions if any are warranted.

67. Robbins Community Power should report emissions during startup, shutdown and malfunction in its compliance reports.

Emissions during startup, shutdown and malfunction must be addressed in the compliance reports for the plant. This requirement was included in the draft permit and has been carried over to the issued permit. (Refer to Condition 3.4(b)(iii).)

68. The draft permit would only require that compliance reports, including information on excess emissions, be submitted quarterly. That would mean that the plant could be in noncompliance with its permit for three months before it would even have to report that noncompliance. Robbins Community Power should be required to submit compliance

reports on a monthly basis, as was required of Robbins Resource Recovery.

In response to this comment, the issued permit requires that Robbins Community Power submit monthly compliance reports during the initial operation of the plant, for a period that extends for one year after the shakedown of the plant is complete. This will provide more frequent reporting during the period when closer scrutiny of plant operation may be needed. However, quarterly compliance reports should be sufficient on an ongoing basis after.

Incidentally, this comment incorrectly described the provisions of the draft permit, which in fact required immediate reporting of continued operation of the boilers during a malfunction or breakdown that results in an exceedance or violation of an applicable state emission standard. This provision is retained in the issued permit, along with the provisions that compliance reports be submitted on a monthly basis during the initial operation of the plant.

69. Emissions for the plant were calculated using emission factors for wood, but the plant will also be permitted to burn natural gas and biomass. It does not appear that the permit has any limits on the percentage of fuel that may be these alternative fuels. How would burning natural gas or biomass fuels affect the plant's emissions?

The use of natural gas or non-wood biomass fuels should not be considered to affect the plant's emissions in any meaningful way. As natural gas is the auxiliary fuel for the boilers, its use would facilitate compliance with the emission limits that have been set for wood fuel, which would be the primary fuel of the boilers. Any use of non-wood biomass fuel would substitute for use of wood fuel, so should also be expected to be accompanied by the same emissions as if only wood fuel were being burned.

70. The draft permit indicates that biomass fuels for the boilers may include switchgrass, corn stover or other similar vegetative materials other than wood (Condition 2.1.5-1). However, by comparison to wood fuel, the draft permit provides little detail on appropriate control standards and technologies for non-wood biomass fuel, nor does it identify the ratio of non-wood to wood that can be combusted without fundamentally altering emission rates, amounts and impacts. Generally, I do not object to the use of non-wood biomass, but believe greater detail is required for non-wood biomass in terms of allowable proportion in fuel by comparison to wood and a description of the point at which the use of non-wood biomass could alter emission characteristics such that a permit modification is required.

The permit for the proposed plant appropriately addresses the potential use of other non-wood biomass fuels in the boilers along with wood. This is because these biomass fuels would generally be similar in character to the wood fuel that would be the primary fuel of the proposed plant, as the wood fuel for the plant and the biomass fuel would be natural, plant-derived materials. They would not exhibit the great variation in elemental or chemical composition that is present in fossil fuels or secondary fuel materials. The permit for the proposed plant sets a rigorous collection of limits or "envelope" for the emissions of the plant based on use of wood fuel. This allowable emission envelope will apply for any types or amount of non-wood biomass

fuels that might be used in conjunction with wood fuel. As such, it should not be anticipated that a modification to the permit for the boilers would ever be needed as related to the use of non-wood biomass fuels. For a permit modification to ever be needed, the use of specific biomass fuels would first need to have significantly higher emission rates, in pounds per million Btu, than wood fuel for certain pollutant(s). Then, Robbins Community Power would have to seek to use such biomass fuels at levels at which the emissions of the boilers would potentially exceed the established emissions envelope. However, Robbins Community Power has stated that at this time it anticipates that non-wood biomass fuel would never be more than 10 % of the total fuel feed to the boilers.

Given the developing nature of non-wood biomass fuels, it is also not reasonable to expect a more refined approach to emissions from the boilers from potential use on non-wood biomass fuel. The permit to provide flexibility in the use of these fuels as the boilers could be used to assist in the gathering of such data.

71. The draft permit allows for an unspecified percentage of biomass fuels other than wood, such as switch grass and corn stover, to be burned along with wood fuel. Robbins Community Power representatives have indicated that the burning of such other biomass fuels may lead to increased emissions of particulate matter from the plant.[32] Those increased emissions might push the plant into the "major source" status for particulate matter. However, it is unclear whether the calculations used to determine emissions of criteria pollutants and HAPs from the proposed plant were completed with the assumption that the fuel was 100 percent wood, or whether they were calculated assuming some percentage of other biomass fuel. Unless emissions calculations are completed that take other biomass fuels into account, the public cannot effectively comment on whether the proper permitting requirements have been imposed on the proposed plant. The lack of specifications regarding how much alternative fuel may be used, and what its emission impact may be, avoids review by the Illinois EPA and the public. The Illinois EPA should: determine the permissible percentage and amount of alternative fuels that the proposed plant may burn.

The use of non-wood biomass fuels by the plant would not threaten the plant's status as a minor source for emissions of particulate matter. This is because the brief statements by representatives of Robbins Community Power, which were cited by this comment, did not fully explain the implications of use of non-biomass fuels for the particulate matter emissions of the boilers, which may be none. A potential concern exists with use of non-wood biomass fuels, as their ash content is higher than that of wood, which is very low. Thus the uncontrolled particulate emissions, i.e., emissions without any control equipment, from burning of non-wood biomass fuels would be expected to be higher than burning of wood. However, the emissions of the boilers of the proposed plant are not uncontrolled but controlled with baghouses baghouses, which are constant emission rate devices in contrast to efficiency based

[32] This statement was made at the public hearing by Edward Kalebich, the Chief Operating Officer of Robbins Community Power, and by Richard Trzupek, a consultant for Robbins Community Power, and in a letter from Edward Kalebich to the Illinois EPA.

devices,[33] it is not appropriate to expect that an increase in dust loading to the baghouses will result in a proportional increase in emissions, much less any increase in particulate emission. In this regard, the limits for the particulate matter emissions for the boilers at the proposed plant have been set based on the outlet performance of the baghouses. They have not been derived from the ash content of the wood fuel and a nominal removal efficiency provided by the control system. The limits that have been set for the particulate emissions of the boilers were appropriately set and should adequately serve to maintain non-major status for particulate independent of the specific rate at which non-wood biomass fuels might be being used.

Moreover, the permit includes provisions to enable any effects from the use of non-wood biomass fuels to be identified in a timely manner to help assure that non-major status is maintained for emissions of particulate matter. Robbins Community Power must keep the Illinois EPA informed with respect to use of non-wood biomass fuels, including notification within 30 days when it begins to use a non-wood biomass fuel (Conditions 2.1.10(d)(iv) and (e)(ii)). Upon request by the Illinois EPA, Robbins Community Power must promptly have emissions testing conducted for pollutants as specified by the Illinois EPA (Condition 2.1.7-1(a)(ii)). These provisions provide the necessary flexibility to appropriately address use of non-wood biomass fuels by the plant. The use of these fuels would initially almost certainly occur on a trial basis to evaluate the feasibility and practicality of producing and using biomass fuels, and then, if successful, gradually develop over time.

72. The draft permit provides little detail for appropriate non-wood biomass fuel preparation and storage techniques. Greater detail is required for non-wood biomass in terms of vendor responsibilities and on-site storage.

The permit appropriately addresses non-wood biomass fuels used by the plant as such materials are limited to "…vegetative material that is grown and/or harvested from agricultural operations for the purpose of use as fuel or recovered from grain processing plant," (Condition 2.1.5-1(c)(i)). As such, this non-wood biomass fuel would not pose the types of concerns that are posed for wood fuel for the plant that is prepared by suppliers who handle mixed wood streams. Robbins Community Power must keep relevant records related to the acceptance and use of any non-wood biomass fuels, including records identifying the suppliers of such fuels and records for each shipment of such fuel accepted at the plant (Condition 2.1.9-1(b)).

The practices for storage and handling of any non-wood biomass fuels by the plant would be addressed by the Fuel Management Plan that is required for all solid fuel handled by the plant (Condition 2.1.5-1(d) and 2.2.5(d).). If non-wood biomass fuel poses concerns for nuisance dust or odor that were not present with wood fuel,

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[33] **Unlike control devices that remove a certain percentage of the pollutant in the exhaust from an emission unit, the particulate emissions of filter baghouse can be largely independent of the dust loading in the exhaust. Instead, the "losses" or emissions of baghouses are better expressed in terms of a loss factor, weight of particulate per cubic foot of air passing through the baghouse. This loss factor is a property of the filter material related to the type of particulate, the nature of the emission unit that is being controlled, and the speed with which the exhaust passes through the filter, rather than the specific loading of particulate in the exhaust.**

Robbins Community Power would have to appropriately revise this plan to address such concerns.

73. As related to use of non-wood biomass, the provision exempting the proposed plant from local siting review, Section 3.33(a)(16) of the Environmental Protection Act, appears to be limited to a plant combusting "…only wood material…."

The provision of the Environmental Protection Act cited by this comment addresses the nature of the wood fuel that is used at the proposed plant but does not prohibit the use of other types of fuels. As such, the proposed plant is not limited to burning wood fuel, but also can burn auxiliary fuel, for which purpose natural gas will be used. The plant can also burn non-wood biomass fuels as supplemental fuel along with wood fuel.

74. Substantial amounts of wood fuel will be transported to the proposed plant and large amounts of ash will be transported from the plant. To minimize the release of materials during transport, including wood fuel, dust, and ash, the permit should require that all vehicles transporting material to and from the plant should be tarped. Section 15-109 of the Illinois' Motor Vehicle Code provides that, "No vehicle shall be driven or moved on any highway unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, shifting, leaking or otherwise escaping…" Similarly, Section 9(a) of the Environmental Protection Act prohibits the discharge or emission of any contaminant into the environment so as to cause air pollution.[34] There is an adequate legal basis to insert a tarping requirement into the permit.

Notwithstanding its intent, this comment demonstrates that it would not be appropriate for the permit for the proposed plant to include a provision requiring trucks delivering wood fuel to the plant to be tarped or otherwise covered. The operators of such trucks are already subject to a state law that prohibits the loss of material from these trucks during transit. This law serves to require that these trucks to be appropriately enclosed, covered, or tarped as necessary to prevent loss of wood fuel during transit. Moreover, while any loss of wood fuel during transit could contribute to a nuisance, as such material constitutes litter, it would not meet the common understanding of the term air pollution, which this comment indicates would be legally necessary for transport of wood fuel to be addressed by the Illinois EPA in the permit for the plant. Moreover, given the provisions of Illinois Motor Vehicle Code, the Village of Robbins has ample authority working with law enforcement officials to ensure that trucks transporting wood fuel through Robbins are appropriately covered to prevent a litter nuisance from loss of material.

With respect to transport of ash from the plant, requirements have been added to the issued permit in response to this comment. The draft permit would have only

[34] Under Section 3.02 of the Environmental Protection Act, air pollution is defined as "…the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics as to be injurious to human, plant or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property."

required that the handling and loadout of ash be controlled by enclosure as necessary to prevent any visible emissions from these activities (Condition 2.3.5(a)(i)). The issued permit further requires that if the ash is not loaded into a fully enclosed hopper or vacuum truck, that the ash be wetted or otherwise treated to prevent emissions and that the load of ash on the transport vehicle then be covered (Condition 2.3.5(c). These requirements are justified as they address an activity that is conducted at the plant and a material that has significant potential for emissions if losses occur during its transport.

75. The proposed plant would use urea, rather than ammonia, as the reagent for the Selective Non-Catalytic Reduction (SNCR) systems used on the boilers to control emissions of nitrogen oxide (NOx). However, since urea breaks down into ammonia, the use of urea in this system may still be accompanied by ammonia odors.

As implicitly acknowledged by this comment, the use of urea for the SNCR systems, rather than ammonia, avoids the potential for odors and safety issues that would be present if ammonia were being handled and stored at the plant. Ammonia would only be present in the flue gas of the boilers, as the urea injected by the SNCR systems would disassociate at the elevated temperatures in the ductwork to release ammonia. However, this ammonia would then immediately react to control NOx emissions, with most if not all of the ammonia consumed in the process. The amount of any unreacted ammonia in the exhaust of the boilers, given the height of their stacks, would be too low to result in any odors.

76. Why doesn't the permit set limits for emissions of ammonia from the boilers. Can the Illinois Agency explain the absence of limits for emissions of ammonia?

While small amounts of ammonia may be emitted from the boilers due to the SNCR systems, these circumstances do not provide the necessary justification for limits to be set for emission of ammonia. This is because ammonia is not generally a regulated pollutant in Illinois and such limits would have to be established under the Illinois EPA's general authority to regulate emissions as needed to protect air quality. However, only small amount of ammonia should be emitted from these SNCR systems that are operating to control emissions of NOx, which is a regulated pollutant and of concern as it is a precursor to the formation of both ozone and $PM_{10}/PM_{2.5}$ in the atmosphere.

77. The emissions from the trucks bringing materials to and from the plant, including idling of truck engines at the plant, are not figured in to the permitted emissions of the plant.

The trucks serving the plant would be mobile sources, so their tailpipe emissions should not be included in the construction permit for the proposed plant, which can only addresses emissions from the plant itself (e.g., the boilers, fuel handling, etc.). Emissions from mobile sources are addressed as part of transportation planning, separately from the permitting of stationary sources. Mobile sources, including cars and trucks, are subject to federal regulations adopted by USEPA that are lowering emissions from this source sector as existing vehicles are replaced with new vehicles

that are designed to comply with more stringent emission standards. The Illinois EPA must account for the emissions from mobile sources when developing Illinois' plans to bring the Greater Chicago area into compliance with all air quality standards.

78. When Robbins Resource Recovery was operating, there were two fires and it was nasty. Garbage isn't nearly as combustible as wood. There is a potential for spontaneous combustion. The plant is right across the street from people's homes. A fire would be a huge problem. Robbins Community Power needs an emergency response plan and a fuel management plan to safely store wood fuel at the plant so workers, people who live in Robbins, and people who live in surrounding communities can feel good about this project.

The Illinois EPA concurs that an emergency response plan is needed. Such a plan will be developed between Robbins Community Power and the Village of Robbins but this plan is outside the scope of the Illinois EPA's authority or expertise. The wood fuel management plan required by the permit is appropriately focused on emissions and odors, which are aspects of sources that are addressed by the Illinois EPA.

79. I am concerned about the safety of the public because the proposed plant will stockpile wood fuel and people will live near the plant. What kind of safety provisions would be in place in the event of a fire?

A variety of practices, programs and regulations, which are outside the domain of Illinois EPA and environmental permitting, specifically address the safety of the proposed plant. For example, the plant must be designed with a fire water system and sprinklers and other systems to automatically activate in response to a fire. The plant must maintain a reserve supply of water for the sprinklers and hydrants. An emergency fire water pump is required so that the plant water system can operate during a power outage. The design and engineering of the plant for fire safety are addressed by standard design codes. They are also addressed by the inspection of the plant for fire safety and approval by the local fire marshal before beginning to operate. Fire protection and safety is addressed by the insurance companies that will provide coverage for the plant.

80. This permitting process has not provided a complete opportunity for public participation because the draft permit defers fundamental aspects of the permit until after the public comment period. The Illinois EPA should provide an opportunity for public review and comment on the startup, shutdown and malfunction plan, fugitive dust control plan, and an accident prevention and emergency response plan. A permit should not be issued until this review is complete and these plans are incorporated as elements of the permit.

This comment misunderstands the nature of these plans which are outside the scope of the permitting process. This is a direct consequence of applicable regulations or protocols that govern or would govern these plans. It is also appropriate as these plans addressing various aspect of the plant are "living" documents that should be refined and enhanced as needed based on experience at the plant.

In particular, accident prevention and emergency response planning is generally outside the scope of the permitting conducted by the Illinois EPA and is administered by other agencies, e.g., local emergency response officials, the State Fire Marshal, the federal Occupational Safety and Health Administration, the state Emergency Management Agency, etc. Under 35 IAC 212.309, a source is not required to submit a fugitive dust control program (which is known as an Operating Program under applicable rules) as part of an application for a construction permit. The review of the contents of such plans by the Illinois EPA is separate from permitting. It is also reasonable that such plan not be developed until shortly before a new plant begins operation, as the plan would more accurately address the location of roadways and nature of vehicle traffic at a source. The adequacy of the plan could also be verified by on-site inspection of a plant by staff of the Illinois EPA.

It is commonly accepted that a basic technique for minimizing emissions during startup shutdown and malfunction is through evaluation and planning for these events by a source that results in the development written procedures that are to be followed for these events. Accordingly, the permit requires that the boilers at the proposed plant be operated in accordance with a Startup Shutdown Malfunction Plan. The provisions of the permit with respect to this plan are fully enforceable. They require Robbins Community Power to conduct certain activities pursuant a written plans that it prepares and maintains. This obligation is clearly stated and can be implemented. However, it should not be construed to further suggest the details of the plan must be directly enforceable in the same manner that emission limits set by the permit would be enforceable. In this regard, the specific provisions addressing this plan are derived from requirement of the General Provisions of the federal National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart A. The relevant regulations, 40 CFR 63.6(e)(3), appropriately provide that the contents of a such a plan are not subject to the same type of scrutiny as other parts of a permit application. For example, 40 CFR 63.6(e)(ix) specifically provides that the elements of the startup, shutdown, and malfunction plan shall not be considered an applicable requirement for purpose of federal operating permit programs under Title V of the Clean Air Act. As such, these plans do not have to be submitted with an application for a CAAPP permit, and are not required to be submitted with the construction permit application for the proposed plant. Again, as a practical matter, it is also reasonable that this plan not be developed until shortly before a new plant begins operation, so that the plan more accurately address the detailed operation at a plant. At such time, the plan can also be appropriately reviewed by staff of the Illinois EPA as part of an on-site inspection of the new source

81. The following documents were not included in the application or with the draft permit: (1) startup shutdown and malfunction plan; (2) preventative maintenance plan, (3) fugitive dust prevention plan, and (4) episode action plan. While these plans are not typically contained in a construction permit, the Chicago Department of Environment requests an opportunity to review and comment upon these documents when they have been prepared.

As noted by this comment, the plans listed in this comment are not typically part of an application for a construction permit. However, when the plant begins operation,

the Chicago Department of the Environment and members of the public can obtain a copy of these plans by a request to the Illinois EPA. The fugitive dust prevention plan (or Operating Program) and the Episode Action Plan would be readily available as the applicable rules that govern these plans provide that a source must submit a copy of such plans to the Illinois EPA for its review on or before the initial startup of a new source. A copy of the Startup Shutdown and Malfunction Plan and the Preventative Maintenance Plan (which is actually part of the Startup Shutdown and Malfunction Plan) would also be available. While Robbins Community Power is not generally required to submit a copy of its Startup Shutdown and Malfunction Plan to the Illinois EPA, Robbins Community Power is required to do so upon specific request by the Illinois EPA. The Illinois EPA would make such a request if an individual sought a copy of this plan.

82. As a result of the Illinois EPA's delay in responding to FOIA requests, individuals who requested copies of certain records from the Illinois EPA did not have the opportunity to review and comment on several important aspects of the draft permit for the proposed plant, such as the basis for Illinois EPA's independent LAER determination for the plant or information relating to startup, shutdown and malfunction plan for the boilers at the plant.

The public was not prevented from the aspects of the draft permit discussed in this comment. At the public hearing, individuals had the opportunity to ask the Illinois EPA questions about these matters or to generally comment upon them. As these matters were in fact addressed in specific comments, they have been addressed elsewhere in this Responsiveness Summary.

83. This permitting process has not been fundamentally fair, nor has it provided a full and complete opportunity for public participation. This is because the Illinois EPA did not provide copies of records requested by certain individuals under the Freedom of Information Act (FOIA).

The permitting process has not been unfair. As stated in the public notice for the comment period, which was first published on February 28, 2008, copies of the application for the proposed plant submitted by Robbins Community Power and the draft permit and project summary for the draft permit prepared by the Illinois EPA were made available for review by the public at several locations, including the public library in the Village of Robbins.

However, to provide a full opportunity for public participation and address the delay in assembling and providing certain other material related to the proposed plant that was requested under the FOIA, the Illinois EPA extended the public comment period for this proposed plant until June 3, 2008. This enabled individuals who had requested copies of certain information under the FOIA to review that information and consider it before submitting written comments.[35]

[35] **Copies of the records requested by individuals, which involved records in possession of several bureaus and groups in the Illinois EPA, were provided on May 9, 2008, several weeks before June 3, 2008, with delivery by express mail, with the costs for copying and shipping of the material waived by the Illinois EPA.**

84. The Illinois EPA improperly responded to my FOIA request because I only asked for the identity of documents or documentation other than the application that has been received or developed or otherwise relevant in the Illinois EPA file regarding the proposed plant. Instead, the Illinois EPA began to assemble actual copies all the relevant documents in its files, notifying me that fulfillment of my request would require the collection of a substantial number of records, which have not been located in the course of a routine search, and that the Illinois EPA was working to assemble those records. However, Illinois law requires that the Illinois EPA keep an index for its files, which should have been on top of the files for the proposed plant. I only asked for these indexes.

The Illinois EPA appropriately treated your FOIA request as request for copies of material regarding the proposed plant that are in its files. The Illinois EPA does not generally keep indexes for its files nor is there is not a legal requirement to do so, as claimed by this comment. In addition, maintaining indexes of files would be completely impractical given the huge number of records and files on different aspects of sources, projects and activities that are maintained by staff in the various bureaus and divisions of the Illinois EPA as part of their work. As related to FOIA requests, any such index also would not necessarily clearly identify the material in a file, so as to be of practical use to an individual making an FOIA request. To the extent that desired material was identified in an index or the nature of material could not be understood, the initial request would likely be followed by a request for specific documents in any case. Given these circumstances, the Illinois EPA did not have indexes of files to provide and appropriately treated your FOIA request as a request for actual copies of material regarding the proposed plant.

85. In its initial response to my FOIA request, the Illinois EPA, Bureau of Land, only sent me four pages. If the Bureau of Land assisted in the review of the wood fuel plan for the plant, why didn't I receive more material from the Bureau of Land?

It is most likely that the initial response to the FOIA request by the Illinois EPA only included four pages because the individual fulfilling your request only made copies of the material that was in the main files of the Bureau of Land. This individual did not realize that staff in the Bureau of Land were assisting in the review of the proposed plant and had information relevant to the FOIA request in their possession.

86. Relevant documents were not available in a meaningful manner. Because of the issues with availability of information, the comment period for the draft permit should be extended and a new public hearing held. If this does occur, a permit should not be issued.

The handling of FOIA requests for certain individuals, as addressed by this comment, does not invalidate the public comment period that has been held for the proposed plant. The comment period held by the Illinois EPA for the proposed plant provided ample opportunity for public input and was consistent with applicable regulatory requirements. Members of the public had the opportunity to raise any questions and concerns about the proposed plant during the public hearing on April 8, 2008. All permitting file information was ultimately provided, as requested under the FOIA.

The Illinois EPA extended the public comment period until June 3, 2008, to enable individuals who had requested copies of information under the FOIA to review that information and consider it before submitting written comments.

87. The permitting of the proposed plant should be based on applicable law and rule, not on USEPA guidance or recommendations, neither of which have the force of law. Guidance by its very nature assumes that there is some variability in the subject of such guidance, which may not be adequately or appropriately addressed by such guidance. Likewise, recommendations assume that some decision making or discretion must be exercised before such recommendations are applied to a particular situation.

As observed by this comment, guidance and recommendations do not have the force of law, so that their application to a particular situation may need to be independently evaluated and justified. In addition, as guidance, recommendations and other policy determinations have not necessarily undergone the same scrutiny and care during their development as laws and rules, they generally cannot be afforded the same weight as law or rules. It also cannot necessarily even be assumed that guidance or recommendations are still relevant given the specific situation that they were intended to address, the passage of time, or more recent developments. At the same time, guidance and policy should not be rejected out of hand. Guidance and policy may illuminate underlying principles that are at play, still be relevant when considered on its merits, or simplify the approach and provide consistency in addressing an incidental matter posed by a particular situation.

88. The amount of interaction between Robbins Community Power and the Illinois EPA during the processing of the application seems to reflect the Illinois EPA moving from impartiality to "booster" of the proposed plant.

The amount of interaction between the Illinois EPA and Robbins Community Power for this project was appropriate and necessary given the nature of the project. Notably, as the first wood fueled power plant proposed for Illinois in over a decade, the Wood Fuel Plan for the plant posed issues that the Illinois EPA had not previously addressed. As such, a number of drafts of this plan and a series of meetings were needed to develop a suitable plan to ensure the quality of the wood fuel for the plant, as accompanied the draft permit and is attached to the issued permit. The occurrence of these discussions should not be taken to suggest that the Illinois EPA lost its objectivity about this project or failed to carry out its duties in the review and processing of the application. The Illinois EPA is fully aware of its critical role in helping to create and maintain a healthful environment in Illinois for the benefit of this and future generations. This concern is reflected in the fact that it has taken over 10 months to compete the processing of the application for the proposed plant from the date that the application was originally submitted.

89. The project summary accompanying the draft permit does not discuss the process water needs of the proposed plant, which is located next to the Cal-Sag Channel. Existing power plants located along the waterways in the Chicago area use substantial quantities of water for cooling. If the proposed plant would use Channel water and return warm water to the

Channel, it could potentially affect the operations of the Metropolitan Water Reclamation District of Greater Chicago (MWRD) and the amount of water that must be diverted from Lake Michigan to maintain compliance with water quality standards.

Robbins Community Power has indicated that the proposed plant will not be using water from the Cal-Sag Channel. The plant will be obtaining the water from the City of Robbins and discharging it to the local wastewater treatment plant.

90. The MWRD is concerned that water used for process cooling could impact the MWRD's compliance with its NPDES permit. Under the NPDES Permit for its Calumet Water Reclamation plant, the MWRD is required to maintain a minimum of 3.0 mg/L of dissolved oxygen in the Cal-Sag Channel. (NPDES Permit No. IL0028061, Condition 12). The MWRD currently has infrastructure in place to meet this limit. However, if large quantities of water were used at the plant for process cooling and then discharged back into the Cal-Sag Channel, the temperature in the Channel and dissolved oxygen levels would be negatively affected.[36]

As explained, the proposed plant should not significantly affect water temperature or dissolved oxygen levels in the Cal-Sag Channel.

91. Will this plant have an impact upon the quality of drinking water supplied from Lake Michigan?

The proposed plant should not be of concern for impacts on the quality of the water supply from Lake Michigan.

92. The project would be better if there were solar and wind power for schools and public buildings in Robbins, paid for with by revenue from the plant.

The Village of Robbins and the local school districts must decide how the tax revenues provided by the plant should appropriately be used.

93. The coal-fired Fisk power plant on 22nd Street in Chicago does not have a scrubber and the control system for particulate is old. If 55 MW of electricity are generated at the proposed plant in Robbins, the Illinois EPA should take 55 MW away from the Fisk plant.

The Illinois EPA does not have the authority to mandate that Midwest Generation, which is a totally separate company from Robbins Community Power, cut back on the amount of electricity that is generated at the Fisk power plant, in response to the startup of the proposed plant, nor is such action justified. The emissions and operation of the Fisk power plant are appropriately addressed independent of the proposed plant. In this regard, Midwest Generation has entered into a commitment

[36] The Illinois Pollution Control Board is also currently engaged in rulemaking for the water quality standards throughout the Chicago area, which could increase the standard for dissolved oxygen from 3.0 to 5.0 mg/L. Compliance with this standard might require the MWRD to construct additional infrastructure.

to install a scrubber on the existing generating unit at this plant by December 31, 2015 or to permanently shut down the unit (35 IAC 225.625(a)(3).

GENERAL COMMENTS

1. The proposed plant will have a significant positive economic impact for the Village of Robbins and the region, while protecting the environment.

2. The region will be well served by the proposed plant. It will bring a clean, safe and environmentally-friendly source of renewable electricity to the region. The use of clean wood to generate electric power would responsibly address public policy concerns as it would be an alternative to fossil fuels like coal and natural gas, which negatively impact the environment, and greatly reducing the amount of wood material going to landfills.

3. Over the past ten years, the Recycled Materials Resources Center has sponsored 39 projects to encourage the increased use of recycled materials by analyzing potential long-term considerations and environmental effects. Upon review of the plans and methods for recycling clean wood into a renewable fuel, the Center is proud to endorse this project.

4. The proposed plant could be very important to help handle the large number of ash trees in the Greater Chicago area that will likely have to be cut down after they are infected by Emerald Ash Borers, to slow and prevent the further spread of this insect infestation.

5. As a member of organized labor, I support this project. It will help revitalize southern Cook County and provide an opportunity for the working men and women in the region while providing a clean, renewable source of power and benefiting the Village of Robbins.

6. The proposed plant would help reduce the amount clean wood (pallets, cable spools, tree trimmings, etc.) sent to landfills, which should be being recycled.

7. The proposed plant would be an improvement over existing coal-fired power plants.

8. As a boilermaker and having lived in this area for many years, I have seen the improvements in technology and the environment. This project will not be harmful.

9. This plant would provide needed tax revenue to the Village of Robbins and the local school districts.

11. This plant would add to the spectrum of available environmentally and economically methods for management of the wood from the Chicago area urban forest, working along with reclamation of timber, to help this resource be beneficially used.

FOR ADDITIONAL INFORMATION

Questions about the public comment period and permit decision should be directed to:

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LISTING OF SIGNIFICANT CHANGES BETWEEN THE DRAFT PERMIT AND THE ISSUED PERMIT

Introduction and elsewhere: The description of the boilers in the introduction to the permit does not indicate that limestone would be added to the fluidized beds of the boilers. The draft permit inadvertently listed limestone addition to the beds of the boilers. While limestone is added to the beds of coal-fired fluidized bed boilers for control emissions of sulfur dioxide (SO_2), the sulfur content of wood is lower that that of coal and separate add-on scrubber systems will be used for control of SO_2 emissions from the boilers. Provisions elsewhere in the permit that referred to handling of limestone by the plant are also no longer present. As the plant will not use limestone in the boilers at the plant, the plant will also not be handling limestone.

Conditions 1.5(b)(i) and 2.1.6 (Table II) and Condition 2.1.7(b): Limitations are set for emissions of formaldehyde from the plant and the boilers, accompanied by a change to the provisions for testing of emissions of the boilers to also include testing for formaldehyde. These changes are made to the permit to further ensure that the plant is not a major source for emissions of hazardous air pollutants (HAPs), by explicitly addressing emissions of formaldehyde, which is a HAP that is commonly emitted from combustion processes.

Condition 1.7(d): This new condition requires diesel-fired non-road equipment operated at the plant, such as dozers and front end loaders that would be used to maintain storage piles, to use ultra low sulfur diesel (ULSD) fuel. While a federal rule requires use of such fuel in non-road equipment in a few years, the provision ensures that ULSD will be used when the plant begins operation, which is a reasonable and readily available measure to minimize emissions of the non-road equipment at the plant.

Conditions 1.12, 1.13, 1.14 and 1.15: These conditions are now located in the Source-Wide Permit Conditions, near the front of the permit, to improve the clarity of the permit. These conditions, which deal with Retention and Availability of Records, General Reporting Requirements, Submission of Notifications and Reports, and Effect of Permit, were included in the draft permit as Conditions 3.7, 3.4(b) and (c), 3.8 and 3.6 in the General Conditions toward the back of the permit.

Condition 2.1.3-2(b)-2: This condition, which provides the authorization for violation of state emission standards during startup of the boilers pursuant to 35 IAC 201.262, now also addresses 35 IAC 216.121, the state emission standard for CO emissions from fuel combustion emission units, in addition to 35 IAC 217.121, the state emission standard for NOx emissions from new fuel combustion emission units. The authorization in the draft permit incorrectly failed to list 35 IAC 216.121, which may potentially be violated during startup of a boiler.

Condition 2.1.5-3(a): This condition, which addresses the Startup Shutdown and Malfunction Plan required for the boilers, is enhanced. For purposes of the development and implementation of this plan, the term “malfunction” is defined to include all equipment failures with excess emissions. Equipment failures must also be handled as malfunctions for purposes of the recordkeeping, notifications and reports for malfunctions required by the permit irrespective of the cause of the failure. As a result, the measures that are implemented for the boilers to prevent and respond to equipment failures will be comprehensive and include potential equipment failures that

should be prevented and not occur.

Condition 2.1.5-1(d): This condition, which addresses the plan that Robbins Community Power must prepare and maintain for management of the stockpiled fuel at the plant, has been enhanced. The condition now addresses certain procedural requirements associated with this plan, which would be a living document. In particular, this condition now specifies that Robbins Community Power must revise this plan if necessary to comply with the requirements of the permit or address changes in the solid fuel supply for the boilers or if required by the Illinois EPA.

Condition 2.1.5-2((b): This limitation for the annual use of solid fuel by the plant is now expressed in terms of the weight of fuel fed to the boilers, rather than its energy content. This change was made to enable practical enforceability of this limitation.

Condition 2.1.7-1(a)(ii): This new condition requires a second round of emissions testing to be conducted for the boilers between 15 and 24 after the initial round of emissions testing. This "follow-up" emissions testing is being required to provide further verification of emissions for pollutants other than SO_2, NOx and CO, for which continuous monitoring is conducted, and $PM_{2.5}$, which would be adequately addressed by testing for PM_{10}. The permit need not address subsequent emission testing as provisions for periodic emission testing would be more appropriately addressed in the CAAPP permit for the plant.

Condition 2.1.7-1(e)(iii): This condition, which addresses the operational information that must be contained in the reports required for emissions testing of the boilers, has been enhanced. The condition now requires more operational information be submitted, including certain analytical data for wood fuel and collected fly ash during the period of testing. This is accomplished by references to other conditions of the permit that address the collection of this information. Inclusion of this data in the emission test report for a boiler will facilitate in the assessment and understanding of the relationships between operating conditions of a boiler and its emissions.

Condition 2.1.7-2(a): This condition, which addresses the sampling and analysis of the solid fuel supply for the boilers, has been enhanced. The condition now requires analysis for more parameters, including moisture and ash content of fuel and the sulfur, fluorine and copper content of fuel. The condition also requires more frequent analysis, with analyses required on a quarterly basis during the two years of operation of the plant and on an annual basis thereafter. The collection of this data may assist in understanding the relationships between certain properties of the wood fuel for the boilers, i.e., ash, sulfur and moisture content of fuel, and the emissions of the boilers. This data may also assist in confirming the quality of the wood fuel for the boilers.

Condition 2.1.7-2(b): This new condition requires periodic sampling and analysis of the fly ash collected at the boilers for its metals content. This is generally required on a quarterly basis during the two years of operation of the plant and on an annual basis thereafter. In addition, sampling and analysis of ash is required during the period when emissions testing is conducted and upon request by the Illinois EPA. The collection of this data may assist in understanding the level of control that is achieved for metals and assist in confirming the quality of the wood fuel for the boilers.

Condition 2.1.2-2(c) and (d): These new conditions support the conditions for sampling and analysis of wood fuel and ash. Condition 2.1.2-2(c) restricts the use of composite sampling to a

period no longer than one week (seven days). Condition 2.1.2-2(d) requires that records be maintained for this sampling and analysis, including both results and documentation for the sampling and analysis procedures.

Condition 2.1.8-2(a)(iv): This condition, which addresses operational instrumentation related to the oxidation catalyst systems on each boiler, has been enhanced. The condition now requires instrumentation to measure the concentration of CO in the flue gas entering these systems. The information from these devices may help in understanding the efficiency of combustion that is achieved by the boilers and the level of control for CO that is provided by the catalyst systems.

Condition 2.1.8-2(a)(vi): This condition, which addresses operational instrumentation related to the baghouses on each boiler, has been enhanced. The condition now requires instrumentation that indicates the status of each compartment in a baghouse, i.e., on-line, cleaning cycle or out of service. The information from these devices this data may help in reviewing the operation of the baghouses and assist in ensuring that they are properly operated and maintained.

Condition 2.1.11(c): This condition, which addresses the periodic compliance reports for each boiler, has been enhanced. The condition now requires that these reports initially be submitted on a monthly basis. The frequency for these reports would only change to 12 months after the conclusion of the shakedown period. Monthly submittal of compliance reports during the initial operation of the boilers, rather than quarterly submittal, may result in better communication with the Illinois EPA during the initial operation of the plant and faster response by the Illinois EPA to any problems that might occur.

Condition 2.2.4(b): This new condition indicates that the requirements of 35 IAC 212.304, Storage Piles, would not be applicable to the fuel storage piles at the plant. It reflects the applicability provisions of this rule, which does not apply to sources like the proposed plant, whose potential emissions of particulate matter are less that 100 tons per year. As a consequence the fuel storage piles at the plant do not have to be sprayed with a surfactant or water on a regular basis, as specified by 35 IAC 212.304, which could be contrary to maintaining fuel in good condition. However, measures to control particulate matter emissions from storage piles must still be implemented, as would be addresses in the required Fuel Management Plan.

Condition 2.2.5(d): This condition, which addresses the implementation of control measures for material handling operations, has been enhanced. The condition now requires that the control measures for material handling operations address all requirements for control of particulate matter emissions from such operations. It also clarifies that these control measures are to be addressed as part of the Fuel Management Plan required by Condition 2.1.2-1(d) for handling of solid fuel at the plant.

Condition 2.3.3(e): This new condition contains 35 IAC 212.315, Covering of Vehicles, which would be applicable for transport of ash from the plant by truck. This rule in 35 IAC Part 212, Visible and Particulate Matter, addresses the covering of trucks to prevent loss of transported material and emissions of particulate matter. It requires that loads of material have a covering that is sufficient to prevent the release of particulate matter into the atmosphere, subject to the qualification that the level of control required by Section 15-109 of Illinois' Motor Vehicle Code shall govern, if it less strict. As loss of ash during transport could reasonably be expected to result

in or threaten the emissions of particulate matter, given the nature of fly ash from a solid fuel-fired boiler, this rule is appropriately applied to transport of ash from the plant.

Condition 2.3.5(c) and (d): These new conditions address the loadout of ash from the plant. Condition 2.3.5(c) requires any shipments of ash that are not transported by a fully enclosed transport vehicle to be treated with water or dust suppressant and then covered to prevent loss of ash during transport. Condition 2.3.5(d) requires that any ash that is spilled must be collected so as to prevent the ash from being tracked out of the plant or otherwise becoming air borne. These requirements will serve to prevent emissions of particulate matter from the loadout of ash and the subsequent transport of ash from the plant.

Condition 3.2(a): This condition, which addresses the testing of emissions of particulate matter from material handling and ash handling operations, has been enhanced. The condition now provides deadlines for such testing to be conducted if it is requested by the Illinois EPA.

Attachment 4 (Acid Rain Permit): Various changes are made to the wording of the terms and conditions of the Acid Rain permit for the plant. The changes reflect language for the terms and conditions for Acid Rain Permits for new sources recently agreed to with USEPA. The Acid Rain permit also be effective in 2008, in the event that the proposed plant began operation this year.