

**Comments of the American Lung Association of Texas  
on a Proposed RCRA Permit for Hazardous Waste Combustion  
at TXI Cement Company**

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# **Comments of the American Lung Association of Texas on a Proposed RCRA Permit for Hazardous Waste Combustion at TXI Cement Company**

## **1 Procedural Issues Concerning the Process for Proposed Issuance of the TXI Permit and the Negative Effect of this Process on Public Participation**

Elements of the TNRCC/EPA process for public review, comment and appeal of the issuance of the TNRCC/EPA granted RCRA Permit for TXI negatively and impermissibly affect public participation and rights of appeal for members of the public and otherwise frustrate and diminish public participation.

### **1.1 TNRCC/EPA Have Not Complied with the Fact Sheet Requirement**

Federal Regulations at 40 CFR 124.8 require production of a Fact Sheet for proceedings involving a major hazardous waste management facility. The RCRA permit for TXI most assuredly involves permitting for such a facility.

The Fact Sheet rule exists as a state/federal program requirement as a fundamental instrument to facilitate public participation and inform the public of the underlying determinations by the permitting agency implicit with a decision to propose issuance of a permit. Fact sheets also provide the public with basic information about the facility that would not otherwise be available to members of the general public in any easy or expeditious fashion. Finally, issuance of a Fact Sheet in a permit proceeding involving environmental management of toxic waste and subsequent emissions should perform a fundamental function of risk communications as to the pending permit and contemplated activities.

Nothing TNRCC and EPA have released to the public at the time of the announcement of the pending proceeding concerning the proposed permit issuance constitutes a “fact sheet” as defined by the EPA Regulation. There are no references to a “fact sheet” in the TNRCC produced Public Notice of April 4, 1997.

Under the regulation, Fact Sheets are required to disclose:

“the type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted or discharged.”

“A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by section 124.9 (for EPA issued permits).”

“Reasons why any requested variances or alternatives to required standards do or do not appear justified”

“A description of the procedures for reaching a final decision on the draft permit including: The beginning and ending dates of the comment period under section 124.10 and the address where comments will be received; Procedures for requesting a hearing and the nature of that hearing; and any other procedures by which the public may participate in the final decision; name a telephone number of a person to contact for additional information”

On April 4, 1997, Eugenia K. Brumm, Ph.D, Chief Clerk issued a “Notice of Draft Permit and Public Hearing for Industrial Hazardous Waste Permit.” However, this written instrument did not comply with the Fact Sheet requirements of the Federal Regulations articulated above.

Moreover, this notice did not announce that the draft permit was available on request, only that it was available “for inspection” which violates public notice requirements at 40 CFR 124.10(d)(iv). TNRCC/EPA’s decision not to clearly announce easy availability of the proposed permit in the public notice, in addition to the TNRCC/EPA failure to produce a Fact Sheet, fundamentally frustrates the ability of the public to effectively participate in the proceedings for permit issuance.

Moreover, the failure to produce a Fact Sheet and to announce it in the Public Notice fundamentally violates 40 CFR 124.10(e) which requires the permitting authority to mail the fact sheet, along with the draft permit, to any person on the agency mailing list for a particular facility.

**1.2 TNRCC/EPA Apparently Do Not Intend to Comply with the Procedures Articulated at 40 CFR 124.15 Providing an Agency Final Decision Requirement at the Close of the Public Comment Period and with 40 CFR 124.12 Concerning Public Hearings, Their Conduct and Who May Participate.**

EPA Regulations at 40 CFR 124.15 require the following:

“(a) After the close of the public comment prior under section 124.10 on a draft permit, the Regional Administrator shall issue a final permit decision ..... The Regional Administrator shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a RCRA....permit.... For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.”

Moreover, EPA public participation regulations require:

At the time that any final permit decision is issued under section 124.15, the Director shall issue a response to comments, States are only required to issue a response to comments when a final permit is issued. The response shall: Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change;

and.... Briefly describe and respond to all significant comments on the draft permit or the permit application.....raised during the public comment period, or during any hearing..... The response to comments shall be available to the public.” 40 CFR 124.17.

EPA/TNRCC apparently do not intend to issue a final decision at the close of the public comment period as is provided by 40 CFR 124.15(a), since their April 4, 1997 public notice contains no public comment deadline, as it is required by 40 CFR 124.8(b)(i). Furthermore, apparently EPA/TNRCC do not intend to comply with the requirement of 40 CFR 124.17 to issue a responsiveness summary to public comments made on or before May 20 by the general public on issues relevant and germane to comments made as of that date.

### **1.3 EPA/TNRCC Proceedings Commencing on May 21, 1997 as Announced by the April 4, 1997 Public Notice do not Constitute a “Public Hearing” under EPA Public Participation Rules**

The April 4, 1997 “public notice” describes a so-called “second session of the public hearing” that will take place starting May 21, 1997 and continue to an indefinite time. The “public notice” describes procedures which specifically have the substance, requirements, look and feel of formal contested case hearing.

The general public and/or any person is not entitled by right to participate in this formal contested case hearing. The April 4, 1997 “public notice” explicitly announces that participants must show a “personal justiciable interest which would be affected by the granting of the application in a way not common to members of the general public.” The notice provides for an alternative written statement to the proceeding, but is unclear whether filing of the written statement otherwise qualifies the filing party at a formal hearing party.

However, the May 21, 1997 contested hearing cannot be regarded as a public hearing within the meaning of clear requirements of EPA’s public participation rules. Under these rules, at a public hearing...

“Any person may submit oral or written statements and data concerning the draft permit.....” 40 CFR 124.12(c) (emphasis added)

As a result, the May 21, 1997 proceedings cannot be regarded as a 40 CFR 124.12 public hearing because Texas standing rules on its so-called “public hearing” explicitly preclude “any person” from participating as a party.

Federal rules at 40 CFR 124.13 require that:

“All persons, including applicants, who believe any condition of a draft permit is inappropriate....must raise all reasonably ascertainable issues and submit all reasonably

available arguments supporting their position by the close of the public comment period (including any public hearing) under section 124.10. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, EPA documents of general applicability, or other generally available reference materials.”

Since the Texas restrictive standing rule on participation in the so-called May 21, 1997 “public hearing” prevents all persons from participating, the procedure envisioned by the TNRCC/EPA notice fundamentally prejudices the proceeding against members of the general public who are denied knowledge, public notice, fact sheets and responsiveness summaries concerning any additions or amendments to the administrative record occurring during the May 21, 1997 and subsequent proceedings. Such individuals are unable to specifically comment on such matters before the “real” public hearing is closed on May 20, 1997.<sup>1</sup>

Any member of the general public who offers a written or oral comment during the public comment period is entitled to appeal federally significant issues under 42 CFR 124.19 and then, subsequently, to file a citizen suit under the Resource Conservation and Recovery Act challenging issuance of the TXI RCRA permit. However, aspects of the proposed TNRCC/EPA procedure for adopting the permit discriminates against (and interferes with) any person who commented during the May 20, 1997 public hearing, but who is not a formal party to the contested “hearing” starting May 21, 1997. Such persons will not be able to properly and determinantly preserve all necessary issues on the record and questions for future appeal because of lack of access to the formal contested proceeding, because of the high likelihood of changes and additions to the administrative record, and because of the failure of EPA/TNRCC to properly articulate their final permit decision in a timely way after the end of the May 20, 1997 public hearing with an appropriate final permit decision and responsiveness summary.

What the May 21, 1997 so-called “public hearing” really amounts to is a formal contested hearing on matters preliminary to a final determination by EPA/TNRCC on whether or not to finally issue a RCRA permit to TXI, on the EPA/TNRCC determination on specific final provisions of that permit and on EPA/TNRCC’s specific final factual basis and legal conclusions in issuing the permit, pursuant to public comments.

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<sup>1</sup> Interestingly enough, a prejudicial action of TNRCC against disclosure of the record took place even during the public comment record. TNRCC Attorney Susan White on April 17 took the position with this commenter that disclosure of information in the administrative record would be denied on the basis that a “contested matter” was pending, even prior to the May 20, 1997 hearing. This illustrates the nature of the hostile environment created for public participation created by the TNRCC/EPA procedure of mixing public hearings with contested hearings prior to a final decision to issue the TXI RCRA permit.



In actuality, the procedure prejudices even the “full parties” to the proceeding since these final aspects of TNRCC/EPA decision making cannot be known prior to the intervention by contested case parties at the time of or during such intervention.

#### **1.4 EPA/TNRCC’s Process to Hear Public Comment, Deliberate and Issue a Decision Concerning the TXI Permit is Fundamentally Flawed**

In summary, EPA/TNRCC’s permit procedures, used in this proceeding:

- a) conflict with applicable federal regulations on public participation and administrative procedure in the issuance of RCRA permits;
- b) frustrate meaningful public participation and use of federally guaranteed rights under the Resource Conservation and Recovery Act by interfering with the ability of “any person” to appropriately preserve issues for future appeal;
- c) fail to properly provide required public notice and pertinent information to the public in violation of applicable federal public participation regulations;
- d) allow the permit issuing agencies to discount or ignore public comments provided by the public on or before the May 20, 1997 public hearing because of failure to provide final agency action pursuant ONLY to that hearing and to provide a responsiveness summary pertinent to issues raised at such a hearing;
- e) interfere with the ability of any person or commenter to discover changes in the administrative record occurring after May 20, 1997;
- f) allow final agency action to occur without accountability to the input of the general public.

## **2 Issues Related to the Texas Audit Privilege and Environmental Immunity Statute**

### **2.1 All Permit Monitoring and Record keeping Requirements Should Be Written to Preclude Environmental Audit Confidentiality Claims on Information and Supporting Material Implicit in Permit Operations**

The proposed permit should be amended to specifically and determinantly preclude the ability of TXI Cement to declare a confidential audit privilege over information which is required to be

maintained but is not either explicitly or implicitly required to be submitted. In addition, this preclusion should be extended to all source materials that are used as the basis of information and reports that are required to be submitted.

For example, Sections I.F.4 (Monitoring and Records), I.F.5 (Retention of Application Data), II.F (General Inspection Requirements), II.G. (Personel Training), II.S (Recording and Reporting, Operating Record), IV.C.6 (Other Cement Kiln Monitoring Testing and Inspection Requirements, Monitoring and Inspection Data), V.A.6 & 11 (General Air Quality, Record keeping; Operating Record), V.D (raw data on Continuous Emission Monitoring), V.H (Record keeping, monitoring, maintenance and CEMS) all envision requirements for record keeping without a firm requirement for this information to be affirmatively reported to TNRCC.

Each of these provisions should be specifically rewritten to affirmatively and decisively state that the permit requires specific subject materials, information and/or data to be affirmatively collected, stored and maintained; and that any such supporting materials, data and/or information, such as any underlying strip charts, raw data, laboratory slips and reports and other such supporting information, are also affirmatively subjected to a collection, storage and maintenance requirement.

Further, the permit should be amended to require that all such aforementioned information, materials, data and supporting information constitute non-privileged materials under Section 8 of the Texas Environmental, Health, and Safety Audit Privilege Act, and that TXI shall not declare or attempt to declare an audit privilege concerning such materials.

## **2.2 TNRCC's Statutory Authority for the Issuance of the Proposed Permit Violates RCRA Enforceability Requirements**

The Texas Environmental, Health, and Safety Audit Privilege Act creates fundamental approvability issues associated with issuance of the proposed RCRA permit to TXI.

The proposed permit does contain a "Duty to Comply" provision (permit at I.E, Page 7) similar to 40 CFR 270.30(b) that declares:

"Any permit noncompliance...constitutes a violation of RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application." Section I.F(2) of proposed permit.

However, TNRCC may potentially be unable to obtain civil, criminal and/or administrative penalties that should clearly be available to a permit enforcement agency under the federal enforcement provisions of the Resource Conservation and Recovery Act because of the Texas Audit Privilege Law. Under this law, a source who makes a voluntary disclosure of a violation of

an environmental law is immune from administrative, civil, or criminal penalties for the violation disclosed.

Under the provisions of the Texas law, a source can give notice of a 6 month environmental audit and then voluntarily disclose a violation and obtain penalty immunity. This situation raises fundamental questions concerning the enforceability of the permit by TNRCC and/or citizens acting by citizen suit, specifically as to Section I.F(2) of the permit.

### **3 Cement Kiln Dust Issues**

#### **3.1 Nothing in the Permit Effectively Controls Fugitive Dust Emissions from the Transfer, Conveyance and Disposal of CKD**

The proposed permit fails to impose any specific standards designed to control fugitive emissions of cement kiln dust from the transfer, conveyance and the disposal of cement kiln dust (CKD). The permit should be amended to require that all fugitive emissions of CKD be controlled by the application of best available control technology with specific plans, standards and procedures to ensure the efficacy of such control techniques. In addition, there should be a firm schedule of compliance to incorporate such controls with firm deadlines for final compliance articulated in the permit language.

Such provisions in permit amendments should include, but not be limited to, an approved fugitive dust control plan for active and closed CKD landfills and conveyance mechanisms for transferring CKD from the kilns to the landfills.

Specific standards should incorporate a requirement for no visible emissions from landfills and conveyances, plans incorporating an enforceable schedule for fugitive dust mitigation activities, installation of effective conveyance equipment, truck-tire washing requirements and dedicated equipment operation for CKD landfills, daily cover requirements, truck covers and speed limits, watering of dust surfaces to control dust on a regular basis, paving of roads to the CKD landfill, clear use of pneumatic conveyances, etc.

Fugitive dust emissions from cement kiln dust landfills can cause serious air pollution problems. According to the U.S. EPA:

“In its follow-up work leading to the NODA, EPA did find evidence of possible risk to human health due to the fine particulate nature of inhaled dust. Although the Agency's direct inhalation exposure modeling studies described in the RTC did not indicate significant risk from inhaled chemical constituents in CKD, subsequent screening-level modeling on a small number of plants did indicate that windblown dust from uncontrolled CKD waste management units could exceed EPA's health-based fine particulate (10 micron

or less) National Ambient Air Quality Standard (NAAQS) at plant boundaries, and potentially at nearby residences. Results from a more recent extension of this work to a larger sample of 52 cement plants suggest that 28 of the plants could exceed NAAQS standards at plant boundaries, if the plants do not have effective dust control mechanisms.<sup>7</sup> Although quantitative risks presently can not be estimated, these initial modeling results relating to fine particulates suggest cause for concern and argue for further attention to this source of fugitive dust.” EPA Regulatory Determination on Cement Kiln Dust, Federal Register: February 7, 1995)

TNRCC does not appear to have considered fugitive emissions from TXI’s CKD pile in its screening risk assessments of the potential of TXI’s CKD pile to cause air pollution in the absence of specific, permit-required provisions to control fugitive CKD emissions.

### **3.2 The Administrative Record Contains Conflicting Statements About CKD Handling Arrangements Presently in Place at the TXI Plant; Evidence Exists that CKD Fugitive Emissions are a Problem**

An October 12, 1992 letter from TXI Industries, Inc. To Charles Gill, District Manager, Texas Water Commission provides a notification by TXI of a change to a system whereby:

“In the interest of reducing fugitive particulate emissions generated by truck traffic resulting from the transportation of CKD from the stack dust tank to the active CKD landfill, TXI has developed a method of pneumatically conveying CKD to the landfill. The modified CKD transport system is a closed conveying system. The modified system will require the installation of a portable dust tank equipped with a fabric filter dust collector utilizing mechanical cleaning. The dust tank will be located in the landfill area and will discharge directly to the landfill surface via a closed screw conveyor equipped with water sprayers.”

However, a January 19, 1996 document<sup>2</sup> indicates:

“The dust is moved via enclosed screw conveyors to a dust bin located near the #4 precipitator. The dust bin is equipped with a 5000 acfm baghouse (EPN E2-9)..... From the CKD bin, the dust is dropped into a dump truck via pug mill. The CKD is then transferred to the intended disposal area where a bulldozer spreads the material evenly.”

Both of the descriptions of CKD handling equipment cannot be simultaneously correct.

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<sup>2</sup> “Texas Industries Resource Recovery Program, Hazardous Waste Management Facility TNRCC Permit Application, Supplemental Information #2,” Volume 1, Section 3.3, Page J-62-6, dated January 19, 1996.

A undated handwritten notebook found in the files which was a field observation book by a TNRCC (or its predecessor agency) staffer who was observing a stack test at the plant (probably in 1992) indicated:

“It was noted that the CKD unloading facility by the #4 kiln gave off large amounts of dust while the bin was being unloaded into a truck trailer.”

This observation thus gives some credence to the 1996 description of CKD handling system and further indicates that CKD handling can cause problematic fugitive CKD air pollution.

Citizen observations have been made of fugitive dust from both the CKD landfill and from near-ground level sources in the area of the plant.

### **3.3 The Permit Should Be Amended to Clearly Require a System of CKD Handling Which Requires State-of-the-art CKD Handling and Conveyance Systems.**

The permit should incorporate a specific requirement for operation of covered CKD conveyors at the plant with baghouse control, enclosed baghouse-controlled pneumatic conveyances of CKD to the landfill area, deposition of pneumatically conveyed CKD into a wet pugmill with sufficient capacity to completely and thoroughly wet (to a specific wetness standard) all CKD and dustless manipulation of such wetted CKD materials at the CKD landfill.

In the event that truck trailers remain as any component of a CKD conveyance and transfer system, truck load covers, tire washing, speed limitations, paved haul roads and road cleaning should be incorporated to ensure that collected CKD is not emitted as an airborne contaminant.

It does not appear that anything in the permit or the established records explicitly provides for this kind of CKD management system and such a system should be required by amendment to the permit for operations at TXI.

### **3.4 Testing Protocols for CKD do not Provide Adequate Assurances of the Bevill Exemption**

Under Table IV.V, Sampling and Analytical Methods, the Bevill metals testing protocol for CKD requires only a 24 hour composite sample once per month for Bevill exemption compliance. File materials indicate that such Bevill metals determinations are done on the day of maximum waste-derived fuel burning.

While testing on the day of maximum waste-derived fuel burning might be an appropriate day to test for organics in CKD, testing of CKD for Bevill metals should be done on the day of the month with the maximum daily feed of toxic metals derived from the applicant's mandatory

system to account for compliance with feed rate limitations, in the event that the sampling frequency remains only one 24 hour composite sample per month.

The permit should be amended to provide for daily Bevill metals determinations on CKD produced at the plant. A sample schedule of one 24- hour composite sample every 30 days does not provide adequate assurances of compliance with the metals-related Bevill exemption.

In addition, TXI should provide for a system that allows for CKD to be separately stockpiled to account for proven metals-related Bevill compliance. Without such a system of stockpiling CKD until metals-related Bevill exemption compliance is proven, the permit would allow TXI to co-mingle Bevill and non-Bevill CKD without having the remedy available to ensure that the non-Bevill materials would be handled as hazardous waste.

### **3.5 CKD Recycling or Insufflation Should Be Specifically Precluded by Permit Provision**

Compliance with emission limitations and kiln operating conditions were evaluated for TXI's operation without the presence of CKD recycling to the kiln or CKD insufflation. The permit should be amended to incorporate a prohibition on such CKD recycle and this mode of operation should not be permitted under any operational flexibility theory without a completely renewed demonstration of compliance, public notice and comment and an amendment to the permit.

CKD insufflation has the potential to increase particulate loading on PM control equipment, increase PM emission, increase the metal toxicant content of any CKD that is wasted and increase emissions of toxic metals and hydrogen chloride. As a result, such CKD recycling practices pose fundamental questions about maintenance of compliance with the permit in the absence of a clear demonstration of compliance with all permit parameters.

## **4 Issues Related to Performance Testing and Simultaneous Regulatory Compliance**

In general, a number of problems are noted in this comment with TXI's failure to disclose all simultaneous performance-related parameters during stack performance tests and the failure of TNRCC/EPA to require and ensure TXI's simultaneous compliance with all applicable performance requirements under any given set of operational assumptions. Applicable performance requirements should also include compliance with TXI's air discharge permit # R-1360A as well as simultaneous compliance with all of the RCRA permit provisions and emission limitations.

This comment objects to so-called "certifications of compliance" where TXI has been allowed to pick and choose which parameters with which they will demonstrate compliance at any given time, ignoring other applicable and germane measures of compliance, both within the proposed

RCRA permit and with TXI's air discharge permit. Some, but not all of the problematic, conflicting compliance areas are noted below:

#### **4.1 Simultaneous Metal Emission and HCL/Chlorine Emissions Compliance**

Nothing in the 1995 Recertification of Compliance demonstrated simultaneous compliance with both high chloride feeds and high metal feeds and maximum temperatures in the hotter sections of the kiln. No data was provided on the chlorine feed inputs during metal emission testing, and TXI apparently refuses to install, or be accountable for, temperature monitoring in high temperature sections of the kilns.

TNRCC staff have been aware that metal emissions may significantly be affected by the metal compound type and hot-zone kiln temperatures. Toxic metal chlorides can have significantly greater vapor pressures than metal oxides, hydroxides or sulfides.

TNRCC should have required a simultaneous demonstration of high chlorine, high temperature and high metal spiking emissions and such a demonstration should be provided before EPA/TNRCC approves the proposed permit.

#### **4.2 Chlorine feed/HCL emission rate/HC Cold Mode Emissions**

During the 1995 Recertification of Compliance, TXI had a 3 test average of hydrogen chloride emissions during "cold mode" maximum chlorine input testing of 7.73 lbs/hour. The proposed permit has set this as an emission limitation, along with a 4 kiln emission limitation of 29 pounds per hour.

However, TXI's Air Discharge permit has a four-kiln HCL emission limitation of a total of 13.30 pounds per hour which is no less compelling than the HCL limitation in the proposed RCRA permit. Compliance with the Air Permit #R-1360A under conditions of maximum feed of chlorine containing wastes is extremely unlikely.

Previously, during the 1992 certification of compliance testing, hydrogen chloride emissions of greater than 17 pounds per hour were detected; this amount from a single kiln exceeded the air permit limitation from all four kilns of 13.30 pounds per hour. However no notice of violation was issued to TXI concerning hydrogen chloride emissions standard violations and no rollback of chlorine inputs in waste feed was provided to ensure compliance with the Air Permit.

The solution to these conflicts is not to relax the air discharge permit but to require a roll-back in permissible chlorine content of waste feeds below what has been proposed in the RCRA permit.

It appears that during “cold mode” testing, TXI cannot ensure compliance with the 20 PPM HC emission limitation and automatic waste feed cutoff (AWFCO) during anything close to maximum quench-water mode or maximum kiln feed rate. According to the performance test, one run had to be abandoned completely because of a HC-related AWFCO. No information was provided on destruction and removal efficiencies (DREs) for a selection of principle organic hazardous constituents during such adverse conditions.

It appears that in the last hour of run three used in the recertification of compliance determination, operation of the kiln within required parameters was jeopardized, along with an HC emission of 25 PPM at the conclusion of the test. In the later half of the “test,” hazardous waste feed was significantly reduced. The total chlorine emission was the greatest during this last run with the least amount of chlorine feed input....a counter intuitive result. TNRCC/EPA should not have accepted this so-called “recertification of compliance” and should not accept it for the purposes of an adequate application for the proposed TXI RCRA permit.

#### **4.3 Opacity/PM Emission Rate**

The 1995 recertification of compliance did not include detailed process data for the “particulate mode” run in Appendix H. As a result, there is no information concerning what opacity was occurring during the test conditions. There is no information from the test on the chlorine inputs or hazardous waste feed rates to the kiln. It is entirely possible that this run was made while burning mostly natural gas in the absence of a specific disclosure by TXI in the recertification of compliance.

The problem is that the proposed permit allows opacities of 20% without having one piece of detailed concrete information on whether PM, metal toxicants, TCDD or other emission limitations can be met during such operations at the plant. (It should be noted, however, that hourly averages of opacity during the multi-metals compliance test showed a range of 5-7 percent.).

Before granting the permit, TNRCC should require more data showing simultaneous disclosure and compliance with PM, metals and TCDD TEQs emission rates in a showing where there is also simultaneous disclosure of stack opacity and numerical PM emissions..

#### **4.4 Mercury Stack Emission/Feed RCRA Permit and Air Permit Requirements**

The proposed RCRA permit allows a single kiln to discharge more than three times the amount of mercury compared to the permissible emissions from all four of the kilns under the TNRCC Air Permit. The proposed RCRA permit thus constitutes a significant relaxation of permissible mercury emissions to a point that the Air Permit will be violated with certainty if feed rate limits are approached under the proposed RCRA permit.



TNRCC should not allow this kind of inter-permit media conflict to occur. Feedrate limits for mercury should be rolled back to ensure compliance with the air permit before the proposed RCRA permit is issued.

**4.5 Chromium Requirements**

The proposed RCRA permit allows more than ten times the chromium emissions from all four stacks compared to the 4-stack chromium emission limitations contained in the air discharge permit. Such a conflict should not be permitted and the chromium feed rates should be roll-back in the proposed RCRA permit to ensure compliance with the chromium emission limitations of the air permit.

**5 Feed Rate Limitations**

**5.1 The Permit Allows Significant Amounts of Metal Fluxes to the Facility**

The table below analyzes information concerning permissible metal fluxes to the facility.

| Toxic Metal | Pumpable Waste Feed Limit<br>grams/hour per kiln | Annual Tons of Permissible Waste Metals<br>(4 kilns) | Percent by weight @<br>257 lbs/min waste feed |
|-------------|--|--|---|
| Arsenic     | 106  | 4.1  | 0.0015  |
| Antimony    | 1539   | 59.4   | 0.0220  |
| Barium      | 13061  | 504.0  | 0.1866  |
| Beryllium   | 30   | 1.2  | 0.0004  |
| Cadmium     | 1320   | 50.9   | 0.0189  |
| Chromium    | 5420   | 209.2  | 0.0774  |
| Lead        | 11261  | 434.6  | 0.1609  |
| Mercury     | 43.3   | 1.7  | 0.0006  |
| Silver      | 33500  | 1292.8   | 0.4785  |
| Thallium    | 604  | 23.3   | 0.0086  |

The first column shows the permissible metal feed rates in grams/hour in pumpable hazardous waste fuels. The second column shows the maximum permissible annual tons of the toxic metals that would be permitted in waste if fed at the maximum feedrate for an entire year. The third column shows the maximum percentage of toxic metals by weight in hazardous waste fuels assuming a maximum feed rate of 257 lbs. of hazardous waste per minute per kiln.

Although it is unrealistic to assume that TXI will feed the maximum feed rate of a toxic metal for every hour of the year and that the facility would operate at the maximum rate of hazardous waste feed at all times, the chart is useful to illustrate that the proposed permit allows very significant and large fluxes of waste-related toxic metals to be fed into the four kilns without violating any provisions of the permit

The third column is useful to illustrate that only a minor percentage, always less than one percent by weight in waste derived fuels to be burned, can allow very significant annual fluxes of toxic metals to and through the TXI facility.

The nature of the TXI facility is that one hundred percent of these metal fluxes are discharged to the environment in one form or another. These metals are either incorporated into clinker, end up in the kiln dust or are released from the kiln stacks.

## **5.2 Significant Permissible Toxic Metal Fluxes Are Inconsistent with Effective Pollution Prevention Policies**

The fact that TXI can incorporate very large amounts of toxic metals into kiln waste derived fuels on an annual basis illustrates some fundamental issues associated with pollution prevention as it relates to toxic metals and the environment.

The laxity of the permit as to toxic metal throughput encourages the applicant to accept for blending low BTU toxic metal containing wastes that can be combined with high BTU materials to blend up a kiln fuel to meet a burning specification. Such blending does not mean that the emissions associated with the disposal and management of that particular waste will be minimized or that the toxic constituents will be most effectively prevented from creating the potential for environmental exposures.

As a result, fundamental concerns about pollution prevention are raised by issuance of the proposed permit as to management of low BTU wastes when such waste might better be managed in other, alternative facilities and waste disposal processes.

TNRCC/EPA should consider additional restrictions in the proposed permit to discourage acceptance of waste loads of very low BTU value. Requirements on the testing of waste loads that were previously in effect to discourage low-BTU materials should be reimposed in the proposed permit.

## **5.3 Waste Cutoff Should be Keyed to Metal Waste Feed Limitations**

The proposed permit should be amended to clearly provide that hazardous waste derived fuel feed should cease if metal related feed rate limitations would be exceeded or if, for any reason, TXI

has lost the ability to have a determinant understanding of the metal contents of any particular burn tank of waste feed.

## **6 Kiln Operating Conditions**

### **6.1 Demonstration under Low Kiln Feed Conditions**

The proposed permit has a lower production rate limitation of greater than 8 tons of slurry mass flow per hour. A previously proposed limitation that at least 50% of materials introduced into the kiln be normal cement production materials was dropped after a mid-1996 version of the proposed permit.

There does not appear to ever have been a demonstration or certification of compliance where crucial emission parameters are shown to comply with the proposed permit at this low production rate.

Under conditions of low production rate and high chlorine feed to the kiln, it is unclear that TXI can demonstrate adequate removal efficiencies for hydrogen chloride and acceptable emissions in such circumstances. It is not clear that the reduced amount of potential chlorine scavaging materials in the kiln will not affect high chlorine input operation and subsequent compliance with hydrogen chloride emission limitations and percentage reduction requirements.

### **6.2 Kiln Temperature Monitoring at Locations Other than the Cool End of the Kiln**

Additional demonstrations of compliance should be obtained and the permit should be amended to more clearly characterize the minimum operational temperature characteristics of the kiln. Although it is true that cement production requires a floor on temperature characteristics in various parts of the kiln, it is also true that kilns will occasionally experience problems in maintaining adequate temperature control and that some clinker may not be acceptable as produced from the kiln.

Other hazardous waste burning kiln operations and hazardous waste incinerators have provided for more detailed kiln temperature characterization than TXI has proposed in its application. For example, Ash Grove Cement has provided for temperature monitoring, limitations and waste feed cutoffs based on the temperature at the hot end of the kiln chain section. Optical pyrometry is available to monitor combustion temperatures in kiln burning zones. Problems of dust interferences with such devices that are cited by TXI can be overcome by the use of air sweeps of the optical sensing devices.

TXI's reliance on kiln cold-end exit temperatures as the sole temperature characteristic for monitoring waste feed cutoffs discounts the effect of high combustion zone temperatures on

potential toxic metals volatility and subsequent emissions, particularly for the most volatile or semi-volatile metals.

EPA/TNRCC should require TXI to amend its application to incorporate more detailed temperature characterization of its kilns, and subsequent operating and waste feed cutoffs that are demonstrated by further compliance certification stack testing.

## **7 Emission Limitations**

### **7.1 Comparison of Permit Limit and Emission Test Results with MACT Standards**

On April 19, 1996, the U.S. Environmental Protection Agency published proposed Maximum Achievable Control Technology Standards under the Clean Air Act and under the Resource Conservation and Recovery Act to control emissions from hazardous waste combustors, including hazardous waste burning cement kilns and hazardous waste incinerators (referred to below as MACT1 standards).

The American Lung Association filed comments with the U.S. EPA in response to the proposal. The ALA comments criticized the MACT standards as too lenient and illegal under the Section 112 of the Clean Air Act. ALA criticized the standards as allowing large variations in the mass rate of emissions between cement kilns and hazardous waste incinerators as groups of hazardous waste combustors.

On May 2, 1996, U.S. EPA published a "Notice of Data Availability" which proposed revised standards (referred to below as MACT2 standards). In general, hazardous waste incinerator emission standards were made significantly more stringent, semi-volatile metal emission standards for cement kilns were significantly relaxed, low volatile metal emission standards for cement kilns were made more stringent, and hydrogen chloride/chlorine emission standards were made more stringent.

This commenter prepared an analysis of the proposed permitted TXI emissions for TCDD TEQ, semi-volatile metals (SVM) and low volatility metals (LVM) and compared these pound per hour emission rates to emissions in pounds per hour that would be permitted under both MACT1 and MACT2 standards. Assumptions made for the purpose of this analysis are that a single kiln stack exit flow is 59,882 dry standard cubic feet per minute under a condition of 5% kiln exit oxygen (conditions that are reflective of available stack test conditions from the 1992 stack tests for certification of compliance).

Pursuant to this analysis, the following conclusions are drawn:

- a. The proposed permit's emission limitation for TCDD TEQs is 2.73 times what will be allowed under the proposed MACT1 or MACT2 EPA standards for hazardous waste

combustors. As a result, the permit does not provide emission limitations that are reflective of what U.S. EPA has concluded to be state of the art emission limitations for chlorinated dibenzo dioxins and furans from hazardous waste burning cement kilns, and such proposed emission limitations should be revised in the proposed permit to reduce permissible emissions.

- b. The proposed permit's emission limitations for low volatility metals will allow emissions which are 20.4 times what would be permitted under MACT1 standards and 42.2 times what would be permitted under MACT2 standards.

It appears, based on this analysis, that the proposed emission limitations in the proposed permit for chromium and antimony are out of line with what the U.S. EPA considers to be emission limitations reflecting state-of-the-art emission control performance for these two metal toxicants. Based on this analysis, the permit should be amended to significantly reduce permissible emissions of these toxic metal air contaminants.

- c. The proposed permit's emission limitations for semi-volatile metals will allow emissions which would be two times what would be permitted under the MACT1 standards, although the limitations would comply with the significantly relaxed SVM limitations in the MACT2 standards. It should be noted, however, that the proposed SVM MACT2 limitations will allow dramatically large mass rate emissions in the hazardous waste burning cement kiln industry as compared to the hazardous waste incinerator industry.

A similar exercise was carried out to compare permissible emission rates in the proposed permit for TXI with the MACT1 and MACT2 emission limitation which would be imposed on the hazardous waste incinerator industry. If these same standards were considered for applicability to one of the TXI hazardous waste burning cement kilns, the following would be noted:

- a. The proposed TXI permit's emission limitations would be 9.5 times the MACT1 limits and 1.5 the MACT2 limits for semi-volatile metals if TXI were to be regulated hypothetically under the proposed hazardous waste incinerator rules.
- b. The proposed TXI permit emission limitation would be 7.8 times the MACT1 limits and 71.8 times the MACT2 limits for low-volatile metals if TXI were to be regulated hypothetically under the proposed hazardous waste incinerator rules.

## **7.2 Best Available Control Technology -- Main Stack Emission Control for Particulate Matter and Toxic Metals**

TXI has attempted in its application materials to summarily dismiss baghouse kiln stack emission control technology from any consideration as the preferred main stack emission control technology at this proposed plant.

TXI has claimed issues of technical infeasibility associated with the installation of baghouse emission controls on the TXI wet process cement kiln.

However, TXI's technical infeasibility argument cannot be taken seriously in view of some key installations of main kiln stack baghouse emission controls on other wet process kilns in the United States. For example, the Holnam Dundee, MI cement plant is a wet process kiln that is controlled with baghouse kiln stack emission controls. This kiln operates in a much colder climate than does TXI and is able to maintain particulate emission control operations.

The Giant Resource Recovery plant in Harleyville, SC is a hazardous waste burning cement kiln that has been operating many years as a wet process cement kiln controlled with baghouse main kiln stack controls.

In the last two years, Lafarge Corporation has committed to and is installing main stack baghouse emission controls at its Palding OH hazardous waste burning wet process cement kiln.

EPA determined in its April 19, 1996 Maximum Achievable Control Technology submittal for hazardous waste combustors that baghouse emission control on wet process cement kilns is feasible and has been demonstrated in practice.

As a result, TXI's disregard for consideration of baghouse emission controls on its kiln as part of a BACT determination cannot be upheld as valid. As a result, the application for the permit and the resulting BACT determination is defective and the permit application should be amended to properly consider main kiln stack baghouse controls on the TXI facility as a potential best available control technology determination for PM, metals and TCDD TEQ control. In addition, installation of baghouse controls on TXI's main stack should also allow installation of spray dryer/HCl sorbent capability.

### **7.3 Failure to Base Emission Limitations for Toxic Metals on the Level of Performance Already Achieved**

A number of the proposed permit's permissible toxic metal emission limitations significantly exceed demonstrated emission control performance in the March 1995 recertification of compliance.

This is shown below:

| Pollutant | Factor by which permissible emissions exceed 3/95 actual stack test emissions |
|-----------|---|
| Arsenic   | 2.1   |
| Beryllium | 115.1   |
| Cadmium   | 1.3   |
| Chromium  | 1644.6  |
| Lead      | 5.1   |
| Mercury   | 2.8   |
| Thallium  | 2.3   |

As a result, the proposed permit allows emissions from TXI to potentially experience significant degradation over recently achieved performance levels in the 3/95 recertification of compliance. This is unacceptable and the proposed permit should be amended to ensure that the toxic metal emission limitations more closely resemble emission control performance which has already been achieved and demonstrated.

In particular, the large excess emissions for permissible chromium helps illustrate a point made in a prior section that permissible chromium emissions are excessive and that the permit should be amended to significantly reduce such permissible chromium emissions.

#### **7.4 Mercury Issues**

We again note that the permissible mercury feedrate limitations potentially allow as much as 1.7 tons per year of mercury to be introduced to the TXI cement plant. Although TXI claims that mercury is removed by the kiln and its emission control system from stack discharges, these claims are difficult to accept as valid considering the high volatility that mercury would have in a hot kiln system. TXI's claims of mercury capture in the kiln are probably better accounted for by presently unknown defects in their analytical procedure than any real capture efficiency in the kiln.

We note that U.S. EPA considers activated carbon injection to be a proven and feasible mercury and TCDD TEQ emission control technology as it was exhibited by U.S. EPA's use of a beyond-the-MACT floor emission limitation for these two pollutants. TXI should be required to provide a more realistic appraisal of the feasibility of mercury removal by activated carbon injection at the TXI facility and that TNRCC/EPA should require consideration of this emission control method in the proposed permit.

## **7.5 Vanadium**

Emission limitations for vanadium were eliminated between the 1996 draft permit and the final proposed permit. However the toxic metal vanadium may be expected to be present in kiln feed materials in significant amounts to the extent that petroleum coke and petroleum industry wastes are sent to the TXI facility.

Vanadium should be evaluated and regulated in the proposed TXI RCRA permit as it will likely be a pollutant which will be received in significant quantities by this facility.

## **7.6 The 20% Opacity Limitation of the Proposed Permit is too High**

The permit should be amended to incorporate a 10% opacity limitation to ensure that this facility maintains exemplary particulate emission control at all times that it is burning hazardous wastes. We note that TXI demonstrated metals compliance in the 3/95 test while stack opacities were in the 5-7% range.

Alternatively, TNRCC/EPA should have required TXI to submit stack test correlations between the proposed 0.03 grains per dry standard cubic foot emission limitation and demonstrated levels of stack opacity, with a setting of stack opacity at a slightly higher level with a small compliance margin. This type of demonstration should have been required of TXI before the proposed permit was issued. The permit should not be granted without the submittal of this kind of analysis.

We again stress the importance of maintaining exemplary particulate control to ensure that all emissions of metals will remain acceptable at all times. This assurance is not provided by the current 20% opacity limitation in the proposed permit.

## **7.7 TCDD Detection Limits**

Proposed permit condition V.G.2(a) contains a provision:

“[PCDD/PCDF] Congeners not detected will be assumed not to be emitted and reported as zero.”

This provision is objectionable and should not be approved as proposed. The provision should be amended to require that the detection limit for each congener should be determined, and that emissions should be assumed to be at the detection limit, rather than zero, if they are not observed during the test.

## **7.8 TCDD TEQ Emission Limitations**



The provision of the proposed permit applicable to TCDD TEQ emissions effectively undermines enforcement of this emission limitation. Section V.G.2b contains a provision that can be interpreted as eclipsing the ability of EPA/TNRCC to enforce the dioxin/furan emission limitations of the permit. The following language should be stricken from this provision before the proposed permit is issued:

“Should performance test TEQ be higher than the emission limit specified in Attachment H, the permittee will retest for D/F emissions only in accordance with the requirements of V(G) of this permit within 60 days of submittal of the performance test which exceeded the permitted limit along with a detailed analysis of operation conditions and a report to the TNRCC describing proposed alternatives and actions that will be necessary to achieve compliance with the emission limit.”

The effect of this language is to excuse noncompliance with the dioxin/furan emission limitations and to allow TXI to evade enforcement penalties for any violations of the dioxin/furan emission limitations which may occur. Such evasion of an enforceable emission limitation should not be allowed in the proposed permit.

## **7.9 PM Emission Limitation**

TNRCC staff prepared an analysis of stack test emission results for particulate matter to arrive at a 95% confidence level number of 0.03 grains per dry standard cubic foot for the setting of a PM emission limitation.

However this analysis is defective since it incorporated results from many tests where no hazardous waste burning occurred and therefore does not adequately and stringently regulate particulate emissions from the TXI facility. The analysis of PM emission should be redone to examine only those tests in which waste derived fuel was being burned to determine an enforceable particulate emission mass rate limitation whenever the facility is burning hazardous waste derived fuels. This kind of analysis should produce a much more stringent limitation and TNRCC and EPA should use their omnibus authority under the Resource Conservation and Recovery Act to require a more stringent PM emission limitation.

The permit should not be granted until this kind of analysis is done and a more stringent PM emission limitation is developed based only on tests when at least some portion of the fuels to the kiln were hazardous waste.

## **8 Operational requirements**

### **8.1 Operation and Maintenance Provision**

Section II.Q.R of the permit does not provide an adequate statement of the duty of the applicant to maintain proper operations and maintenance of the equipment under all circumstances that complies with federal requirements binding on all RCRA permit holders.

The permit should be amended to incorporate requirements found at 40 CFR 270.30c (Need to halt or reduce activity not a defense), 40 CFR 270.30d (minimize releases to environment upon non-compliance) and 40 CFR 270.30e (proper operation and maintenance). The 40 CFR 270.30 regulations require that all of the provision of 40 CFR 270.3 either be incorporated into ALL RCRA permits or that such sections of the federal regulations are specifically cited.

The existing section II.Q.R language is an inadequate and deficient paraphrasing of these requirements and this proposed language should be struck in favor of specific references to the applicable RCRA regulations at 40 CFR 270.3.

### **8.2 Inspection for Kiln Rings and Needed Kiln Shooting**

Nothing in the inspection table addresses inspection of the kiln for ring dam formation and the need to deal with such rings to avoid kiln upsets. The inspection table should provide for this type of inspection and evaluation.

### **8.3 AWFCO on Opacity**

The permit should be amended to include an automatic waste feed cutoff related to six minute opacities. In another section we urge adoption of a 10 percent opacity limitation on the plant, and this level should also be incorporated for an automatic waste feed cutoff.

Electrostatic precipitator power is simply not adequate as the sole determinant of ESP performance. ESPs are known to be sensitive to changes in inlet loading with detrimental performance at excessive inlet loadings. ESP power measurements cannot give the fullest possible picture of ESP performance. As a result, opacity in excess of 10% should also be used for automatic waste feed cutoff to ensure that hazardous waste burning only occurs during times when the facility is exhibiting exemplary particulate emission control.

#### **8.4 Permit Provisions Should Require No Visible Fugitive Emissions from the Kiln**

The permit should be amended to require that the hot end and cold end kiln seals, hot end burner floor and burner building, cold end raw feed openings to the kiln should not have any visible emissions, and that observations of such visible emissions at these points should be regarded as a violation of the permit.

#### **8.5 Instantaneous Floor on Kiln Oxygen**

The permit presently has a minimum kiln exit oxygen requirement of 1% on a one hour average. This provision should be changed to at least a 1% minimum oxygen requirement on an instantaneous basis, and preferably the permit should be amended to restore a previously utilized (in older versions of the air permit) 2.6% kiln exit oxygen and place this on an instantaneous compliance basis rather than a one hour average.

Adequate oxygen is needed to ensure good combustion. Kilns operating without adequate oxygen will have increased formation of products of incomplete combustion, hydrogen sulfide and other total reduced sulfur compounds and sulfur dioxide. This phenomena of TRS formation in kilns with poor oxygen control is known to occur in kraft mill lime kilns when inorganic sulfur in carbon dioxide rich portions of the kiln form TRS species in the presence of low oxygen concentrations.

By previously allowing TXI to decrease the permissible floor on kiln exit oxygen from 2.6% to 1%, TNRCC made it far more likely that the TXI cement plant would discharge greater problematic amounts of deleterious air contaminants which have cause odor nuisance in the community in the past. Complaints about odors from this plant have continued and this matter has been the subject of past TNRCC enforcement action. It is long past time for TNRCC to take such action so as to ensure these odor problems do not continue by imposing the stringent kiln exit oxygen control requirement proposed in this comment on TXI in the proposed RCRA permit.

In addition, the permit should be amended to require that a kiln exit oxygen automatic waste feed cutoff be incorporated on an instantaneous basis to ensure that hazardous waste is being burned in the kilns only under exemplary combustion conditions with adequate oxygen. Failure to require this kind of control is likely to increase emissions of products of incomplete combustion and pyrolysis products from the kilns when operating under low oxygen conditions.

#### **8.6 Startup and Shut Down**

The provision of the permit (at section IV.A.1(a) on start up and shutdown operation is unacceptable since it opens the way for (and can be interpreted to allow) startup and shut down of the kiln with hazardous waste being fed to the kiln. This provision should be amended to

specifically and deterministically require that no hazardous waste be introduced to the kiln at all during times of start up and shut down.

It is technically and economically feasible for the TXI kilns to be started and shut down on natural gas. There has been no demonstration that this plant can comply with emission limitations and DRE requirements under all startup and shutdown conditions. In particular, there is a high likelihood of violations of requirements on hydrogen chloride percentage reductions during startup and/or low feed conditions. None of the stack tests have examined emissions during startup and shut down so hazardous waste burning should not be allowed under any of these circumstances.

### **8.7 Other Operational Problems on Introduction of Wastes**

The requirements on temperature at Section IV.A.1(b and c) do not provide adequate assurances that a kiln is in a temperature stable condition before introducing waste. The permit should be amended to require that minimum temperatures be proven at mid-kiln and hot end temperature measurement points before waste can be introduced or waste feed can be maintained.

## **9 Continuous emission monitoring**

### **9.1 Enforceability of CEM Results and the Credible Evidence Rule**

The permit should be amended to allow enforcement to take place under all circumstances indicating noncompliance. Specifically, the permit should be amended to require that EPA/TNRCC be able to utilize the results of continuous emission and process parameter monitoring to enforce against violations of emission standards and operating conditions contained in the permit. This type of enforcement capability for the permit complies with EPA's recently enacted Credible Evidence Rule.

### **9.2 Full Scale Exceedances on Monitoring**

The permit should be amended to include reporting of all periods when continuous emission monitors are registering full scale exceedances. In addition, each such event of a full scale exceedance should be regarded as a serious malfunction of process, emission control and/or monitoring systems and reporting should require what preventive measures will be used to ensure that such an incident does not take place in the future.

### **9.3 Reporting of Excursions and Emergency Release Requirements**

Sections II.K provisions on noncompliance going to releases “which may endanger human health or the environment” and Section II.L provisions on twenty-four hour reporting of “a release or discharge of solid waste, or of a fire or explosion which could threaten the environment or human health or safety, outside the facility” are too vague and unenforceable.

These provisions allow TXI to exercise its discretion in how such serious release incidents are regarded rather than providing an objective duty to report such serious releases under all circumstances. There is nothing in the application which sets forth specific enforceable criteria on how such vague language should be implemented. There is no requirement that the facility have capabilities for predictive dispersion modeling, exposure assessment, toxicological review and other standard measures for evaluating the environmental and health impact of release incidents.

These sections of the permit should be amended to provide far more specific requirements to report all significant releases without giving the applicant the discretion to make its own decision based on vague and unenforceable criteria.

In addition, the permit should be amended to ensure that all noncompliance is reported in some form or another at the very least during quarterly excess emission and noncompliance reports.

### **9.4 CEM uptime**

The provision of the proposed permit allowing continuous emission monitors to be down 10% of the time on a 24 hour basis (Section IV.V.(4)) should be amended to require no more than 5% downtime and that any downtime have an explanation that is recorded in the operating log.

Ten percent downtime amounts to 2.4 hours per day. This is an excessive amount of time to have a process be unmonitored. The permit should be clearly written to ensure that continuous emission monitoring equipment cannot be taken off line except for validly needed times for maintenance, calibration and/or repair. The permit should further reflect that failure to maintain continuous emission and process monitoring equipment with a minimum uptime of 95% constitutes a violation of the permit.

### **9.5 Testing of Automatic Waste Feed Cut Off Systems**

The proposed permit outlines a procedure whereby the automatic waste feed cutoff system can be tested without actually proving a waste feed cutoff at the cutoff valve. This is unacceptable.

Solid material present in waste feed may produce long term erosion or degradation in the operation of automatic valve mechanical elements. It is essential that operation of cutoff valves should be tested at least once during AWFCO compliance test periods to ensure that it can actually perform as designed during a real cutoff. Actual waste cutoff valve function should be proven at least once during any such cutoff test. The proposed permit should be amended to incorporate this requirement.

## **9.6 Weekend/Holiday CEMaintenance Provision**

The proposed permit contains an objectionable provision:

“[in regard to CEMS] Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of NSPS or NESHAPS, in which case zero and span shall be done daily without exception.” Proposed permit at p. 33, Section V.D.1(b)

This provision should be amended to strike all references to TXI being able to dismiss its obligations to properly maintain and calibrate continuous emission and process parameter monitors on a daily basis without exception. All involved should appreciate once again that this is a plant that burns hazardous waste and that this operation requires continuous and intense vigilance to ensure that the public health and environment is protected.

The proposed permit’s contemplation that emission and process monitoring that is key to ensuring compliance and exemplary environmental management can be compromised because the facility is not able or desirous of tasking these maintenance operations on weekends and holidays is deeply disturbing. The permit should not be approved with this unacceptable provision.

## **10 Risk Assessment Issues**

This comment incorporates by reference the criticisms of TNRCC risk assessments conducted on the TXI facility as presented by Stuart Batterman, Ph.D. and Yuli Huang, M.S. in the report entitled “Evaluation of the Screening Risk Analysis for the Texas Industries (TXI) Facility in Midlothian, Texas,” May 1, 1996, completed for the American Lung Association of Texas.

This report is enclosed and attached and is filed along with this comment for inclusion in the public comment record.

## **11 Tank Storage Issues**

### **11.1 Nitrogen Blanket**

The permit should include a requirement to maintain a continuous nitrogen blanket system in the TXI facility hazardous waste tank farm. It is simply not true as claimed by TXI that this is just a safety matter which is divorced from considerations of air pollution control.

The nitrogen blanket system will ensure that head space in tanks will be primarily occupied by nitrogen gas and not volatile organic compounds from the hazardous waste. This will tend to significantly reduce any VOC emissions during any overpressure events, and it will also ensure that a nitrogen-rich gaseous environment is introduced to tankers brought to the facility. In the event that such transport units leak or that they are again filled at other locations with waste where tank management emissions are not as well controlled, the nitrogen blanket system will tend to reduce overall waste management system emissions. As a result, nitrogen blanket system and operational requirements should be included as a legal requirement in an amended proposed permit before issuance.

### **11.2 Representativeness of Automatic Sampling**

The proposed permit envisions a future system for automatic sampling of tanker loads for acceptance purposes to replace the current system of full verticle tank manual sampling of waste.

Such an automatic sampling system should not be permitted without a demonstration of comparable effectiveness to the manual tank sampling procedure.

An automatic system employing a recirculating pump will not likely provide representative samples of the entire tanker load because of phase separations, solids settling, differential viscosities and other nonhomogeneous characteristics of tank loads. It simply is not apparent that a small recirculation pump that recirculated a small fraction of a tanker load could ever provide sufficient representative samples equivalent to the representativeness of a complete manual verticle sampling tube procedure in a tanker load.

The application should also include specific occupational health protections for workers involved in such manual sampling activities, including full-face self-contained breathing apparatus, protective clothing, training requirements and emergency procedures development.

### **11.3 Emergency Tank Pressure Relief Is Uncontrolled**

The proposed permit should be amended to require that all emergency tank pressure relief valves be vented through activated carbon canisters to control emissions associated with overpressure

events. Information in the application is suggestive that such over-pressure emissions are currently uncontrolled.

In addition, the proposed permit should be amended to require that actuation of pressure relief valves on waste tanks at the facility be instrumented to the operators to ensure operator knowledge of the occurrence of adverse emissions from such tanks.

#### **11.4 Provision to Terminate Tanker Feed During Venting/Overpressure**

The proposed permit should be amended to require that tanker off loading cease during any overpressure event in a directly connected tank or occurrence of a release of a pressure operated release valve on any receiving, directly connected tank.

#### **11.5 Ban on Direct Feed**

The proposed permit should be amended to prohibit direct feed of the kilns from tanker trucks or railcar tanks. Tanker truck and tank car recirculation pumps are not adequate substitutes for the mixing and agitation capabilities of dedicated tank agitation systems.

As a result, phase separations can occur in tanker trucks and tank cars that may cause undesirable disruptions to kiln flame conditions or other flame upsets.

Since TXI has since incorporated an adequate number of tanks to avoid such direct feed operations, such practices should be specifically precluded by new amendments to the proposed permit.

### **12 Reporting of Enforcement Requirements**

#### **12.1 Malfunction and Preventive Maintenance Plan**

The proposed permit should be amended to require the approval and adoption of a legally enforceable malfunction and preventive maintenance plan applicable to all air pollution controls, kiln systems and tank systems at the facility.

The malfunction and preventive maintenance plan should provide for a system of continuous improvement and future problem avoidance and clear demonstrations on how each system outage leading to emission problems will be corrected and prevented in the future.

Review of selected quarterly reports indicates repeated problems with electrical outages and precipitator functioning. Repeated malfunctions are a sign that overall environmental



management vigilance should be improved. Such improvement in management should be made enforceable by a legally binding malfunction and preventive maintenance plan.

## **12.2 Reporting of All Precipitator Outages**

The proposed permit should be amended to require reporting of all precipitator outages and malfunctions within two hours to the TNRCC Fort Worth office. These outages are responsible for significant particulate emissions and such events can have a major impact on local air quality. These are serious events and TNRCC should increase their scrutiny of this problem through a better reporting and monitoring system.

## **13 Waste Acceptance**

### **13.1 List of Waste Codes Permitted for Acceptance at TXI**

The proposed permit should be specifically amended to include as an attachment to the body of the permit a list indicating the permissible EPA waste codes that may be delivered to the plant or that may be co-mingled for the purpose of blending at the plant.

Such a list will assist enforcement efforts on dilution bans and will give notice to all parties of which wastes are permitted to be delivered to the TXI facility. U.S. EPA Region 7 and the State of Kansas have provided for such a list in the proposed permit for the Ash Grove Cement facility in Chanute KS.

### **13.2 New Introduction of Non-hazardous Wastes**

The permit should be amended to require that TXI not accept non-hazardous fuels for burning which haven't been previously used during compliance tests upon which proposed permit issuance is based. For example, TXI's proposed permit should not allow introduction of whole or chipped tire-derived fuels without permit amendment and a clear revised program of compliance demonstration. Such changed non-hazardous fuels have the potential to increase emissions of toxic air contaminants or to otherwise affect operations at the kiln.

For example, introduction of tire chips or whole tires to the cool end of the kiln has the potential to significantly increase products of incomplete combustion, hydrocarbons and TCDD TEQ emissions. Introduction of tire derived fuels to the center of the kiln may cause disruption of combustion oxygen to certain regions of the kiln.

### **13.3 Chromium Refractory Brick**

The permit should be amended to prohibit the introduction of waste chromium refractory brick that contains hexavalent chromium into the kiln feed materials. Waste chrome refractory brick produced by this facility should be sent to a properly permitted hazardous waste landfill since this material has no BTU value and should be treated in the same fashion as other low/no BTU materials that are prohibited for disposal in cement kilns and fuel blending facilities under the Elliott Laws EPA Office of Solid Waste memorandum that addressed the metal waste dilution ban issue.

## **14 All Solid Waste Management Units Should be Clearly Listed, Delineated and Regulated in the Proposed Permit**

### **14.1 Kiln Refractory Brick**

There is evidence in the file of past disposal of kiln refractory brick at the TXI site. It is common for this type of brick to contain hexavalent chromium. The proposed permit should be amended to specifically identify the solid waste management unit where this material has been disposed and to identify removal and subsequent disposal of hazardous wastes which are chrome refractory brick by a certain deadline.

### **14.2 All Components of CKD Handling and Disposal System**

All components of the CKD handling and disposal system should be identified in the proposed permit as solid waste management units. To the extent that these units have actual or potential fugitive dust problems, the CKD solid waste management units should be targeted for remediation and compliance efforts that are listed as compliance schedules in the proposed permit.

### **14.3 Enforceable Compliance Schedule and Deadline**

Provisions of the Resource Conservation and Recovery Act concerning corrective action measures at solid waste management units contain very specific requirements applicable to the present permit:

“Standards promulgated under this section shall require, and a permit issued after November 8, 1984, by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit under this subchapter, regardless of the time at which waste was placed in such unit. Permits issued under section 6925 of this title shall contain schedules of compliance for such corrective action (where such corrective

action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.” 42 USC 6924(u).

Nothing in the proposed permit provides for specific corrective action measures, compliance schedules and final compliance dates for remediating any needed problems at solid waste management units located at the facility.

The proposed permit should be amended to set forth a list of all solid waste management units at the facility, to outline any needed remediation required and to provide a schedule of compliance with a final end date to ensure completion and compliance at all such solid waste management units.

Comments of the American Lung Association of Texas were filed by UPS Red delivery to the TNRCC Central Clerk to the TNRCC TXI Permit docket arriving on May 20, 1997.

These comments were prepared for the American Lung Association of Texas by Alex J. Sagady & Associates, East Lansing, MI