

# Downwinders

reducing toxic air pollution in north texas *at risk*

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August 31<sup>st</sup>, 2010

Dear Carl,

Since we met on August 3rd at EPA Region Six HQ concerning TXI's application for a new permit amendment to 1360A for its Kiln 5, members of Downwinders have acquired a copy of the proposed amendment itself (enclosed), and have done additional research on the burning of Automobile Shredder Residue (ASR) and plastics in cement kilns.

What we've found has shocked and disappointed us. If the company gets its way, TXI will be able to burn a variety of new "non-hazardous" wastes that are capable of emitting air pollution as toxic as the officially-classified hazardous wastes it stopped burning in 2008, increase the volume of air pollution by over 2500 tons a year, and avoid all public or federal oversight of the entire process. It's reminiscent of the way TXI began burning hazardous waste in the late 1980's – with no public hearings, and no federal involvement.

According to the permit amendment TXI submitted to the Texas Commission on Environmental Quality on August 16<sup>th</sup>, the company is making the following physical changes at its Midlothian cement plant:

- 1) Replacing the entire existing clinker cooler system with a new cooler
- 2) Replacing the system's main ID fan
- 3) Adding a heat exchanger to the existing coal mill system
- 4) Burning seven new fuels:
  - a) Tire-Derived Fuel
  - b) Petroleum Coke "and other similar carbon-based solid fuels"
  - c) "Wood by-products"
  - d) "Biomass fuels"
  - e) "Process Engineered Fuels (PEF)/plastics"
  - f) "Syn-gas"
  - g) "Auto Shredder Residue"
  - h) "Liquid fuels"

Other than generic profiles of "typical" wastes in each category, there are no chemical specifications for any of these new fuels in the permit. Other than a theoretical TXI-manufactured "worst-case scenario" mishmash of different fuels and raw materials, there are no permitted substitution rates for anything but the tire-derived fuel in the permit.

In particular, plastics and ASR or car "fluff" (car interiors including dashboards, seats, etc) are infamous for their toxic characteristics, with a high risk of adding significant amounts of toxic metals, dioxins, and even asbestos to the kiln's exhaust, yet there is no discussion of processing the ASR or filtering the post-production plastics to assure a uniform chemical profile.

What are "liquid wastes?" TXI postulates, but doesn't specify in the permit. What kinds of "wood wastes," "plastics" and "biomass" will TXI burn? TXI lists some examples, but there is no regulatory definition. These vague descriptions belong back on the dinner table napkin they were sketched out on, not an operational permit for a facility affecting the health and safety of hundreds of thousands of people.

At least with its hazardous waste fuel permit, TXI had to blend the toxic soup into a consistent mix with minimum BTU, chlorine, halogen, metals, ash and water content. There are no such minimums, or maximums, in the mix of fuel covered by this permit amendment. Every technical discussion of ASR notes that the heterogeneity of "fluff" makes it very difficult to quantify the composition of the shredder residue waste stream from load to load, thus making it hard to maintain kiln stability. Because wastes would vary widely, so could emissions.

Besides the plant changes listed above, TXI also says it will have to build:

- 1) A "Tire Receiving System" that requires a hopper, multiple conveyors, and a sorting system.
- 2) A "Solid Fuel Receiving and Feed System" that requires a hopper, multiple conveyors and a feed mechanism.
- 3) A "Tire Injection System"
- 4) A "Petroleum Coke/coal System"
- 5) A Liquid Fuel Feeding System" that includes tanks and piping.

In the meeting on August 3rd, a definition for "major modification" that would prompt EPA intervention in TXI's permit request was read by staff that included references to fuel changes, structural changes and increases in production. Despite asking for a copy of that regulatory language at the August 3rd meeting, we have yet to receive it. However, according to other EPA documents, a "major modification" is a *"physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act" [40 CFR 51.24(b) (2) and 52.21(b) (2)]* and the most modern consensus definition appears to be

*"Any physical change in or change in the method of operation of an existing major source that would result in a significant net emissions increase of any pollutant subject to regulation under the CAA (Clean Air Act)."*

By TXI's own admission, the changes in its permit will result in large emissions increases in CAA-listed "Prevention of Significant Deterioration" (PSD) pollutants:

- Carbon Monoxide (CO) will increase by over **500** tons a year. An increase of **100** a year tons triggers an automatic PSD review.
- Nitrogen Oxides (NO<sub>x</sub>) will increase over **1000** tons a year. An increase of **40** tons a year triggers an automatic PSD review.
- Sulfur Dioxides (SO<sub>x</sub>) will increase by **700** tons a year. An increase of **40** tons a year triggers an automatic PSD review.
- Volatile Organic Compounds (VOCs) will increase by 30 tons a year to **67** tons annually. PSD review is triggered at **40** tons.
- Total Suspended Particulates (TSP) will increase by **75** tons per year. An increase of just **25** tons triggers a PSD review.
- Particulate Matter 10 microns or less (PM<sub>10</sub>) will increase by **93** tons a year. Only a **15** ton a year increase triggers a PSD review.
- Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) will increase over 35 tons a year, and TXI states **this is an "Increase Greater Than (regulatory) Significance."**

In total, TXI is seeking a permit amendment that would increase pollution from Kiln 5 by at least 2525 tons, or 5 million pounds, a year. And given the instability of the fuels it wants to burn, and how it wants to burn them, that's probably a very large underestimate.

To try and prevent what would normally be automatic EPA involvement in light of these numbers, TXI claims in the permit amendment that because it's closing its old wet kilns, these emission increases from Kiln 5 won't really be increases at all, and so "no federal review is required for purposes of this application." The new emissions will be "netted." That is, the decreases in wet kiln pollution will even out with the increases in new pollution from Kiln 5.

But that "netting" is only a claim that TXI makes and there is no operational data from Kiln 5 to support it. Kiln #5 has never burned anything but coal and natural gas, and as we noted earlier, ASR waste is notorious for destabilizing kiln operations.

With respect to Carbon Monoxide emissions, the total netting for all four wet kilns comes EXACTLY to the amount of increase TXI is estimating to result from the changes at Kiln #5, down to the ounce - a mathematical and engineering feat that begs closer analysis by EPA. VOCs netting is performed with only a slightly larger half-ton margin of error.

The only modeling for metals emissions, a primary concern when burning ASR and many of the other wastes, relies on Destruction Removal Efficiencies (DRE) taken from other cement kilns that are different in design and process than TXI's Kiln 5 in Midlothian (with the exception of Mercury, taken from a 2007 stack test at Kiln 5 where none of these new fuels were burned.) 10 out of the 14 metal DREs come from a Holcim plant in

Missouri that only burns tires and coal. The modeling itself is “generic,” the values for which were determined by a previous amendment application for Kiln 5 (meaning no public scrutiny either) that in no way reflected the operation described in this new permit amendment. There is no modeling for toxic flame-retardants, asbestos, dioxins and furans, or other pollutants that are emitted by the burning of ASR and plastics. TXI’s consultants have rigged a slap-dash excuse of a model and used it to take the place of real stack testing. We find this unacceptable, and so should the EPA.

In effect, TXI is telling us that we just have to take the company’s word that everything will “even out” in the end. TXI has not earned that kind of trust.

This is the same company that caused a chronic sulfur pollution problem in Midlothian that was never solved until the wet kilns closed. It’s a company that failed in its stack testing of SNCR control technology on those wet kilns. TXI tried to turn off its Regenerative Thermal Oxidizer, the same device it now says is BACT for controlling Volatile Organic Compounds. This company needs supervision.

TXI’s claim of no “net” emission increases overlooks the fact that for almost two years, there has been NO pollution coming from the wet kilns, TXI having shuttered them in October 2008. So in fact, the addition of 2525 tons of new air pollution to the DFW airshed is a very real increase and imposes serious environmental and public health burdens. This is especially true of the NOx emissions TXI proposes to bring on line in 2012 just as the DFW non-attainment area is trying to meet an important clean air milestone by 2013.

In regard to the NOx netting, TXI’s permit amendment also seems to contain a major error. TXI is counting the pre-2009 NOx tonnage from the wet kilns as if they had never had to meet the new emission standard for NOx emissions from a wet kiln in the nine-county DFW non-attainment area. But that is not the case.

Those older wet kilns could not operate and release 1360A permitted levels of NOx in 2010 - they would have had to meet a tougher standard that reflected new DFW SIP emissions rules. They would have had to install and operate SNCR just like Ash Grove has done. As a result, TXI’s NOx emissions from the wet kilns would be at least 30% lower than their pre-2009 levels.

But in its permit request, TXI doesn’t reflect that reality. Instead, it uses a two-year *pre-2009* (2007-2008) average to come up with an annual NOx total for the wet kilns of 1318.3 tons per year. To reflect what tonnage is actually available to net after 2009 however, **you must subtract at least 30% from that number because of the DFW SIP rules for kilns.** That gives you only 923.3 tons a year to use for netting on Kiln 5. TXI wants to increase NOx pollution from Kiln 5 by 1062.95 tons a year, leaving an “un-netted” real increase of at least 139.65 tons a year. The amount of increase in NOx at a major source that automatically triggers a PSD review? 40 tons.

To add insult to injury, TXI also claims that Best Available Control Technology (BACT) for control of NOx pollution is not Selective Non-Catalytic Reduction (SNCR), but the status quo at Kiln 5 now. Strange then that state regulators and TXI sought to install SNCR as BACT for NOx control on the company’s wet kilns in 2007 in preparation for compliance with the DFW SIP NOx emission rules, going so far as to do pilot tests. If

TXI wants to increase its smog-forming pollution by over 1000 tons a year in a chronic ozone non-attainment area, then it should be required to put on additional NOx controls to abate that increase.

Holcim, the only other dry kiln plant in Midlothian, operates SNCR on both of its kilns. And even Ash Grove's antique wet kilns operate with SNCR. But TXI never mentions any of this in its discussion of the subject in its permit request, looking past its immediate neighbors and surroundings to examples of cement plants built elsewhere across the country, albeit not in non-attainment areas. A theme of this permit amendment seems to be to look everywhere else but Kiln 5 for an indication of how Kiln 5 should operate under it.

Renewal of TXI's 1360A general air permit for the Midlothian plant is the very same permit that Downwinders, local officials, North Texas municipalities, and hundreds of individuals sought to get a public hearing on last year, but were denied by TCEQ on a 2-1 vote. It was "the poster child" of why there should be a public hearing process according to the dissenting TCEQ Commissioner.

Downwinders is certain that this latest permit request by TXI is part of a regulatory charade that began with that landmark vote. TXI received its renewal of 1360A without delay or public hearings. A year later it's submitting a permit "amendment" that would fundamentally change operations at its Midlothian plant, and that permit, but it too will not be subject to public participation or federal oversight. The result is a seamless two-year complete makeover where the largest single air pollution permit in North Texas is renewed and then changed beyond all recognition without the slightest bit of public or EPA involvement.

With all that is occurring between the state and EPA on matters of permitting authority and execution of federal law, submission of this kind of permit amendment now, to only the state, is the regulatory equivalent of TXI flipping-off EPA. Given the enormity of the physical changes to the plant, the dearth of technical data, the less-than-honest approach to netting, as well as the radically-different composition of fuels being proposed, we don't understand how EPA can ignore a top to bottom technical and legal analysis of TXI's permit amendment and we're officially requesting one with this letter.

In the course of our research on the burning of auto fluff material we were surprised to find out that Region 6 has a history of dealing with this waste. We were disappointed that no one from EPA at the August 3rd meeting either didn't know about this history, or chose to keep it to themselves, as it appears to be central to TXI's request to burn ASR.

As you know ASR, or automobile "fluff" contains a great deal of plastics and metals that are toxic. In fact, ASR is regulated as a toxic waste by the State Of California and several countries.

According to an EPA publication published in October 2008 entitled "Cement Sector Trends in Beneficial Use of Alternative Fuels and Raw Materials"

*"Toxic Control and Substances Act regulations categorize*

*ASR as a “PCB Waste.” This represents a regulatory barrier to use of ASR for energy recovery, therefore most ASR is landfilled. ASR can contain mercury (within mercury switches), lead, and copper from content of scrap automobiles; these elements can affect cement kiln air emissions.”*

At the time, TXI management was telling the authors of this 2008 report that Region 6 was strictly enforcing a ban on the incineration of automobile fluff, specifically,

*“EPA Region VI is interpreting EPA regulation “Disposal of PCB bulk product waste” in a way that automobile shredders that generate ASR cannot certify compliance.”*

*“The PCA E&E subcommittee contact (TXI) indicated that TSCA regulations specifically categorize ASR as a “PCB Waste” unless proven otherwise, and that it is “difficult to prove otherwise.” EPA regulation 40 CFR §761.62(b)(1) Disposal of PCB bulk product waste applies specifically to landfilling of ASR but also, according to cement sector contacts, is being applied by EPA Region VI to incineration of ASR.*

*As of 2005, EPA Region VI was strictly interpreting the phrase “from which PCB small capacitors have been removed” in the regulation as applying to ASR, and interpreting the phrase in ways that shredders could not certify compliance.”*

The report documents that TXI’s interests in burning both plastics and ASR is long-standing, dating back to the acquisition of a shredder at then-Chaparral Steel, and continuing with TXI’s attempts to make deals with local municipalities to burn their plastics for them. However there was a specific paragraph that caught our attention given TXI’s request to burn ASR in its new permit with no mention of the regulatory barriers presented in the 2008 report:

*“The regulatory barrier to use of ASR in cement kilns is the Toxic Substances Control Act regulations. The TSCA regulations (referred as “Superrules”) for PCB wastes affect the status of automobile shredder waste. Shredder waste is categorized as a “PCB waste” until proven otherwise, and according to TXI it is very difficult to prove otherwise. Therefore, automobile shredders can landfill this material relatively easily, **but cement kilns cannot burn the material without encountering major regulatory hurdles under the PCB regulations. TXI is continuing correspondence with EPA concerning the TSCA issue.**”*

Our question is simply, did that correspondence with EPA eventually pay-off? Is what once was a PCB waste that Region 6 was not allowing to be burned in a cement kiln now a PCB waste that Region 6 is allowing to be burned in cement kilns? If so, please tell us

how that regulatory slight-of-hand occurred and why. We want to know what happened to Region 6's strict prohibition against burning PCB wastes in Midlothian kilns between 2008 and 2010.

By the way, the EPA report also concludes that

*In general, cement plants are required to obtain construction permits to establish the use of a new alternative fuel, in part because modifications to the materials handling system involving capital expenditure need to be permitted.*

Now that we have the actual permit in hand and more information about the new kinds of wastes TXI would like to burn, we'd like to schedule a second meeting with Region 6 to further discuss EPA's response during the week of September 20-24<sup>th</sup>. Please let us know if such a meeting is possible and the details of where and when.

Sincerely,

Becky Bornhorst

Cynthia Fava

Sue Pope

Jim Schermbeck

cc:  
Congresswoman Eddie Bernice Johnson  
State Senator Wendy Davis  
State Senator Chris Harris  
State Representative Lon Burnam  
State Representative Alan Vaught  
State Representative Carol Kent  
State Representative Rafael Anchia  
State Representative Mark Veasey  
State Representative Chris Tuner  
State Representative Vicki Truitt

State Representative Paula Pierson  
State Representative Diane Patrick  
State Representative Todd Smith  
Judge Glen Whitley  
Judge Jim Foster  
Mayor Robert Cluck  
Mayor Mark Burroughs  
Commissioner Marti Vans Ravenswaay  
Commissioner Roy Brooks  
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