

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF AIR

February 14, 2000

Responsiveness Summary
to Questions and Comments on an
Air Pollution Control Permit for
New Heights Recovery & Power, L.L.C.
Ford Heights, Illinois

Waste Tire-Fired Boiler

Source Identification No.: 031801AAE
Application No.: 99050003
Illinois EPA Hearing File No.: 390-99

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ILLINOIS EPA DECISION

The Illinois Environmental Protection Agency (Illinois EPA) has issued a state air pollution control permit to New Heights Recovery & Power, L.L.C. (New Heights) for the waste tire-fired boiler in the Village of Ford Heights, Illinois. The boiler facility must be operated in accordance applicable regulations and the conditions of the permit.

PERMIT PROCESS

The Illinois EPA Bureau of Air processes applications for permits for sources of emissions to the atmosphere. An air permit application must address and demonstrate compliance with applicable air pollution control laws and regulations before a permit can be issued.

BACKGROUND ON THE FACILITY

This boiler facility was initially permitted and developed by Chewton Glen Energy (Chewton Glen) to produce shredded waste tires to generate electricity. A plant to produce crumb rubber from waste tires was also developed at the site. Before the boiler facility became fully operational and had completed the required emissions testing to demonstrate compliance with applicable requirements, operation stopped due to the repeal of the "Retail Rate Law." The repeal of this law reduced revenues from the sale of electricity, forcing Chewton Glen into bankruptcy.

KTI, a waste management company, and certain Chewton Glen bondholders have formed New Heights Recovery & Power, L.L.C. to take over the site. New Heights has requested a new construction permit for the existing waste tire-fired boiler, to allow it undertake shakedown (i.e., the initial operation of the boiler) and emissions testing of the waste tire-fired boiler.

This boiler is specifically designed to burn shredded waste tires. The boiler is also equipped with supplementary natural gas fired burners. The steam produced by the boiler would be used to generate up to 20 megawatts (MW) of electricity. The boiler is rated at a maximum heat input of 240 million Btu per hour, which represents, roughly, a nominal capacity to burn approximately 700 passenger tire equivalents per hour. Waste tire fuel would be produced on-site from whole tires using the existing primary shredder at the site.

A series of three air pollution control systems are used to reduce emissions from this boiler in addition to the good combustion practices required for the boiler itself. Nitrogen oxide (NO_x) emissions from the boiler are controlled by selective non-catalytic reduction (SNCR). This system injects urea into the flue gases to remove NO_x. A fabric filter or "baghouse" removes ash or particulate matter from the flue gas before discharge to the atmosphere. The layer of ash that builds up on the surface of the baghouse fabric filter is periodically removed by air flow in the reverse direction, and collects in the hoppers at the bottom of the baghouse. The collected ash is transported by enclosed conveyors to a storage bin for shipment off-site. A lime scrubber system removes gaseous sulfur dioxide (SO₂) and hydrogen chloride (HCl) from the flue gas. This is done by passing the flue gas through a water and lime (calcium hydroxide) solution, which reacts to absorb these gases and collects them in a liquid slurry.

With the required control measures, the boiler should not be a major source for any pollutant.

PUBLIC COMMENT PERIOD AND HEARING

The public comment period began August 8, 1999, with the publication of a notice in the Chicago Heights Star newspaper. Additional notices appeared in the Star on August 15 and 22, 1999. A public hearing was held on September 21, 1999, at 7:00 p.m. at Cottage Grove Middle School, 800 East 14th Street in Ford Heights, to receive verbal comments and answer questions regarding the application and draft air permit. The comment period comments closed on October 21, 1999, allowing an additional 30-days following the hearing for submittal of written comments to the Illinois EPA.

FINAL DECISION

Upon review of comments received during the public comment period and final review of the application, the Illinois EPA has determined the application meets the standards under state law for issuance of a construction permit. Accordingly, on February 14, 2000, the Illinois EPA issued the construction permit for the tire-fired boiler. The permit as issued includes the following significant changes compared to the draft permit.

- Introduction - Boiler capacity expressed in terms of weight of waste tires and number of passenger tire equivalents.
- Condition 2 - Limits set for emissions of zinc.
- Condition 11 - Emissions testing required for additional pollutants.
- Condition 12 - Requirements established for storage of shredded tire fuel, including a limitation on the amount of tire fuel stored outdoors.
- Condition 13(c) - Additional recordkeeping required for startup and shutdown of the boiler.
- Condition 15(e) - Notification required for results of testing of boiler ash to determine whether it qualifies as hazardous waste.

QUESTIONS AND COMMENTS

GENERAL

1. Would this permit restrict the boiler to just burning waste tires?

Yes. In addition to natural gas, which would be used mainly during startup and shutdown, the only other material that this permit allows to be burned in the boiler is waste tires.

2. How many waste tires can the New Heights complex handle? How many tires could be burned in the boiler?

The boiler has the capacity to burn as many as 70,000 tons of waste tires per year. This reflects operation of the boiler at a typical firing rate of 233 million Btu per hour and a nominal heat content for the waste tires of 13,552 Btu per pound, so as to use 8.6 tons/hour and 206 tons/day of waste tires. The annual estimate reflects operation at this rate for as many as 340 days per year. To the extent that the

boiler is operated less or the tire fuel has a higher heat content, the actual amount of tires would be proportionately lower.

The existing ambient crumb rubber plant has the capacity to handle as many as 15,000 tons of tires per year (nominal hourly capacity 4.25 tons for two-shift operation). The cryogenic crumb rubber plant has the capacity to handle as many as 50,000 tons of tires per year (nominal hourly capacity 6.0 tons for continuous operation). If a second cryogenic processing line were installed in the cryogenic crumb rubber plant, as allowed by the construction permit issued for the cryogenic crumb rubber plant, this capacity would double.

- 3. What conversion factor should be used to convert from weight of tires into the number of tires?**

The weight of tires varies with size. Illinois' rules assume that the average weight of a waste tire is 25 pounds. Passenger (light duty automobile) tires weigh something less than this, probably closer to 20 pounds each. Truck tires can weigh considerably more.

BOILER OPERATION

- 4. A spreader-stoker type furnace is the most successful and widely used for burning tire derived fuel. Why was a reciprocating grate stoker furnace selected?**

The boiler is a spreader-stoker type furnace, that is, fuel is spread onto a grate on which the fuel burns. The unit would be more fully described as a "reciprocating grate spreader-stoker furnace." The grates in spreader-stoker boilers move to transport the burning fuel from the front to the back of the furnace. The grate in this unit are made up of a number of overlapping metal sections that slide back and forth, i.e., reciprocate.

- 5. How is the fuel feed rate and the combustion air flow rate to the furnace controlled?**

The shredded tires are fed into the boiler through a scale system, which can vary the amount and frequency of fuel charged to the boiler. The amount of air introduced into boiler is determined by the forced draft fan, which is also adjustable. The ratio of primary air introduced below the grate and secondary air introduced above the grate is set with dampers. All these units are normally operated by a central computerized boiler management system.

- 6. Chewton Glen experienced a problem maintaining boiler temperature. How will New Heights maintain boiler temperature on a uniform basis if it has not determined the correct size for shredded tire fuel?**

The size of the shredded tire fuel determines how quickly it burns. During its short period of shakedown (i.e., initial operation) in 1995, Chewton Glen experienced a problem because the tire shreds were too small. The shreds burned too quickly, exposing the front part of the grate system to excessive temperatures and leaving the back part of the grate uncovered, which damaged the grate. This did not affect the rest of the boiler, since the amount of fuel being burned (the amount of

heat put into the boiler) was correct. New Heights will also be able to control the rate at which tire shreds are charged to the boiler.

7. **In its application for a revised construction permit, New Heights requests approval "to modify the boiler grate and fuel feed systems as necessary to assure that the facility is able to operate properly and comply with all emission limits up to its maximum power generation capacity." This request should be denied. At a minimum, a time limit on this condition should be established and the Illinois EPA should be involved in changes.**

Although New Heights made this request, changes of this type to an emission unit and in these circumstances do not require Illinois EPA involvement. In particular, in conjunction with its shakedown of the boiler, New Heights has requested the ability to make changes to the grate system and related changes to the fuel feed system. New Heights has not asked to make changes that might increase the physical capacity of the boiler, as installed, which is determined by the design of water pumps and steam tubes, and ultimately by the size of the associated electrical generator.

8. **New Heights still seems to be testing the size of the tire chips going into the boiler. It sounds as though New Heights is not sure what modifications are needed to improve the performance of the fuel feed and the furnace.**

New Heights has not had an opportunity to operate the boiler yet, which has been idle for almost four years. It is correct that as part of its shakedown of the boiler New Heights will have to verify the optimum size of tire shreds to burn in the boiler. New Heights will start operation with larger shreds and if needed gradually reduce size to assure that the grate is always properly covered with fuel. New Heights may also determine that other changes to the grate system or fuel feed system would be beneficial. For example, the feed system may need to be adapted to handle larger shreds or distribute the tire shreds over more of the area of the grate. Changes to the grate itself may also be needed to allow easier movement of the shreds over the grates or prevent jamming or further adjust the balance between primary and secondary combustion air.

9. **If New Heights does not maintain a uniform temperature in the boiler, the pollution control equipment will not work as well.**

This is generally correct. It is certainly correct that the temperature of the flue gases must be in the correct temperature range for the Selective Non-Catalytic Reduction (SNCR) System to be effective in controlling NO_x emissions. Stable boiler temperatures also make it easier to effectively operate the other air pollution control equipment. However, the baghouse (fabric filter) can safely operate over a range of temperatures so that routine variation in boiler temperature should not have a significant effect on the operation of the baghouse and the scrubber which follows it.

EMISSIONS

10. In comparing Construction Permit 92090009 issued to Chewton Glen and the draft permit prepared for New Heights, a significant increase in particulate matter (PM) emissions is allowed. The draft permit for New Heights would allow a total of 88 tons/year of PM (26.9 tons filter and 61.1 tons stack) to be emitted. The Chewton Glen permit only allowed 26.6 tons/year of PM emissions. Is this because New Heights is allowed to burn more tires? This increase in PM emissions needs to be explained.

The difference in particulate matter emissions is not due to an increase in the rate at which tires would be burned. The current permit addresses the boiler that Chewton Glen built and the maximum heat input capacity of the boiler is unchanged, i.e., 240 million Btu per hour.

The difference in emissions is attributable to two developments. First, New Heights has requested annual operating limits based on maximum annual operation for 340 days per year (93.1 percent availability), whereas Chewton Glen based its request on maximum annual operation for 336 days per year (92.1 percent availability). This difference is reflected in a comparison of the annual emission limits of 26.6 and 26.9 tons, which differ by about one percent. The other development reflects the fact that the scrubber, which is situated after the baghouse, may add some lime particulate matter to the cleaned air coming out of the baghouse which was not reflected in Chewton Glen's permit. No change in the rate of particulate matter emissions is allowed for the baghouse, i.e., the hourly emission limit at this point in the ductwork is still 6.6 pound per hour. However, a second emission limit is now set after the scrubber at 15 pounds per hour to accommodate some loss of scrubbant as particulate matter emissions. The concern is that a baghouse-based emission limit not constrain the effective operation of the scrubber to control emissions from the boiler.

It should be noted that these two limits are not additive, that is, the boiler is allowed no more than 6.6 pounds of particulate in the ductwork after the baghouse and no more than 15 pounds of particulate coming out the stack. Alternatively, New Heights may comply with an emission limit of 6.6 pounds per hour at the stack.

11. The draft permit also has higher emission limits for CO, NO_x, SO₂, THC compared to the limits in the Construction Permit issued to Chewton Glen. Is this also due to an increase in the amount of tires to be burned? The changes need to be explained.

As discussed above, these changes do not reflect any change to the boiler. They are in part the consequence of the higher annual availability factor requested by New Heights. In addition, New Heights has requested hourly emission limits that reflect the boiler design capacity, i.e., 240 million Btu per hour. The limits for Chewton Glen reflected an average firing rate of the boiler, i.e., 210 million Btu per hour. In addition, the changes to the SO₂ and NO_x limits reflect New Heights' request that limits be based on the required efficiency of control devices, rather than the typical control efficiency, which is

somewhat higher. Finally, and perhaps most significantly, the change to the NO_x emission limit does reflect a change to the efficiency required to be achieved by the Selective Non-Catalytic Reduction (SNCR) system, as was specifically discussed in the Illinois EPA's Project Summary prepared in conjunction with the draft permit. The emission limits for NO_x reflect a 45 percent control efficiency, rather than 50 percent removal efficiency as relied upon by Chewton Glen. The new level of control efficiency is consistent with recent performance of SNCR systems when maintaining low levels of associated ammonia slip from unreacted reagent.

12. **A USEPA report identifies zinc as a contaminant of concern from combustion of tires, Air Emissions from Scrap Tire Combustion Facilities, October 1997, USEPA 600/R 97-115. The report indicates that combustion facilities burning tires should monitor emissions of zinc. Zinc can have a variety of harmful effects on health and the environment as described in the USEPA's Toxic Substances Disease Register, Fact Sheet for Zinc, September 1995. The permit should set a limit on zinc emissions.**

In response to this request, limits on zinc emissions have been included in the issued permit and testing of zinc emissions is required. While zinc is not as toxic as other heavy metals, zinc, in the form of zinc oxide, is a constituent of rubber tires. Emissions of zinc can be readily tested to confirm the effectiveness of the control system for removal of metals.

13. **Why has New Heights asked to have a "permit condition allowing emissions during startup and shutdown to exceed the emission limitations for normal operation?"**

Startup and shutdown both involve gradual transition of the boiler across the full range of boiler load, with transition from natural gas to tire fuel or vice versa. During these conditions it may be impractical or impossible to consistently comply with certain emission limitations established for the boiler. For example, the SNCR system can not be activated until the temperature of flue gases at the injection point reaches the correct range. Otherwise, the NO_x removal reaction will not occur and ammonia will be emitted. The activation of the SNCR system must be coordinated with the operating temperature achieved in the boiler. Similar concerns exist for other pollutants. In addition, the duration of operation under the transitional conditions of startup and shutdown is relatively short, and for much of the time involves low load operation with "clean" natural gas fuel. Accordingly, the permit does not set performance-based emission limits, expressed in terms of pounds per million Btu heat input, for periods of startup and shutdown. Rate-based emission limits, expressed in terms of pounds per hour, continue to apply during such periods.

14. **What is the Illinois EPA's legal basis under applicable rules to allow higher emissions during startup and shutdown?**

There is ample legal support for establishment of alternative requirements for periods of startup and shutdown, due to the special circumstances during these times. Refer to Illinois' air pollution

control regulations at 35 IAC Part 201, Subpart I, and federal regulations at 40 CFR 60.8(c).

15. **Realizing that the emission levels of various pollutants may exceed the normal operation emission limits, Illinois EPA should provide maximum levels of emissions in the permit that the boiler can emit during startup and shutdown.**

As explained above, the permit includes limits on the rate of boiler emissions, expressed in pounds per hour, which apply at all times, including startup and shutdown. These provisions were also in the draft permit.

16. **Are there any measurable parameters that the boiler cannot exceed during startup?**

Yes. The Continuous Emission Monitoring System for SO₂, CO, NO_x and opacity must be operated during startup.

17. **The permit should limit the duration and frequency of startups and shutdowns during which the emissions of the boiler will exceed the normal operation emission limits.**

The permit does limit the period of time during startups and shutdowns when normal performance limits do not have to be met. The permit does not limit the number of startups and associated shutdowns. This is because hourly emission limits may not be exceeded during these periods.

18. **How is airborne material coming out of the tire shredder controlled?**

Water sprays are present in the shredder to keep the blades cool. This controls any dust from mud or dirt on the tires. The shredding operation itself is not dusty because the shredder is a relatively slow machine that "cuts" the tires into large shreds, and is unlike high-speed crushing machines processing friable materials that crumble into powder.

19. **Tires are exposed to all sorts of chemicals during use on the roads. What can become airborne from the tires?**

Tires are impervious to water and other chemicals to which they are exposed during normal use. In the absence of water sprays, the shredder could produce nuisance dust from dried dirt and mud sticking to some tires. The water sprays used to cool the shredder have the additional effect of washing this material off the tires.

20. **Is the fly ash handling system totally enclosed?**

The handling of flyash is totally enclosed until the flyash is mixed with water to prevent dusting during loadout and transport.

21. **When will the baghouse be enclosed? Will New Heights enclose the baghouse prior to initial startup of the boiler?**

The baghouse is already "enclosed" so that dust does not escape to the environment. However, the fully enclosed conveyors at the bottom of the baghouse are not contained within a separate structure and are only protected from the weather by the structure of the baghouse overhead. New Heights has proposed to extend the outer walls of the baghouse down to the ground to "enclose" the enclosed conveyors and further shield them from the weather.

TESTING AND MONITORING OF EMISSIONS

22. **For what pollutants must the emissions of the boiler be tested? Ammonia? Zinc and other trace metals? Polycyclic aromatic hydrocarbons (PAH)? Other tire burning facilities are required to test for these pollutants.**

The permit as issued requires emissions testing for all these pollutants.

23. **Does the permit assume that no volatile organic compounds (VOC) will be emitted? Emissions of VOC should be monitored to determine whether complete combustion is occurring? The permit granted to Modesto Energy, a similar facility in Westley, California, sets not only a VOC limit but also requires annual emissions testing to show compliance.**

The permit allows for, and addresses, VOC that will be emitted from the boiler by setting a limit on emissions of total hydrocarbon (THC). This THC limit addresses VOC since VOC is a subset of THC. The permit also requires testing for THC emissions. Limits expressed in terms of THC are easier to implement for a combustion facility than limits expressed in terms of VOC, because all gaseous organic compounds are considered for purposes of determining compliance.

24. **New Heights should be required to monitor heavy metals, dioxins and furans, mercury, and polycyclic aromatic hydrocarbons. The permit granted to Modesto Energy requires monitoring for these contaminants.**

The current permit issued to Modesto Energy does not require either monitoring or emissions testing for these pollutants. Continuous emission monitoring systems are not developed for these pollutants.

Emissions monitoring for these pollutants is not needed as continuous emissions monitoring will be conducted for other "surrogate" pollutants that address emissions of these pollutants. In particular, New Heights' permit requires continuous emissions monitoring for carbon monoxide. This addresses emissions of organic compounds, which are related to combustion. Continuous monitoring is also required for opacity and sulfur dioxide, which addresses emissions of metals that are controlled by the baghouse and scrubber.

Modesto Energy has conducted emissions testing for these pollutants in the past. The permit issued to New Heights also requires initial emissions testing for some of these pollutants, including emissions of heavy metals and polycyclic aromatic hydrocarbons. However, the permit

does not require testing for other pollutants which are not present in significant amounts from burning of tires in a boiler, as confirmed by testing that was performed at Modesto Energy.

AIR QUALITY IMPACTS

- 25. Are the emissions from this facility going to be harmful to the community?**

The Illinois EPA does not expect the facility to have impacts on public health that would be harmful.

- 26. How will the health of community children be affected by emissions from this facility?**

As stated above, the Illinois EPA does not expect that the facility will have a significant impact on public health that would be harmful. In this regard, ambient air quality standards and other reference values for acceptable ambient concentrations of pollutants in the air do consider children and other sensitive groups in the general population.

- 27. Is the material from the shredder taken into account in determining health effects from emissions at the facility?**

As already discussed in Comment 18, the shredder is not a significant source of emissions. It does not have the potential to emit fine particulate matter or incomplete combustion products, which are of concern for health impacts.

- 28. Air pollution has not been looked at from a cumulative standpoint?**

It is correct that for minor sources of emissions, like this facility, cumulative impacts of emissions are not explicitly addressed during permitting. At the same time, the overall quality of the air is assessed by the network of ambient air quality monitoring stations operated by the Illinois EPA. Both USEPA and the Illinois EPA have ongoing programs to evaluate and improve air quality throughout the State and particularly in urban areas. In this respect, Cook County is the subject of ongoing intensive study to evaluate the role of individual stationary sources as well as the various categories of mobile and area sources in overall air quality.

WASTE TIRE STORAGE AND FIRES

- 29. There must be some storage of whole tires?**

Yes. New Heights will be storing a relatively small amount of whole tires at the site. New Heights has stated that whole tires would be kept in the individual transport trailers in which they are brought to the site for a short period of time until they are shredded. This avoids handling the whole tires twice, allowing transport trailers to be unloaded directly for processing by the main shredder.

30. **What is the maximum tonnage of whole and shredded tires that the facility is planning to have stored at the site? There should be a limit to the number of tires that can be stored on site.**

At the hearing, New Heights stated that between 6,000 and 10,000 tons of shredded tires could be stored outdoors on the 100 foot by 200 foot concrete pad. The issued permit limits the amount of shredded tires stored outdoors, i.e., the main waste tire pile, to 6,250 tons, which is equivalent to about a 30-day supply of fuel. This is consistent with the need of a power plant to have an adequate fuel supply on-site.

In addition, New Heights temporarily stores whole tires in the transport trailers, as discussed above, and has a much smaller amount of shredded tires in inventory inside the processing building, perhaps as many as 250 tons. The magnitude of this storage is not limited as it is generally restricted by the size of the building.

31. **How many shredded tires would actually be stored outdoors?**

The amount of shredded tires stored outdoors would vary up and down depending on whether the supply of tire fuel is greater or smaller than the rate at which fuel is being burned. It would be reasonable to assume that the facility would try to maintain a reserve supply of at least two weeks of fuel at all times to cover any breakdowns of the main tire shredder.

32. **Illinois EPA appears to be dismissive about potential fire hazards at New Heights.**

This is not correct. The Illinois EPA's Bureau of Land has closely monitored the status of the previous tire piles at the site, which were required to be removed from the site before New Heights began its operations. The Bureau of Land is also overseeing the handling of tires by New Heights to assure that they are properly handled in compliance with applicable state rules governing management of waste tires found at 35 Ill. Adm. Code .

33. **If the Illinois EPA does not limit the amount of tires that can be stored on site, then how can the Illinois EPA ensure that there will be fire breaks in the pile and that the stored pile will not be a fire hazard?**

Unlike the permit issued to Chewton Glen, the issued permit for New Heights imposes a limit on the amount of waste tire fuel that may be kept outdoors, restricting storage to a concrete pad, as well as requiring various practices to minimize the risk of a tire fire.

34. **Illinois' rules for Management of Used and Waste Tires, 35 IAC Part 848, impose requirements on large tire storage sites for financial assurance and tire removal agreements. Section 54.12 of the Environmental Protection Act defines a tire storage site as a site where used tires are stored or processed. Thus, New Heights is a tire storage site that is subject to financial assurance provisions, removal agreement provision and various other requirements under Part 848.**

This is correct with respect to waste tires that are brought to the site. However, these rules are not applicable to storage of waste tires once they have been shredded for use as fuel and are being stored at the site where they are used as fuel.

35. What fire protection measures are being taken?

Measures must be taken to reduce the likelihood of a tire fire, to reduce the extent of any fire, and to facilitate the safe and prompt control of a fire. These measures include limits on the dimensions of the tire storage pile, separation from ignition sources, compliance with applicable fire codes, prior consultation with local fire departments, contingency planning, emergency management planning, etc.

36. What is the bond amount required guaranteeing removal of tires in case of default by owner or a bankruptcy as occurred with the first owner?

This requirement does not apply to tires that have been shredded for use as fuel. For the storage of whole tires, this requirement currently entails a commitment of \$50,000 to address the removal of whole tires from the site.

37. Unfortunately, it appears that New Heights is exempt from most of 35 IAC Part 848, because this facility deals with shredded tires burnt for fuel on the premises. 35 IAC Part 848 has provisions for contingency planning and fire prevention measures that should apply to the facility. Illinois EPA should make these provisions applicable to this facility, with a permit condition requiring compliance with these provisions.

As discussed above, New Heights is subject to Part 848 as related to its handling and storage of whole tires. Part 848 does not extend to storage of tires that have been prepared for use as fuel. However, the issued permit imposes requirements for fire prevention measures and contingency planning, like those in Part 848 for whole tires, on the handling and storage of tire fuel.

38. In its 1992 "Guidelines for the Prevention and Management of Scrap Tire Fires", the Scrap Tire Management Council and International Association of Fire Chiefs indicate that "all scrap tire and rubber products storage facilities should be considered high risk storage sites and pre-planned accordingly." It is inappropriate for Illinois EPA not to require as a permit condition that New Heights enact a fire prevention and emergency response plan. This plan could include preventive measures like 24-hour security and safety checks, storage of sand on site, control measures in case fires do start such as evacuation, employee training, local agency and neighboring fire department involvement, and established methods to monitor fires, and anything else to prevent environmental disasters.

As discussed above, the issued permit does impose these types of requirements on the storage and handling of shredded tire fuel. It is not necessary for the permit to impose these requirements on the storage and handling of whole tires as these types of requirements are directly imposed by rule by Part 848.

39. New Heights does not have the capacity to prevent a fire in its tire stockpile.

While New Heights must take measures to reduce the likelihood that a fire will occur, it is correct that these measures cannot guarantee that a fire will never occur. This is why New Heights must also plan for a fire by developing and maintaining response plans and taking measures to allow a fire to be contained and safely extinguished.

40. I would like to bring to the Illinois EPA's attention facts regarding three tire-pile fires which amply illustrate the unpreventability of fires in tire piles and the intolerable burdens that tire fires inflict on the neighboring population. My conclusion is that even if the New Heights facility were operated safely, the risk of a tire fire is very great, and the ensuing harm to the physical and economic health of the surrounding community would be catastrophic. For this reason alone, the permit should be denied.

Case 1: Aurora

On October 14, 1999, a massive fire broke out at a 9,000-ton pile of shredded tires at a tire recycling facility in Aurora, Illinois, sending up smoke that was seen for miles. According to a report in the Chicago Tribune, investigators and company officials suspect that this fire was a case of arson.

Case 2: East Chicago

A fire broke out on July 16, 1994, at a tire storage facility in East Chicago, Indiana, where it continued to burn for six weeks. During that time, the fire sent up a huge column of thick smoke that was highly irritating to throat and lungs. Nearby residents were forced to evacuate their homes three times.

Case 3: Westley

Modesto Energy, the electricity-generating tire-burning plant in Westley, California, is located next to a massive pile of 7 million tires. Early in the morning of September 22 of this year, this pile was ignited by a lightning strike. Almost a month later, as of this writing, this fire is still burning, despite the efforts of dozens of firefighters from the famed Williams Fire and Hazard Control company out of Texas. Smoke from this fire has caused headaches, nausea, and dizziness in many people living and working, and passing through, the area. Reports from the local newspaper, "The Modesto Bee," say that California has spent about \$1.5 million as of October 21 in fighting this fire. According to this lawsuit filed against the owners of the pile, the plume of smoke has spewed dangerous substances such as benzene, polycyclic aromatic hydrocarbons, butadiene, nickel, chromium, lead, arsenic, hydrogen sulfide, nitrogen oxide, and particulate matter.

Comment acknowledged. Fires in waste tire storage piles have occurred too often. Appropriate measures must be taken to address the potential for a tire fire at New Heights.

41. All these tire fires could not be extinguished and had to burn out over a period of several days or few months.

The environmental impact of a tire pile fire on the air can often be minimized by letting the fire free burn. At the same time, steps can be taken to reduce the number of tires that do burn and the duration of a fire by separating unburned material from the fire. This is facilitated by appropriate design of the tire piles to allow such separation and pre-planning, including the identification of the resources needed to respond to a fire. These resources do include water, which can be effectively used to keep unburned tires from igniting.

42. On Wednesday, October 6, 1999, a lawsuit was filed in California Superior Court, seeking unspecified punitive damages from Ed Filbin, the owner of the Westley tire pile, and the companies that are affiliated with Filbin. Among other things, the lawsuit cites them for failure to create fire breaks by separating the tire pile into several smaller piles, failure to comply with a state order prohibiting new tires at the site and failure to carry out state orders to cleanup the site.

Comment acknowledged. One of the contributing factors to the magnitude of the Westley tire pile fire may have been the failure of the owners to properly manage the tire pile.

43. There is no final figure on how much it will cost to fight and to clean up the tire fire in Westley, California. According to the California Integrated Waste Management Board, the cost has been about \$100,000 a day and could reach \$7 million.

Comment acknowledged. Tire fires can be expensive to fight. However, as noted above, the owner of a tire pile can be held liable for such costs.

44. What kind of security measures will be in place at the facility to prevent arson? There is a possibility that a fire at the facility could be caused by vandals. At the public hearing on this permit, New Heights was unwilling to commit to 24-hour guards at the site when asked if plans were being made for this. New Heights stated that security at the site would be a responsibility of the Ford Heights Police Department. It appears that New Heights was totally unfamiliar with the sorry state of the Ford Heights Police Department: how most of the members have recently been convicted and sentenced for crimes and how the Cook County Sheriff's Department has assumed the responsibility of providing police services to Ford Heights. It is tragically ironic that an incinerator requiring such a high level of security to prevent arson is located in a community so woefully unprepared to provide that security.

The New Heights facility is staffed 24-hours a day. When the facility is open for deliveries, security and controlled gate access will be provided by a contract security service. The facility is fenced and continuous surveillance of the tire storage pad and other exterior areas is provided by closed circuit television cameras. These measures

are typical of those used by industrial facilities to secure their premises from unauthorized access.

45. I realize that the tire fire in Westley, California involved a pile of 7 million tires and whole tires rather than shredded ones. But the Illinois EPA should consider the problems that California has had in fighting that fire in order to better understand the concern of the public. The Village of Ford Heights does not have the resources to combat a tire fire. The Village would have to be evacuated. New Heights should not have dismissed the concern raised at the public hearing by telling us to address the Village of Ford Heights if we felt that the Village's fire protection was not adequate. It should be the obligation of the applicant, New Heights, to provide the cash strapped Village with enough training and resources to ensure fire protection.

The Illinois EPA agrees that it is the responsibility of New Heights to conduct contingency planning for tire fires. This includes evaluation of the equipment and resources of nearby fire departments, including the Ford Heights Fire Department. If a combined effort of several fire departments could be required to deal with a fire, New Heights must work with all the fire departments that might be called upon in the event of a fire. At the same time, the public hearing on the environmental permit was not an appropriate forum to debate the strength or weakness of particular fire departments.

46. If a lightning strike can ignite a pile of tires in Westley, California, what is to prevent that from happening at New Heights?

The tire fire at Westley did not occur at the boiler facility, Modesto Energy, but at a separately owned and operated waste tire pile. At New Heights there are a number of elevated features, including the boiler stack, conveyor belts, and power lines that should preferentially attract lightning.

47. New Heights does not have the capacity to readily extinguish a tire fire once it begins. Little comfort can come from knowing that there are fire hydrants connected to a large water tank, when water is notoriously ineffective in putting out tire-pile fires. Fire hydrants and municipal fire departments are pretty useless to put out tire fires. In addition, the use of water can exacerbate the pollution problem by spreading the oil that is produced when tires burn.

Water can be effective in controlling the extent of a fire, particularly where shredded tires are burning. For example, "The Beacon News" reports that the Aurora tire fire referred to above was successfully contained by the local fire department using water and extinguished in about four hours.

48. According to the Local Enforcement Agency Advisory #46 from the California Integrated Waste Management Board, there is potential exposure while the tire fire is burning. The smoke plume may contain hazardous substances that should not be inhaled or allowed to contact the skin. The two substances for which excessive exposure risk exists are polycyclic aromatic hydrocarbons (PAH) and carbon monoxide. Epidemiological studies of the cancer mortality rates for workers with high PAH exposure show an association with increased mortality from

lung cancer. Polychlorinated dibenzo dioxins and furans (PCDD/PCDF) have been measured in ambient air during a burning tire fire.

The Illinois EPA generally agrees with this comment as it indicates that there can be levels of contaminants in the smoke from a tire fire that warrant evacuation of nearby residents from their homes. As a general practice, tires should only be burned in appropriately designed enclosed combustion devices. When open tire fires do occur they should be dealt with by knowledgeable personnel, to assure adequate protection of both firefighters and the public. This is one of the issues that the facility and local fire departments must address as part of contingency planning to ensure that the public would be protected in the event of a tire fire.

- 49. According to the Local Enforcement Agency Advisory #46, there is also potential exposure after the tire fire is out from the pyrolytic oil, which can contaminate soil, and ground and surface water. The pyrolytic oil also contains polycyclic aromatic hydrocarbons, benzene, ethyl benzene, toluene, and other hydrocarbons. It also contains metals such as cadmium, chromium, nickel, and zinc. The ash from tire fires contains high levels of lead, cadmium, and zinc.**

The Illinois EPA agrees with this comment to the extent it indicates that there is residual material following a tire fire that must be contained, collected and disposed of properly.

- 50. This facility should not be allowed to operate in so heavily populated an area. The developers have claimed that the site has storage capacity for up to 10,000 tons of tires, and between 7,000 and 10,000 tons of tires will be stored at the site as fuel for the boiler. Experience has shown that a fire in a tire pile of anywhere near this magnitude results in an enormous health and economic catastrophe for the surrounding community.**

Applicable law does not limit the siting of waste tire storage facilities to unpopulated areas. New Heights must take appropriate measures to operate safely given its location in the community of Ford Heights.

- 51. The draft permit does not include fire protection, emergency planning and prevention measures for the boiler and the baghouse.**

These units have enormous monetary value, unlike waste tires. Based on experience with other facilities it is appropriate to presume that they will be protected in the ordinary course of business. In addition, a fire in these units would not pose the same risks to the public or the environment as a fire in a waste tire pile.

SITING/ZONING

- 52. Is this facility a "pollution control facility" so that it is subject to local approval of its siting? If not, why not?**

This facility is not considered a pollution control facility if it only burns waste tires. Sites processing or storing waste tires are excluded from the definition of a pollution control facility.

- 53. If the facility is not a pollution control facility, as stated at the hearing, why was it eligible for Illinois' Retail Rate Law?**

Eligibility for the Retail Rate Law, which is now repealed, was based on status as qualified solid waste to energy facility (QSWEF), not on status as a pollution control facility. The definition of a pollution control facility is not the same as the definition of a qualified solid waste to energy facility, a term created as part of the regulation of electric utilities.

- 54. Are waste tires considered a solid waste in Illinois?**

Yes. As already discussed, waste tires are generally considered a solid waste under Illinois law. A variety of legal requirements apply to waste tires as a solid waste, in addition to the requirements addressing the specific concerns associated with waste tires.

OTHER CONCERNS RELATED TO AIR POLLUTION CONTROL

- 55. How can this type of facility be considered when the USEPA has determined that the area is severe nonattainment?**

The greater Chicago area is nonattainment for ozone, which is a regional problem. It is attainment for other air pollutants. In fact, ozone air quality in South Cook County meets the ozone air quality standard, and excessive levels of ozone are generally experienced much further north. For purposes of its contribution to the excessive levels of ozone experienced elsewhere in the metropolitan area, the facility would only become subject to additional requirements if it significantly contributed to ozone, as indicated by major emissions of volatile organic compounds (VOC). The facility will not be a major source of VOC.

- 56. If the facility's VOC emissions during its first 180 days of operation are major, will the facility be classified as a major source subject to nonattainment new source review?**

Yes. If VOC emissions from the facility exceed the applicability threshold of the new source review rules, it would become major and subject to applicable requirements of these rules.

- 57. The history of the other facilities operated by New Heights should be taken into account in permitting.**

The laws and rules governing air permits do not provide for general consideration of the past performance of a permit applicant in deciding whether a permit should be issued.

- 58. New Heights has no experience in burning tires exclusively.**

This is correct. However, the personnel at the plant do have experience operating solid fuel fired boilers. In addition, KTI, one of the corporations with a share in New Heights, has extensive corporate experience in burning alternative fuels, including various wastes.

59. USEPA plans to enact new rules by November 2000 for hazardous air pollutant emissions from combustion facilities. Illinois EPA should specify how the boiler will be brought into compliance with these rules, including the time period for compliance.

This permit does nothing to shield New Heights from having to comply with applicable requirements of any new rules adopted by USEPA. At the same time, the permit cannot address provisions of planned rules that have not yet been adopted. When these rules are adopted, they will establish compliance dates for existing sources.

60. Does the facility have an Acid Rain Permit?

No. The facility qualifies as a new fossil-fuel fired power plant pursuant to the federal Acid rain program, but has not yet obtained its Acid Rain permit.

61. I am opposed to the issuance of an Air Construction Permit for the tire burning facility.

Comment acknowledged. Under existing law, the Illinois EPA lacks authority to reject New Heights' application if it demonstrates compliance with applicable environmental laws and rules. New Heights' application shows compliance with applicable requirements.

ASH/WASTE HANDLING AND DISPOSAL

62. Is the fly ash hazardous? What tests will be conducted? Will a hazardous waste landfill have to be used?

After the facility begins operation, representative samples of the ash from the boiler will have to be tested using the USEPA's Toxicity Characteristic Leachability Procedure (TCLP) to determine whether or not it is hazardous. Unless the ash is shown to be non-hazardous, it will have to be disposed of at a hazardous waste landfill. New Heights expects that testing will show the ash is non-hazardous.

63. In its Start-up Plan dated April, 1999, New Heights states that "The fly ash surge bin is periodically emptied into fly ash containers after being mixed and conditioned to a dust free state." How will this be accomplished?

Water will be added to the flyash in an enclosed pugmill (horizontal mixing vessel).

64. How is the fly ash removed from the baghouse? It is not clear how the entire conveyance system, storage, and fly ash disposal process is entirely enclosed in order to reduce particulate matter emissions.

Flyash collected in the hoppers at the bottom of the baghouse is transported by enclosed conveyors to the storage or surge bin that feeds the pugmill. Only after the flyash has been processed with water in the pugmill to prevent dusting, will the wetted flyash be emptied into the disposal transport containers.

65. **Is New Heights planning on sending the waste ash to American Ash in Nashville, Tennessee? Where will the ash and scrubber waste be sent?**

The company reports that current plans are to send the ash to the Newton County Landfill in Illinois.

66. **The public should be informed if New Heights changes its plans to landfill the ash.**

New Heights must properly dispose of its ash in conformance with applicable laws and rules governing disposal of ash. These rules do not provide for routine notification to the public for changes in ash disposal practices. Moreover, such notification provisions would be more meaningfully applied to a disposal site receiving the ash, if the public near the disposal site had concerns about changes in the waste materials being handled by a site.

67. **In the application, New Heights indicates that the fly ash, bottom ash, and scrubber slurry are going to be mixed and land filled. Will the Bureau of Land allow blending of the ash?**

This is generally an acceptable practice. Indeed, if a particular waste stream was determined to be characteristically hazardous, appropriate additions would have to be made to the waste to stabilize it prior to disposal. It should be understood that if a particular waste is determined to be characteristically hazardous, a source can not blend it with other waste to escape its classification as a hazardous waste, and the source would still have to follow proper practices for disposal of the waste as a hazardous waste.

68. **Is it usual to combine the bottom ash, fly ash and limestone slurry, and why is this done?**

It is common practice to combine ash or other wastes if such materials will be disposed of in the same manner. This simplifies the transport of the waste.

69. **How will the Illinois EPA get involved in ash disposal?**

The issued permit specifically requires New Heights to provide the Illinois EPA with the results of its initial testing of the ash to determine whether or not it is hazardous. Thereafter, the Illinois EPA will verify compliance with the rules governing ash disposal by on-site review of the practices followed by New Heights and the associated records that it keeps, including its shipping manifests.

ADMINISTRATIVE PROCEDURES

70. **In its request to be able to modify the boiler grate and fuel feed system, New Heights provided language for how such a condition of the permit should be worded. A permit applicant should never be allowed to dictate to the Illinois EPA, the regulatory agency, how a permit condition should be worded.**

This is correct. While the Illinois EPA may accept suggestions on how permit conditions may be worded, the Illinois EPA decides whether to use, adapt or reject such suggestions.

- 71. The residents of Ford Heights were not given enough information for informed participation in the public hearing.**

The draft permit, application, and project summary were available for 45 days prior to the public hearing. In addition, these materials were available for 30 days following the hearing, to allow them to be reviewed prior to submittal of written comments.

- 72. A copy of the draft permit should have been placed in the local library.**

The Illinois EPA is working towards placing this information on the Internet. Since access to the Internet is not always available, the Illinois EPA will place paper copies of the documents in a local library. In any case, paper copies of draft permits can also be obtained by calling the Illinois EPA, either in Springfield or at the local field office, and requesting that they be sent to you.

- 73. The Internet cannot be relied upon to work consistently. The Illinois EPA should not rely on the Internet alone to provide the draft permit and supporting information to the public.**

Agreed. The Illinois EPA relies on a variety of methods to make information available to the public, the newest of which is Internet. The Internet has particular convenience as persons who have Internet access can immediately obtain information. The Illinois EPA also makes information available at local offices of the Illinois EPA or by calling the Illinois EPA. When public interest is likely or by request, the Illinois EPA will make information available at a local repository.

- 74. At the public hearing, it was mentioned that modeling and the results of the modeling had shown that there would be "no significant impact on public health and the environment" upon operation of New Heights. Despite a request for a copy of this modeling and its results, this information has not been received to date. It is fundamentally unfair that the community had no opportunity to review or comment, prior to close of this comment period, on the modeling that (ostensibly) found no significant impact on public health and the environment in their area.**

The Illinois EPA made this statement in response to a question concerning the impact of the facility on the health of people living near the facility. The commentator referred to a modeling analysis conducted by the Illinois EPA as support for his belief that the facility would not have a significant impact on local air quality and thus on the health of nearby residents. It should be understood that the Illinois EPA cannot give an absolute guarantee that the facility is safe, but has relied on experience elsewhere showing that use of tires as fuel in a boiler is an acceptable practice. In addition, review of the New Heights facility shows that its emission control practices are the equal of those at other similar facilities and modeling of the

impacts after control shows that the facility will not cause an exceedance of any national ambient air quality standard.

Subsequent review of the specific modeling that had been performed for the facility revealed that the written documentation for the modeling analysis was not prepared in a manner that would be readily understandable to the general public. In addition, the modeling did not address the changes in emission limits and emissions of zinc [See Comment 10, 11, and 12.] To address these circumstances, the Illinois EPA has updated its modeling analysis, expanded it to include emissions of zinc, and prepared a written modeling report that will hopefully be more easily understood by the general public. A copy of this report is available upon request. In addition, for future modeling associated with permitting, the Illinois EPA will attempt to prepare modeling reports that will be more easily understood by the general public.

- 75. Is this permit (if it is granted) transferable if more companies were to become involved in this project?**

Air pollution control permits are routinely transferred when ownership of a permitted source changes. However, involvement of other companies or investors in New Heights would not necessarily constitute a change of ownership, and might not require transfer of the permit. Transfer of this permit would only be required if a company other than New Heights Energy Recover & Power, LLC, takes over ownership of the boiler facility.

STARTUP AND OPERATION OF THE FACILITY

- 76. The permit does not specify an expiration date. The period for purposes of shakedown and testing should be strictly limited, since this facility is already constructed and requires less time to retrofit and test burn compared to a facility still requiring construction.**

While the permit does not have an "expiration date," it does limit the duration of shakedown by requiring emissions testing to be conducted within 180 days of initially firing tires. Permits routinely allow 180 days for such shakedown and this is fully appropriate for New Heights as it cannot rely on the prior shakedown by Chewton Glen, which was over four years ago. The permit also requires status reports from New Heights during the shakedown period.

- 77. In its application, New Heights cites Exeter Energy , Sterling, Connecticut, as a successful tire burning plant. Carbon monoxide was a major problem at Exeter Energy. This plant has had over 1,200 violations during startup and 222 violations in 1994 through 1996 with a \$75,000 fine to the Attorney General in Connecticut and \$300,000 for improvements. Why should we not expect the New Heights plant to have the same problems and violations during startup? What will the Illinois EPA do to monitor and prevent such violations during startup?**

The Exeter Energy facility did experience exceedances of its carbon monoxide (CO) limits, but indicates that most of these violations were minor, e.g., the CO limit was exceeded by a relatively small amount or the reporting of CO emissions may have been incorrect.

The Illinois EPA cannot guarantee that exceedances of the CO limits in the permit will not occur during the shakedown and operation of the boiler. Like the Exeter Energy boiler, the New Heights' boiler will be equipped with a continuous emission monitoring system for CO, which can identify any exceedance of the CO emission limit. If exceedances occur, the Illinois EPA will require that New Heights take appropriate action to correct the problem, e.g., by repairing or replacing components or revising its boiler operating procedures, as well as taking other appropriate action ourselves to address the exceedances.

78. **There should be an independent on-site monitor at New Heights, at its expense, starting during the 180 day period for shakedown and testing and continuing as a feature of Illinois EPA's oversight of the facility. The reports prepared by the on-site monitor can be used by the Illinois EPA to make a decision whether to grant an operating permit to the facility and, if one is issued, to check the facility's compliance with its permit.**

At large commercial waste incineration facilities, Illinois has used "on-site monitors", that is, personnel operating under contract with the Illinois EPA to assist it in environmental oversight of a specific facility. Commercial waste incinerators burn mixed wastes that are made up of many components so that the feed to the incinerator may vary significantly in composition and combustion characteristics. In addition, the waste may include components that pose particular concern for proper combustion and emissions control. These circumstances are not present at this facility. This facility burns tires and natural gas, which are both fuel-type materials with a consistent character.

79. **How can citizens rely on the permitting process, when New Heights has stated that the previous owner did not build the facility that was specified in the original permit and application?**

Chewton Glen did build the facility addressed by the original permit and application.

80. **When the boiler previously operated, the Illinois EPA was completely unaware that Chewton Glen was doing its test burns.**

This is not correct. The Illinois EPA was notified when the facility originally began operation. A problem arose because Chewton Glen failed to submit its shakedown and testing plans to the Illinois EPA in a timely manner. As a result, Chewton Glen had to discontinue the shakedown of the boiler until these plans were submitted to and reviewed by the Illinois EPA.

ENVIRONMENTAL JUSTICE CONCERNS

81. **South Suburban Citizens Opposed to Polluting Our Environment (SS-COPE) is a community group concerned about the disproportionate effects of pollution visited upon the primarily minority population in Ford Heights. SS-COPE is requesting that the Illinois EPA analyze the environmental justice implications of the proposed permit. SS-COPE asserts this analysis must be conducted by Illinois EPA prior to making a final decision on issuance of the permit to New Heights. The permitting of the facility by Illinois EPA will allow the waste tire**

incinerator to operate. The operation of this incinerator may result in discriminatory impacts and effects on the Ford Heights residents. Accordingly, the permit at issue may create and add to a disparate impact on a minority population.

Illinois EPA, as it receives funding from the USEPA, has a legal obligation to consider environmental justice issues in compliance with Title VI of the federal Civil Rights Act. Under Title VI, recipients of federal funding are forbidden from engaging in discriminatory programs and activities. Illinois EPA is thus under a legal obligation not to engage in activities having discriminatory impact or effects. For the reasons described below, Illinois EPA's permitting of the waste tire incinerator is an activity that may result in discriminatory impacts and effects upon the predominantly minority community of Ford Heights. Illinois EPA, thus, will violate its legal responsibilities under Title VI if it permits the facility without an environmental justice analysis.

There are two reasons why the affected community is susceptible to discriminatory impacts and effects: this community is disproportionately African-American and poor; and it is located in an area that is highly industrial thus making it vulnerable to the cumulative impacts of pollution.

As shown by 1990 census data, the community of Ford Heights as well as the population within one mile of the waste tire incinerator are disproportionately both minority (African-American) and low-income as compared to Cook County and the State of Illinois. This data shows that the Ford Heights community, which is at least 95% African-American, is a community at risk.

Another reason for concern is that the local residents may be uniquely and disproportionately affected by the cumulative impact of the waste tire incinerator in combination with other local sources. Ford Heights is immediately adjacent to the city of Chicago Heights. Chicago Heights hosts a number of major industrial facilities. We are aware of over fifteen operating facilities located within three miles of the waste tire incinerator that may contribute to the environmental threats to this community.

SS-COPE is alleging that discriminatory impacts and effects may result from the issuance of pollution control permits by Illinois EPA. The Illinois EPA must acknowledge that Title VI of the federal Civil Rights Act has significance related to environmental protection in Illinois, consistent with its assurances to USEPA to comply with Title VI for purposes of receiving federal funding. The clear mandate and the composition of the community near the facility require that an analysis of the environmental justice implications of its proposed permit be conducted by Illinois EPA. Illinois EPA should conduct an environmental justice analysis of this facility.

The Illinois EPA is committed to protecting the health of the residents of Illinois and its environment, and supports the objectives of achieving environmental equity for all.

Prior to issuing this permit, and although not required to do so, the Illinois EPA provided the public with notice of its proposed action and prepared a draft permit for comment, elected to hold a non-mandatory public hearing on the proposed action without waiting for a specific request for a hearing, and prepared this detailed Responsiveness Summary addressing all significant public comments during the 75-day long comment period. The concerns raised by the public, including concerns raised as part of the request for an environmental justice analysis, are addressed by additional requirements in the issued permit.

An air quality impact analysis for criteria pollutants emitted from the facility was initially prepared in connection with the construction permit issued in 1993, even though the facility is not a "major" source under the Clean Air Act and an air quality impact analysis was not required under the federal rules for Prevention of Significant Deterioration (PSD). This air quality impact analysis demonstrated that emissions of SO₂, PM₁₀, NO_x, CO and lead from the facility would not have a significant air quality impact. The Illinois EPA has updated this air quality modeling to address the higher emissions levels requested by New Heights from the facility. The air quality modeling, as revised, showed there would be no significant impact on air quality from the facility. A copy of this modeling is available upon request.

Moreover, the Illinois EPA has prepared an Air Quality Impact Assessment of the facility's non-criteria pollutants. This assessment analyzed the maximum impacts from the facility and compared these impacts to applicable air quality standards and reference values established to protect the public health. Maximum daily and annual concentrations of these pollutants were identified to address acute and chronic effects of pollutants. No apparent adverse health impacts from the facility were identified. A copy of this study is available upon request.

Finally, and most importantly, Section 55(h) of Illinois' Environmental Protection Act requires new boilers burning waste tires to comply with Best Available Control Technology (BACT). The facility has met that requirement with its application of selective non-catalytic reduction, the use of a fabric filter and a lime scrubber system and the use of good combustion practices.

- 82. An analysis of the environmental justice implications of Illinois EPA's proposed decision to issue operating permits has been requested and must be conducted particularly because it appears Illinois EPA is exercising its discretion to issue a permit which is inadequately protective of residents of Ford Heights in the following ways: no standard set for zinc, a toxic metal; no monitoring for volatile organic compounds; inadequate fire protection; unexplained increases in the allowed emissions of particulate matter and other pollutants; no maximum emission limits set for start-up and shutdown; no on-site monitor; and unavailability of modeling results.**

Appropriate provisions have been included in the issued permit to address these concerns, and responses to each of these concerns appear earlier in this Responsiveness Summary.

83. **A request has been sent to the Illinois EPA for an analysis of the environmental justice implications of the proposed prior to the issuance of operating permits.**

Comment acknowledged. During New Heights shakedown of the boiler facility, they will be required to conduct emissions testing of the various pollutants of concern. Following this test, and prior to the issuance of an operating permit for the facility, the Illinois EPA will reevaluate whether the air quality impact assessments conducted for this facility should be supplemented.

84. **The Village of Ford Heights supports the operation of this facility.**

Comment acknowledged.

REGULATION AS AN ELECTRICAL UTILITY

85. **Will the facility sell its electric power wholesale or retail?**

New Heights reports that this has not yet been decided. The Illinois EPA does not have, nor does it require, this information to issue a permit.

86. **Does any entity oversee the facility in terms of commerce? Who permits power plants? Will this facility be subject to oversight from the Illinois Commerce Commission (ICC) as a power plant?**

As an independent power producer, New Heights would only become subject to oversight by the ICC if it decides to sell power at retail and becomes an Alternative Energy Retail Supplier (AERS).

87. **Does the facility have a license from the Federal Energy Regulatory Commission (FERC)?**

Yes.

OVERVIEW OF NEW HEIGHTS

88. **What other operations does New Heights plan to bring to the site?**

New Heights reports that it has made no decisions about bringing additional operations to the site. Depending on the nature of any such proposal, additional permits or approvals could be required from the Illinois EPA.

89. **How many people will be employed by the boiler facility?**

At the hearing, New Heights stated that the boiler facility itself would employ approximately 20 people.

90. **How many of the tires are from Illinois and how many are from elsewhere?**

The facility is not restricted as to where waste tires come from. However, as waste tires are expensive to transport, it is expected that

the majority, if not all, of the tires would come from the Greater Chicago Metropolitan Area.

- 91. In the future, can New Heights burn waste materials other than tires in the boiler?**

Other waste materials can only be burned in the boiler if New Heights obtains a permit from the Illinois EPA allowing use of such materials. New Heights would also have to comply with other legal requirements that may be triggered by burning such materials, e.g., receiving local siting approval if it burns wastes such that it would make the facility a "pollution control facility."

- 92. New Heights Recovery & Power L.L.C. is comprised of Oakhurst Technologies, Inc., Oakhurst Company, Inc., and certain bondholders. Which company is ultimately responsible for this project?**

The Permittee, New Heights Recovery & Power, L.L.C.

- 93. What is KTI's total investment in this project?**

KTI's involvement in New Heights reportedly includes a commitment to spend at least \$12 million but no more than \$17 million.

OVERVIEW OF ILLINOIS EPA POLICY

- 94. How many waste tires does Illinois generate?**

Illinois generates about 12 million waste tires per year.

- 95. Where do Illinois' waste tires normally go now? How are they disposed of?**

Most of Illinois' waste tires are burned as fuel in coal-fired utility boilers and cement kilns.

FOR ADDITIONAL INFORMATION

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

Public Hearing Procedures and Exhibits, Responsiveness Summary (Questions on or Extra Copies)

Bradley Frost, Community Relations Coordinator
Illinois Environmental Protection Agency
Office of Community Relations
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-7027
1-888-372-1996 Toll-Free

Media Inquiries

Julie Neposchlan, Public Information Officer
Illinois Environmental Protection Agency
Division of Air Pollution Control
P.O. Box 19506
Springfield, Illinois 62794-9506
217/782-2113

Signed: _____ Date: _____
Bradley Frost, Office of Community Relations