

**ATTACHMENT B**  
**TEXAS INDUSTRIES, INC.**  
**DRAFT RCRA PERMIT**  
**(48 Sheets)**

PERMIT MODIFICATION\AMENDMENT TRACKING SHEET

Use this sheet to list the original permit issuance date and all subsequent revision dates for permits which are being amended or modified. **This sheet is not a formal part of the permit. However, for convenience of the permits staff, it is to be kept with internal TNRCC copies of the permit as a modification tracking sheet.** All permit modifications or amendments (including Class 1 modifications and minor amendments) should be listed on this sheet with their respective revision numbers and issuance\notification dates.

**Permit Modification/Amendment**

**Revision No.   Date**

- Original Permit Issuance

0

Report Submittal Tracking Sheet

All reports required to be submitted to the agency by the permittee must be listed on this page in the order in which their corresponding sections are contained in the permit. All due dates should be specific, i.e., if the permit requires a report submittal within 60 days of permits issuance, then this sheet should contain the exact submittal date such as 12/17/94. **This sheet is not a formal part of the permit, so it can be updated by the permit coordinator as necessary.** Once the permit is issued and this sheet has been updated to reflect the most current dates, a courtesy copy should be sent to the permittee and to the appropriate regional office to ensure that no confusion exists regarding required submittal dates.

<u>Required Submittal</u>	<u>Required Submittal Date</u>	<u>Actual Submittal Date</u>
40 CFR 264 Subpart AA & BB	Within 180 days of issuance	
Within 45 days of discovery		
January 25 of every year		
January 25 of every year		
To EPA biannually, to TNRCC upon request		
January 1 of every year		
Within 15 days of receipt		
Within 60 days of issuance		
22 months after issuance		
60 days after data receipt		
14 days after latest occurrence		
Quarterly		
45 days prior to unit closure		
Within one year of permit issuance		
New SWMU RFA		
Annual Report		
Annual Waste Summary		
EPA Biannual Report		
Waste Minimization Report		
Unmanifested Waste Discrepancy		
QA/QC for O2 CEMS		
Stack Sampling Plan		
Stack Sampling Report		
AWFCO Report		
CEMS Reports		
Closure Notification		
Corrective Action Plan		
Corrective Action Modification		
Annual Audit Notice & Report		

PERMIT No. HW-50316-001  
EPA PERMIT NO. TXDOO7349327 -1

Name of Permittee:

TXI Operations, LP  
Midlothian Cement Plant  
245 Ward Rd  
Midlothian, Texas 76065

Site Owner:

TXI Operations, LP  
1341 Mockingbird Lane  
Dallas, Texas 75247

Classification of Site:

Hazardous and Nonhazardous Class 1 industrial solid waste storage and processing, commercial, off-site

The permittee is authorized to store, and process wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules of the Commission and other Orders of the Commission, and laws of the State of Texas. This permit does not exempt the permittee from compliance with the Texas Clean Air Act. This permit will be valid until canceled, amended, modified or revoked by the Commission, except that the authorization to store, process and dispose of wastes shall expire midnight, 10 years after the date of original permit approval.

All provisions in this permit stem from both State and/or Federal authority. Those provisions marked with an asterisk (\*) stem from Federal authority and the U.S. EPA will implement the applicable requirements of HSWA for which the Texas Natural Resource Conservation Commission has not been authorized.

<b><u>PERMIT SECTION I - GENERAL PERMIT CONDITIONS</u></b>	5
A. <u>SIZE AND LOCATION OF SITE</u>	5
B. <u>PERMIT APPLICATION</u>	5
C. <u>AUTHORIZED UNITS AND WASTES</u>	5
D. <u>SEVERABILITY</u>	6
E. <u>DEFINITIONS</u>	7
F. <u>STANDARD PERMIT CONDITIONS</u>	7
1. <u>Permit Expiration</u>	7
2. <u>Duty to Comply</u>	7
3. <u>Certification Requirements</u>	7
4. <u>Monitoring and Records</u>	9
5. <u>Retention of Application Data</u>	9
6. <u>Modification of Permitted Facilities</u>	10
7. <u>Prohibition on Air Pollution</u>	10
8. <u>Requirements for Subparts AA and BB</u>	10
9. <u>Land Disposal Restrictions</u>	11
10. <u>Notification of Release From Solid Waste Management Unit</u>	11
11. <u>Waste Minimization</u>	11
12. <u>Annual Report</u>	12
13. <u>Annual Waste Summary</u>	12
14. <u>Biennial Report</u>	12
15. <u>Pollution Prevention</u>	13
G. <u>STANDARD PERMIT CONDITIONS APPLICABLE TO OFF-SITE FACILITIES</u>	13
1. <u>Manifest Discrepancy Report</u>	13
2. <u>Unmanifested Waste Report</u>	13
3. <u>Monthly Summary</u>	13
H. <u>INCORPORATED REGULATORY REQUIREMENTS</u>	13
I. <u>INCORPORATED APPLICATION MATERIALS</u>	14
1. <u>Contingency Plan</u>	14
2. <u>Closure Plan</u>	15
3. <u>Inspection Schedule</u>	15
4. <u>Waste Analysis Plan</u>	15
5. <u>List of Application Materials</u>	15
J. <u>MONITORING OF COMMERCIAL HAZARDOUS WASTE MANAGEMENT FACILITY OPERATIONS</u>	16
<b><u>PERMIT SECTION II - GENERAL FACILITY CONDITIONS</u></b>	16
A. <u>FACILITY DESIGN, CONSTRUCTION, AND OPERATION</u>	16
B. <u>OPERATION OF FACILITY</u>	16
C. <u>HAZARDOUS WASTE RECEIVED FROM OFF-SITE SOURCES</u>	16
D. <u>GENERAL WASTE ANALYSIS</u>	16
E. <u>SECURITY</u>	17
F. <u>GENERAL INSPECTION REQUIREMENTS</u>	17
G. <u>PERSONNEL TRAINING</u>	17

H.	<u>SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE</u>	17
I.	<u>100-YEAR FLOODPLAIN</u>	18
J.	<u>PREVENTION OF INUNDATION AND DISCHARGES</u>	18
K.	<u>REPORTING OF NONCOMPLIANCE</u>	18
L.	<u>TWENTY-FOUR HOUR REPORTING</u>	19
M.	<u>NOTICE WAIVER</u>	19
N.	<u>SPILL REMOVAL</u>	19
O.	<u>DISPOSAL OF INDUSTRIAL SOLID WASTES AND RESIDUES</u>	20
P.	<u>EQUIPMENT DECONTAMINATION</u>	20
Q.	<u>PREPAREDNESS AND PREVENTION</u>	20
	1. <u>Required Equipment</u>	20
	2. <u>Testing and Maintenance of Required Equipment and Structures</u>	20
	3. <u>Access to Communications or Alarm System</u>	20
	4. <u>Emergency Coordinator</u>	21
R.	<u>OPERATION AND MAINTENANCE OF EQUIPMENT</u>	21
S.	<u>RECORDKEEPING AND REPORTING</u>	21
	<u>Operating Record</u>	21
T.	<u>SPECIFIC CONDITIONS</u>	21
	1. <u>Dust Suppression</u>	21
	2. <u>Specific Waste Ban</u>	21
U.	<u>LIABILITY REQUIREMENTS</u>	22
V.	<u>INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS</u>	22
<b><u>PERMIT SECTION III - STORAGE AND PROCESSING IN TANKS</u></b>		22
A.	<u>PERMIT SECTION III HIGHLIGHTS</u>	22
B.	<u>IDENTIFICATION OF UNITS</u>	22
C.	<u>PERMITTED AND PROHIBITED WASTE IDENTIFICATION</u>	22
D.	<u>CONSTRUCTION, MAINTENANCE AND OPERATING REQUIREMENTS</u>	22
E.	<u>SPECIAL TANK PROVISIONS FOR IGNITIBLE WASTE</u>	23
F.	<u>SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES</u>	23
G.	<u>INSPECTION SCHEDULES AND PROCEDURES</u>	24
H.	<u>CLOSURE AND POST-CLOSURE CARE</u>	24
I.	<u>SPILL AND RELEASE RECORDKEEPING AND REPORTING</u>	24
J.	<u>CERTIFICATION OF REPAIRS</u>	24
K.	<u>SPECIAL PROVISION FOR CORROSIVE WASTE</u>	25
<b><u>PERMIT SECTION IV - CEMENT KILN REQUIREMENTS</u></b>		25
A.	<u>CEMENT KILN AREA OPERATIONAL REQUIREMENTS</u>	25
B.	<u>LIMITATIONS ON WASTES BURNED</u>	26
C.	<u>OTHER CEMENT KILN MONITORING, TESTING AND INSPECTION REQUIREMENTS</u>	26
D.	<u>CEMENT KILN SAMPLING REQUIREMENTS</u>	28

**PERMIT SECTION V - OFFICE OF AIR QUALITY PROVISIONS** ..... 28

- A. GENERAL AIR QUALITY CONDITIONS ..... 28
- B. FEDERAL APPLICABILITY ..... 31
- C. CEMENT KILN PERFORMANCE STANDARDS ..... 31
- D. CEMENT KILN CONTINUOUS DETERMINATION OF COMPLIANCE 32
- E. STORAGE AND UNLOADING AREA OPERATIONAL REQUIREMENTS  
..... 34
- F. STORAGE AND UNLOADING AREA CONTINUOUS DETERMINATION OF  
COMPLIANCE ..... 34
- G. KILN SAMPLING REQUIREMENTS ..... 37
- H. RECORD KEEPING REQUIREMENTS ..... 39
- I. REPORTING ..... 40

**PERMIT SECTION VI - CLOSURE AND FINANCIAL ASSURANCE REQUIREMENTS** .. 40

- A. GENERAL CLOSURE REQUIREMENTS ..... 40
- B. COMMENCEMENT OF FACILITY CLOSURE ..... 41
- C. REQUEST FOR PERMIT MODIFICATION OR AMENDMENT ..... 42
- D. TIME FRAMES FOR MODIFICATION\AMENDMENT REQUEST  
SUBMITTAL ..... 42
- E. CLOSURE NOTICE AND CERTIFICATION REQUIREMENTS ..... 43
- F. STORAGE AND PROCESSING FACILITY UNITS CLOSURE  
REQUIREMENTS ..... 43
- G. CEMENT KILN CLOSURE REQUIREMENTS ..... 44

**PERMIT SECTION VII - CORRECTIVE ACTION REQUIREMENTS** ..... 45

- A. CKD LANDFILL REMEDIAL INVESTIGATION ..... 45
- B. SWMU CORRECTIVE MEASURES ..... 46

**ATTACHMENTS**

- A - Legal Description
- B - Facility Map
- C - Unit Listing
- D - List of Incorporated Application Materials
- E - Application Table IV.C.
- F - Application Table III.D.
- G - Application Table V.C.
- H - MAERT Table
- I - Waste Feed Cutoff Systems
- J - Maximum Constituent Feedrates
- K - Other Kiln Monitoring Systems
- L - Facility Corrective Action Unit Map

[ I.]

**PERMIT SECTION I - GENERAL PERMIT CONDITIONS**

A. SIZE AND LOCATION OF SITE

A permit is issued to TXI Operations, LP (hereafter called the permittee), to operate a hazardous waste processing, and storage facility located at 245 Ward Road, in Ellis County, Texas, drainage area of Segment 805 in the Trinity River Basin (North Latitude 32° 27' 57.5", West Longitude 97° 01' 42"). The legal description of the site submitted in permit No. HW-50316-001 application dated June 18, 1993 is hereby made a part of this permit as "Attachment A". The hazardous waste management facility as delineated by the permittee's application map is hereby made a part of this permit as "Attachment B".

B. PERMIT APPLICATION

This permit is based on the information submitted in the Part B Permit Application June 18, 1993, revised October 22, 1993, February 7, 1994, February 23, 1994, August 25, 1994, August 7, 1995, August 22, 1995, September 2, 1995, September 5, 1995, January 19, 1996, March 20, 1996, April 18, 1996, September 10, 1996, September 26, 1996, October 30, 1996 and December 6, 1996 (hereafter referred to as the Part B Application), which has been certified by the applicant to be accurate. The facility will be constructed and operated as specified in the Part B Application and this permit.

C. AUTHORIZED UNITS AND WASTES

1. The permittee is authorized to operate the facility units listed in "Attachment C" for storage and processing subject to the limitations herein. All waste management activities not otherwise exempted from permitting under 30 Texas Administrative Code (TAC) 335.2 shall be confined to authorized facility units listed in "Attachment C". References hereinafter in this permit to "TNRCC Permit Unit No. \_\_\_" shall be to the facility units listed in "Attachment C."
2. The permittee is authorized to manage hazardous wastes listed in the application and described herein, subject to the limitations provided herein.

Wastes authorized for storage, and processing include those generated from facility sources and from off-site sources. Hazardous and nonhazardous industrial solid wastes authorized to be managed under this permit are limited as follows:

- a. The hazardous wastes must be in the Hazard Code Groups (as prescribed by U. S. Environmental Protection Agency (EPA) regulations in effect upon date of permit approval) indicated below:

<u>  x  </u> Ignitable (I)	<u>  x  </u> Acute Hazardous Waste (H)
<u>  x  </u> Toxic (T)	<u>  x  </u> Toxicity Characteristic (E)

PERMIT NO. HW-50316 -001  
NAME: TXI Operations, LP

CONTINUATION SHEET 8 of 46

Corrosive (C)

Reactive (R)

[ I.C.2.]

<u>b.</u>	<u>Waste Descriptions</u>	<u>EPA Hazard Codes</u>
	Organic Wastewaters	I, H, E, E, C, R
	Organic Liquids	I, T, H, E, C, R
	Organic Semisolids	I, T, H, E, C, R

3. The wastes authorized in Provisions I.C.2.a. and b. (Authorized Wastes) shall not contain any of the following:

- a. Polychlorinated biphenyl (PCB) waste, as defined in 40 CFR § 761.3;
- b. Radioactive or nuclear waste material, which requires specific licensing or permitting under Chapter 401 of the Texas Health and Safety Code and the rules of the Texas Natural Resource Conservation Commission or Texas Department of Health or Texas Railroad Commission; and/or any other rules of state or federal authorities;
- c. Explosive material, as defined by the Department of Transportation under 49 Code of Federal Regulations (CFR) Part 173;
- d. Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR 261.31;
- e. Containerized gases;
- f. Municipal garbage;
- g. Infectious wastes;
- h. Medical wastes;
- j. Wastes displaying the Characteristic of Reactivity as defined at 40 CFR 261.23; or
- k. Wastes that are not pumpable.

4. Prior to accepting any additional wastes not authorized by Provisions I.C.2.a. and b. (Authorized Wastes), the permittee shall follow the permit modification requirements listed in 30 TAC Section 305.69.

D. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

[ I.]

E. DEFINITIONS

For purposes of this permit, terms used herein shall have the same meaning as those in 30 TAC Chapters 305 and 335, unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

Application data - data used to complete the final application and any supplemental information.

F. STANDARD PERMIT CONDITIONS

The permittee has a duty to comply with the Standard Permit Conditions under 30 TAC Section 305.125. Moreover, the permittee has a duty to comply with the following permit conditions:

1. Permit Expiration

In order to continue a permitted activity after the expiration date of the permit the permittee shall submit a new permit application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Executive Director. Authorization to continue such activity will terminate upon the effective denial of said application.

2. Duty to Comply

[30 TAC 305.142] The permittee must comply with all the conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency order issued by the Commission. Any permit noncompliance, other than noncompliance authorized by an emergency order, 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.

3. Certification Requirements

[30 TAC Section 305.144] For a new facility, the permittee may not commence storage, processing, or disposal of solid waste; and for a facility being modified, the permittee may not process, store or dispose of solid waste in the modified portion of the facility, except as provided in 30 TAC Section 305.69 (relating to Solid Waste Permit Modification at the Request of the Permittee) until the following has been accomplished:

PERMIT NO. HW-50316 -001  
NAME: TXI Operations, LP

CONTINUATION SHEET 12 of 46

[ I.F.3.]

- a. The permittee has submitted to the Executive Director and the local Regional Office of the TNRCC, by certified mail or hand delivery, a letter signed by the permittee, and signed and sealed by a Texas Registered Professional Engineer stating that the facility has been constructed or modified in compliance with the permit. If the certification is being provided to document proper closure of a permitted unit, or to certify installation or repair of a tank system, then the certification must be signed and sealed by an independent Texas registered Professional Engineer. Required certification shall be in the following form:

"This is to certify that the following activity (Specify activity, e.g., construction, installation, closure, etc., of an item) relating to the following item (Specify the item, e.g., the particular facility, facility unit, unit component, subcomponent part, or ancillary component), authorized or required by TNRCC Permit No. HW-50316-001, has been completed, and that construction of said facility component has been performed in accordance with and in compliance with good engineering practices and the design and construction specifications of Permit No. HW-50316-001."

- b. A certification report has been submitted, with the certification described in Provision I.F.3.a., which is logically organized and describes in detail the tests, inspections, and measurements performed, their results, and all other bases for the conclusion that the facility unit, unit component, and/or closure have been constructed, installed and/or performed in conformance with the design and construction specifications of this permit and in compliance with this permit. The report shall describe each activity as it relates to each facility unit or component being certified including reference to all applicable permit provisions. The report shall contain the following items, at a minimum:

- (1) Scaled, as-built plan-view and cross-sectional drawings which accurately depict the facility unit and all unit components and subcomponents and which demonstrate compliance with the design and construction specifications approved and detailed in the terms of this permit;
- (2) All necessary references to dimensions, elevations, slopes, construction materials, thickness and equipment; and
- (3) For all drawings and specifications, the date, signature, and seal of a Professional Engineer who is registered in the State of Texas.

- c. The Executive Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or if within 15 days of submission of the letter required by paragraph (a) of this section, the permittee has not received notice from the Executive Director of the intent to inspect, prior inspection is waived and the permittee may commence processing, storage, or disposal of solid waste.

PERMIT NO. HW-50316 -001  
NAME: TXI Operations, LP

CONTINUATION SHEET 14 of 46

[ I.F.]

4. Monitoring and Records

- a. [30 TAC Section 305.125(11)(A)] Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Executive Director of the TNRCC. Laboratory methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, 1987, as revised; *Standard Methods for the Examination of Water and Wastewater*, Fifteenth Edition, 1980, and 1981 supplement, or current edition; *RCRA Ground-Water Monitoring Technical Enforcement Guidance Document*, 1986, OSWER Directive 9950.1, or an equivalent method, as specified in the Waste Analysis Plan, Section IV of the Part B Application, and as approved by the Executive Director.
- b. [30 TAC Section 305.125(11)(B)] The permittee shall retain in an organized fashion and furnish to the Executive Director, upon request, records of all monitoring information, copies of all reports and records required by this permit, and the certification required by 40 CFR 264.73(b)(9), for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application.
- c. [30 TAC Section 305.125(11)(C)] Records of monitoring shall include the following:
  - (1) The date, time, and place of sample or measurement;
  - (2) The identity of individual who collected the sample or measurement;
  - (3) The dates analyses were performed;
  - (4) The identity of individual and laboratory who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses or measurements.

5. Retention of Application Data

[30 TAC Section 305.47] A permittee shall keep records throughout the term of the permit of data used to complete the final application and any supplemental information. All copies of renewals, amendments, revisions and modifications must also be kept at the facility such that the most current documents are available for inspection at all times. All materials,

including any related information, submitted to complete the application shall be retained, not just those materials which have been incorporated into the permit.

[ I.F.]

6. Modification of Permitted Facilities  
The facility units and operational methods authorized are limited to those described herein and by the application submittals identified in Provision I.B. (Permit Application). All facility units and operational methods are subject to the terms and conditions of this permit and TNRCC rules. Prior to constructing or operating any facility units in a manner which differs from either the related plans and specifications contained in the permit application or the limitations, terms or conditions of this permit, the permittee must comply with the TNRCC permit amendment/modification rules as provided in 30 TAC Sections 305.62 and 305.69.
7. Prohibition on Air Pollution  
Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Section 382.003 of the Texas Health and Safety Code Ann. or violate Section 382.085 of the Texas Health and Safety Code Ann. If the Executive Director of the TNRCC determines that such a condition or violation occurs, the permittee shall implement additional abatement measures as necessary to control or prevent the condition or violation.
8. Requirements for Subparts AA and BB
  - a. The permittee must comply with the requirements of 30 TAC Section 335.152(a)(16)/40 CFR 264 Subpart AA and 30 TAC Section 335.152(a)(17)/40 CFR Part 264 Subpart BB, as applicable. Within 180 days of the effective date of this permit, and semiannually thereafter, the permittee shall submit to the Executive Director of the TNRCC, through the Industrial and Hazardous Waste Permits Section, the reports required by 40 CFR §§ 264.1036 and 264.1065, as applicable.
    - (1.) If a closed-vent system and control device is installed to comply with the requirements in 30 TAC Section 335.152(a)(16)/40 CFR 264.1032(a)(2), provide the following:
      - I) An implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation [30 TAC Section 335.152(a)(16)/40 CFR 264.1033(a)(2)].
      - ii) The type of control device under 30 TAC Section 335.152(a)(16)/40 CFR 264.1033 to be installed (e.g., vapor recovery, flare, etc...).
  - b. If the permittee feels any of the requirements of 30 TAC Section 335.152(a)(16) and (17)/40 CFR Part 264 Subparts AA and BB, are not applicable to the hazardous waste management units or associated ancillary equipment at this facility, the permittee must provide justification for this decision as part of the initial report.

[ I.F.]

\* 9. Land Disposal Restrictions

The permittee shall comply with the applicable land disposal restrictions as found in 40 CFR 268 and any subsequent applicable requirements promulgated through the Federal Register. Requirements include modifying/amending the permittee's waste analysis plan to include analyses to determine compliance with applicable treatment standards or prohibition levels, pursuant to 40 CFR 268.7 and 264.13(a).

10. Notification of Release From Solid Waste Management Unit  
(Texas Health and Safety Code, Section 361.303)

- a. The permittee shall notify the Executive Director of the TNRCC of any historical or current release of hazardous waste or hazardous constituents to the environment that may have occurred or is occurring from any solid waste management unit (SWMU) at the facility regardless of when the release occurred, may have occurred, or is occurring, and regardless of when waste was placed in any unit. This notification shall be made in writing within 15 days of the time the permittee determines that a release has occurred. If such a release is discovered, the permittee must submit, to the Executive Director, a request for a major permit amendment or permit modification pursuant to §361.089, Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann. Chapter 361 (Vernon), as necessary to incorporate appropriate corrective action into the permit. In response to such a release, the Commission may require the adoption of (1) a ground-water compliance plan; (2) a permit amendment or modification; (3) an order; or (4) an other action deemed necessary by the Commission. Pursuant to such action required by the Commission, the permittee shall then conduct timely corrective action for the release.
- b. Within forty-five (45) days of becoming aware of a SWMU not previously addressed in the RCRA Facility Assessment (RFA) dated August 4, 1990, or after obtaining new information or evidence on a SWMU which could indicate a high release potential, the permittee shall submit an RFA for that unit which shall include a preliminary assessment and visual inspection as well as recommendations as to whether further investigation is warranted. The preliminary assessment shall include all information regarding the SWMU to determine if there has been or is currently a release of hazardous waste or hazardous constituents from the unit. Based upon this information, the Executive Director may require one of the actions stated in Provision I.F.10.a. (Notification of a Release from a Solid Waste Management Unit), above.

11. Waste Minimization

PERMIT NO. HW-50316 -001  
NAME: TXI Operations, LP

CONTINUATION SHEET 19 of 46

The permittee shall annually certify, by January 25th for the previous calendar year, the following information, [40 CFR 264.73(b)(9)]:

[ I.F.11.]

- a. that the permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the permittee's facility operation to the degree determined to be economically practicable; and
- b. that the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment. This waste minimization certification is to be included in the facility operating records until closure.

12. Annual Report

The permittee shall prepare and submit to the Executive Director an Annual Report. One copy of the report shall be submitted to the TNRCC Industrial and Hazardous Waste Permits Section and an additional copy shall be submitted to the appropriate TNRCC Regional Office by January 25th of each year for the preceding year's activities. This report shall include at a minimum, the following information:

- a. All information and records required by 30 TAC Section 335.154;
- b. Summary of any major construction and/or expansion of hazardous waste management areas at the facility during the year;
- c. Summary of the annual cost estimate adjustments for facility closure and post-closure care;
- d. Volume of all waste processed at the facility, by kiln unit and waste class, and percent of annual kiln capacity utilized.

13. Annual Waste Summary

The permittee shall submit to the TNRCC Industrial and Hazardous Waste Division Waste Evaluation Section, on or before January 25 of each year, a complete and correct Annual Waste Summary, as per the requirements of 30 TAC Section 335.9(a)(2). This summary shall detail the management of each hazardous waste and Class 1 waste generated onsite during the previous calendar year. The Annual Waste Summary shall be submitted in a form provided or approved by the Executive Director.

14. Biennial Report

As per 30 TAC Section 335.71, generators subject to the EPA Biennial Reporting requirement, upon request by the TNRCC, shall submit to the TNRCC information as required under 40 CFR 262.41. Unless specific information is requested by the TNRCC for

a biennial report year, the provisions of 30 TAC Section 335.71 are met by satisfying the requirements of 30 TAC Sections 335.9(a)(2) and 335.6 (Notification Requirements).

[ I.F.]

15. Pollution Prevention

Facilities subject to 30 TAC Chapter 335, Subchapter Q - Pollution Prevention: Source Reduction and Waste Minimization, must prepare a five year Source Reduction and Waste Minimization Plan and submit a Source Reduction and Waste Minimization Annual Report (SR/WM Annual Report) to the TNRCC Office of Pollution Prevention and Recycling. This report must be submitted annually on the dates specified in the rule.

G. STANDARD PERMIT CONDITIONS APPLICABLE TO OFF-SITE FACILITIES

1. Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee must submit a report, describing the incident, to the Executive Director, as per the requirements of 30 TAC Section 305.146(1), 30 TAC 335.12(c), and 40 CFR 264.72. A copy of the manifest must be included in the report.

2. Unmanifested Waste Report

A report must be submitted to the Executive Director within 15 days of receipt of unmanifested waste, as per the requirements of 40 CFR 264.76.

3. Monthly Summary

[30 TAC Section 335.15(2)] The permittee shall prepare a monthly report, of all manifests received during the month, summarizing the quantity, character, transporter identity, and the method of storage, processing and disposal of each hazardous waste or Class 1 waste shipment received, itemized by manifest document number. This monthly summary report shall be submitted to the TNRCC Waste Evaluation Section on or before the 25th day of each month for waste received during the previous month.

H. INCORPORATED REGULATORY REQUIREMENTS

1. The following TNRCC regulations are hereby made provisions and conditions of this permit. Issuance of this permit with incorporated rules in no way exempts the permittee from compliance with any other applicable state statute and/or Commission Rule.

a. 30 TAC Section 335, Subchapter A;

b. 30 TAC Section 335, Subchapter B;

c. 30 TAC Section 335.152;

[ I.H.1.]

- d. 30 TAC Sections 335.153 - 335.155;
  - e. 30 TAC Sections 335.177 - 335.179;
  - f. 30 TAC Section 335.221- 335.229;
  - g. 30 TAC Section 335, Subchapter Q.
2. To the extent applicable to the activities authorized by this permit, the following provisions of 40 CFR Part 264 and 266 Subpart H, adopted by reference by 30 TAC Section 335.152 and 30 TAC Section 335.221(a), are hereby made provisions and conditions of this permit, to the extent consistent with the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361 (Vernon), and the rules of the TNRCC:
- a. Subpart B -- General Facility Standards;
  - b. Subpart C -- Preparedness and Prevention;
  - c. Subpart D -- Contingency Plan and Emergency Procedures;
  - d. Subpart E -- Manifest System, Recordkeeping, and Reporting;
  - e. Subpart G -- Closure and Post-closure;
  - f. Subpart H -- Financial Requirements;
  - g. Subpart J -- Tank Systems;
  - h. 40 CFR Part 266 Subpart H -- Hazardous Waste Burned in Boilers and Industrial Furnaces

I. INCORPORATED APPLICATION MATERIALS

In addition to maintaining documents pursuant to Provision I.F.5. of this permit, the permittee shall also maintain the following documents in an organized fashion that makes them available to facility employees and available for inspection by regulatory personnel. Any revision of incorporated application materials, whether conducted as a result of regulatory mandate or voluntarily, must be addressed through requesting the applicable permit amendment or modification from the TNRCC, as per the requirements of 30 TAC Sections 305.62 and 305.69, respectively.

1. Contingency Plan

The permittee shall follow the Contingency Plan, developed in accordance with 40 CFR Part 264 Subpart D, and contained in the permit application submittals identified in Provision I.B.

[ I.1.]

(Permit Application), which is hereby approved subject to the terms of this permit and any other orders of the TNRCC. The Contingency Plan is hereby incorporated into this permit by reference as if set out fully herein. Any and all revisions to the plan shall become provisions and conditions of this permit upon the date of approval by the Commission. Copies of this plan shall be available to all employees involved in waste management at the facility.

2. Closure Plan

Closure of regulated units shall be completed in accordance with the requirements of 30 TAC Section 335.152 and 40 CFR Part 264 Subpart G and the Closure Plan contained in the permit application submittals identified in Provision I.B. (Permit Application), which is hereby approved subject to the terms of this permit and any other orders of the TNRCC. The Closure Plan is hereby incorporated into this permit by reference as if set out fully herein. Any and all revisions to the plan shall become provisions and conditions of the permit upon the date of approval by the Commission.

3. Inspection Schedule

The permittee shall follow the Inspection Schedule, developed in accordance with 40 CFR 264.15 and the permit application submittals identified in Provision I.B. (Permit Application), which is hereby approved subject to the terms of this permit and any other orders of the TNRCC. The Inspection Schedule is hereby incorporated into this permit by reference as if set out fully herein. Any and all revisions to the schedule shall become provisions and conditions of this permit upon the date of approval by the Commission.

4. Waste Analysis Plan

The permittee shall follow the Waste Analysis Plan, developed in accordance with 40 CFR 264.13 and the permit application identified in Provision I.B. (Permit Application), which is hereby approved subject to the terms of this permit and any other orders of the TNRCC. The Waste Analysis Plan is hereby incorporated into this permit by reference as if set out fully herein. Any and all revisions to the plan shall become provisions and conditions of this permit upon the date of approval by the Commission.

5. List of Application Materials

The permittee shall follow the Part A and Part B Industrial and Hazardous Waste Application elements identified in Provision I.B. (Permit Application) and listed in "Attachment D", which are hereby approved subject to the terms of this permit and any other

orders of the TNRCC. These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

[ I.]

J. MONITORING OF COMMERCIAL HAZARDOUS WASTE MANAGEMENT FACILITY OPERATIONS

Within the first year after Commission action on this permit, the permittee shall provide notice to affected persons of the intent to have an independent annual environmental audit of the facility performed. The notice shall be issued in accordance with the requirements of 30 TAC Section 305.147(1). If an affected party requests the audit, then the permittee must follow the requirements of 30 TAC Section 305.147(2)-(6), and (8), for selecting an independent inspector, paying for the notice and audit, submission of a written report, and determining the scope of the inspection.

**PERMIT SECTION II - GENERAL FACILITY CONDITIONS**

A. FACILITY DESIGN, CONSTRUCTION, AND OPERATION

Facility design, construction, and operation shall comply with TNRCC rules and be in accordance with all plans and specifications for design, construction and operation approved by the terms of this permit. All plans and specifications for design, construction, and operation submitted with the permit application submittals noted in Provision I.B. are approved, subject to the terms of this permit and any other orders of the TNRCC.

B. OPERATION OF FACILITY

The permittee shall construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31.

C. HAZARDOUS WASTE RECEIVED FROM OFF-SITE SOURCES

When the permittee is to receive hazardous or nonhazardous waste from an off-site source (except where the permittee is also the generator), the permittee shall inform the generator in writing that the permittee has the appropriate permits and will accept the waste the generator is shipping. The permittee shall keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]}

D. GENERAL WASTE ANALYSIS

1. The permittee shall ensure that all waste analyses utilized for waste identification or verification have been performed in accordance with methods specified in the current editions of "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", (SW-846), ASTM or other methods accepted by the TNRCC. The permittee shall only utilize laboratories which demonstrate that they are following a quality control/quality

assurance program conforming to the program specified in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", (SW-846).

[ II.D.]

2. Application Table IV.C., entitled Sampling and Analytical Methods, included in this permit as "Attachment E", shall be used in conjunction with the Waste Analysis Plan referenced in Provision I.I.4., in performing all waste analyses.
3. The permittee may request Executive Director approval to use an automatic sampling system to sample incoming truck and railcar loads. The request must provide plans and specifications for the system, and must document how the system will obtain a sample representative of the load, including representative portions of all liquid phases and contained solids. Upon approval, the permittee may use the system to obtain samples from truck and rail loads of waste.

E. SECURITY

1. The permittee shall provide a 24-hour surveillance system which continuously monitors and controls entry onto the active portion of the facility.
2. The permittee shall post warning signs at all points of access to the active waste management portion(s) of the facility and along the natural and/or artificial barriers in sufficient numbers to be seen from any approach to that (those) portion(s) of the facility. The signs shall be printed so that they may be clearly read from a distance of at least 25 feet, and shall state "Danger - Unauthorized Personnel Keep Out".
3. The legend on the warning signs shall be written in English.

F. GENERAL INSPECTION REQUIREMENTS

The permittee shall follow the inspection schedule set out in application Table III.D., entitled Inspection Schedule, which is included in this permit as "Attachment F". The permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d). Any remedial actions taken in response to facility inspections and the date of the remediation shall be included in the inspection records.

G. PERSONNEL TRAINING

The permittee shall ensure that all facility personnel involved with hazardous waste management successfully complete a training program as required by 40 CFR 264.16. The permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

H. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The permittee shall comply with 40 CFR 264.17(a), relating to general requirements for ignitable, reactive, or incompatible wastes.

[ II.]

I. 100-YEAR FLOODPLAIN

1. The permittee shall construct, operate, and maintain the facility to prevent washout of any hazardous waste by a 100-year flood, as required by 40 CFR 264.18(b)(1).

J. PREVENTION OF INUNDATION AND DISCHARGES

The permittee shall prevent inundation of any permitted units and prevent any discharges of any waste or runoff of waste contaminated stormwater from permitted units. Additionally, each loading or unloading area, associated with a permitted hazardous or nonhazardous waste management unit, shall be provided with a drainage control system which will collect spills and incident precipitation in such a manner as to satisfy the following:

1. Preclude the release from the system of any collected spills, leaks or precipitation;
2. Minimize the amount of rainfall that is collected by the system; and
3. Prevent run-on into the system from other portions of the facility.

K. REPORTING OF NONCOMPLIANCE

The permittee shall report to the Executive Director of the TNRCC information regarding any noncompliance which may endanger human health or the environment. [30 TAC Section 305.125(9)]

1. Report of such information shall be provided orally within 24 hours from the time the permittee becomes aware of the noncompliance.
2. A written submission of such information shall also be provided within five days of the time the permittee becomes aware of the noncompliance. The written submission shall contain the following:
  - a. a description of the noncompliance and its cause;
  - b. the potential danger to human health or safety, or the environment;
  - c. the period of noncompliance, including exact dates and times;
  - d. if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
  - e. steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance, and to mitigate its adverse effects.

[ II.]

L. TWENTY-FOUR HOUR REPORTING

The following shall be included as information which must be reported orally within 24 hours pursuant to Title 30 TAC Section 305.125(9): [30 TAC Section 305.145]

1. Information concerning release of any solid waste that may cause an endangerment to public drinking water supplies;
2. Any information 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. The description of the occurrence and its cause shall include:
  - a. name, address, and telephone number of the owner or operator;
  - b. name, address, and telephone number of the facility;
  - c. date, time, and type of incident;
  - d. name and quantity of material(s) involved;
  - e. the extent of injuries, if any;
  - f. an assessment of actual or potential hazards to the environment and human health or safety outside the facility, where this is applicable; and
  - g. estimated quantity and disposition of recovered material that resulted from the incident.

M. NOTICE WAIVER

[30 TAC Section 305.145(b)] The Executive Director may waive the five-day written notice requirement specified in Provision II.K.2. (Reporting of Noncompliance) in favor of a written report submitted to the Commission within 15 days of the time the permittee becomes aware of the noncompliance or condition.

N. SPILL REMOVAL

The permittee shall immediately initiate clean-up procedures for removal of any spilled hazardous or industrial nonhazardous wastes and waste residues and shall take all steps necessary to prevent surface-water or groundwater contamination as a result of any spills.

[ II.]

O. DISPOSAL OF INDUSTRIAL SOLID WASTES AND RESIDUES

Collected hazardous or industrial nonhazardous wastes, spills, leaks, clean-up residues, and contaminated rainfall runoff, including contaminated stormwater from the drainage control system(s) associated with the permitted units, shall be removed promptly after the spillage and/or rainfall event in as timely a manner as is necessary to prevent overflow of the system by the following method(s):

1. Removal to an on-site authorized facility unit;
2. Removal to an authorized industrial solid waste management facility or authorized off-site facility; or
3. Discharge in accordance with a wastewater discharge permit.

P. EQUIPMENT DECONTAMINATION

The permittee shall ensure that any equipment or vehicles which have come in contact with waste in the loading/unloading, storage, processing, and/or disposal areas have been decontaminated prior to their movement into designated uncontaminated areas of the site property. At a minimum, all contaminated equipment shall be externally decontaminated and contaminated vehicles shall have their undercarriages and tires or tracks decontaminated to remove all waste residues and to prevent contamination of uncontaminated areas. All wash water generated shall be collected and disposed of in accordance with Provision II.O. (Disposal of Industrial Solid Wastes and Residues)

Q. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the permittee shall equip the facility as set forth in the Contingency Plan, Section III.E. of the Part B application, as required by 40 CFR 264.32.

2. Testing and Maintenance of Required Equipment and Structures

All sumps, pumps, fire- and spill-control equipment, decontamination equipment, and all other equipment and structures authorized or required through the Contingency Plan shall be tested and maintained, as necessary, to assure its proper operation in time of emergency, as required by 40 CFR 264.33.

3. Access to Communications or Alarm System

The permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.

[ II.Q.]

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency and will have the responsibility for coordinating all emergency response measures as required by 40 CFR 264.55 and 264.56. Emergency number(s) shall be posted in all waste management portions of the facility and all employees in those areas shall be trained in the location of those postings.

R. OPERATION AND MAINTENANCE OF EQUIPMENT

All equipment and structures used to manage hazardous waste at the facility shall be maintained in proper operating condition.

S. RECORDKEEPING AND REPORTING

Operating Record

In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73. These records will be made available to representatives of the TNRCC upon request.

T. SPECIFIC CONDITIONS

1. Dust Suppression

Pursuant to 30 TAC 335.214(b), the permittee shall not use waste, used oil, or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment.

\* 2. Specific Waste Ban

The permittee may store wastes restricted under 40 CFR Part 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of 40 CFR 268.50(a)(2) including, but not limited to the following:

- a. Clearly marking each container to identify its contents and the date each period of accumulation begins;
- b. Clearly marking each tank with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such

information for each tank is recorded and maintained in the operating record at that facility.

[ II.T.2.b.]

The permittee is required to comply with all the requirements of 40 CFR 268.7, as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the permittee, pursuant to 40 CFR 270.42/30 TAC 305.69.

U. LIABILITY REQUIREMENTS

The permittee shall demonstrate continuous compliance with the requirements of 40 CFR 264.147(a) to maintain liability coverage for sudden and accidental occurrences of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.

V. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The permittee shall comply with 40 CFR 264.148, regarding bankruptcy, whenever necessary.

**PERMIT SECTION III - STORAGE AND PROCESSING IN TANKS**

A. PERMIT SECTION III HIGHLIGHTS

The permittee may store and process a total volume of 640,000 gallons of hazardous waste in 12 permitted tanks. The permitted tank units and their approved waste types are shown on Attachment G., Tank Table V.C., which is taken from the application materials. The permittee is authorized to operate the permitted tank units for storage and processing subject to the limitations contained herein.

B. IDENTIFICATION OF UNITS

All authorized tanks must be clearly identified as numbered on Attachment C, and must have signs indicating "TNRCC PERMIT UNIT NO. \_". For example, the unit identified as Tank No. 1 on Attachment G would be identified as "TNRCC PERMIT UNIT NO. 5, TANK NO. 1".

C. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

The permittee shall not store or process hazardous waste in a tank that is not identified in Attachment G, Table V.C., permit Provision III.A., unless such tank is exempt from hazardous waste permitting requirements.

D. CONSTRUCTION, MAINTENANCE AND OPERATING REQUIREMENTS

1. The permittee shall not place hazardous waste or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. [40 CFR 264.194(a)]

[ III.D.]

2. The permittee shall prevent spills and overflows from the tank or containment system as per the requirements of 40 CFR 264.194(b).
3. Permitted tank systems shall be constructed, operated and maintained in accordance with 40 CFR 264 Subpart J (Tank Systems):
  - 264.190 - Applicability
  - 264.191 - Assessment of Existing Tank System Integrity
  - 264.192 - Design and Installation of New Tank Systems or Components
  - 264.193 - Containment and Detection of Releases
  - 264.194 - General Operating Requirements
  - 264.195 - Inspections
  - 264.196 - Response to Leaks or Spills and Disposition of Leaking or Unfit-For-Use Tank Systems
4. Secondary containment systems must be provided with a leak-detection system that is operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours.

E. SPECIAL TANK PROVISIONS FOR IGNITIBLE WASTE

1. The permittee shall not place ignitable waste in the tank system or in the secondary containment system, unless the procedures specified in 40 CFR 264.198(a) are followed.
2. The permittee shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or any adjoining property line that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). [40 CFR 264.198(b)].

F. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

1. The permittee shall not place incompatible wastes or incompatible wastes and materials in the same tank system or the same secondary containment system unless the procedures specified in 40 CFR 264.199(a) are met.
2. The permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material unless the requirements of 40 CFR 264.199(b) are met.

[ III.G.]

G. INSPECTION SCHEDULES AND PROCEDURES

The permittee shall inspect the tank systems in accordance with the Inspection Schedule, Table III.D. (Permit Attachment F), to ensure that the storage and processing areas are maintained in good functional condition, as required by 40 CFR 264.195.

H. CLOSURE AND POST-CLOSURE CARE

At closure of any permitted tanks, the permittee shall remove all hazardous waste and hazardous waste residues from the tanks and secondary containment systems in accordance with the procedures in the Closure Plan referenced in permit Provision I.I.2. (Incorporated Application Materials). [40 CFR 264.197]

I. SPILL AND RELEASE RECORDKEEPING AND REPORTING

1. The permittee shall report to the Executive Director within 24 hours of detection when a leak or spill occurs from the tank system or secondary containment system to the environment. [40 CFR 264.196(d)(1)] (A leak or spill of one pound or less of hazardous waste that is immediately contained and cleaned-up need not be reported.) [40 CFR 264.196(d)(2)] (Releases that are contained within a secondary system need not be reported.)
2. Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the permittee shall report the following information to the Executive Director: [40 CFR 264.196(d)(3)]
  - a. Likely route of migration of the release;
  - b. Characteristics of the surrounding soil (including soil composition, geology, hydrology, and climate);
  - c. Results of any monitoring or sampling conducted in connection with the release. If the permittee finds it will be impossible to meet this time period, the permittee shall provide the Executive Director with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;
  - d. Proximity of downgradient drinking water, surface water, and populated areas; and
  - e. Description of response actions taken or planned.

J. CERTIFICATION OF REPAIRS

The permittee shall submit to the Executive Director all certifications of major repairs to correct leaks within seven days of returning the tank system to use. [40 CFR 264.196(f)]

[ III.K.]

K. SPECIAL PROVISION FOR CORROSIVE WASTE

Wastes displaying the characteristic of Corrosivity as defined in 40 CFR § 261.22 shall not be stored in the tank system unless they are treated to remove the Characteristic within 24 hours of introduction of the waste into the tank. The permittee shall determine or verify the rate and reactants for treatment using the compatibility test method specified in the Waste Analysis Plan adopted into this permit. The compatibility test measurement period shall be at least 15 minutes.

**PERMIT SECTION IV - CEMENT KILN REQUIREMENTS**

A. CEMENT KILN AREA OPERATIONAL REQUIREMENTS

1. The permittee shall feed wastes to a permitted cement kiln unit only when that unit meets the following conditions:
  - a. During start-up and shut-down of a permitted cement kiln, waste shall not be fed into the device unless the device is operating within the parameters specified in this permit.
  - b. The combustion gas temperature measured by the thermocouple located at the feed end of the kiln (feed end temperature) is maintained above 433°F, which is considered to be representative of the minimum required kiln temperature demonstrated during testing.
  - c. The temperature of the combustion gas by the thermocouple located at the feed end of the kiln (feed end temperature) is maintained below 530°F, which is considered to be representative of the maximum required kiln temperature demonstrated during testing.
  - d. The maximum velocity head differential pressure through the cement kiln stack shall not exceed 0.1915 inches of H<sub>2</sub>O as measured at the stack.
  - e. The combustion gas concentration of carbon monoxide (CO) continuously measured at the stack shall not exceed 365 parts per million by volume (ppmv) when corrected to 7% oxygen, dry basis, in the stack gas.

In addition, the total hydrocarbons (THC) at the stack shall not exceed 20 ppmv when corrected to 7% oxygen, dry basis, in the stack gas. Both the CO and the THC Continuous Emission Monitoring Systems (CEMS) shall meet the data quality requirements of Provision IV.C.

[ IV.A.]

- f. Total emission rates of metals and chlorine while burning wastes are limited to those listed in Attachment H, entitled "Emission Sources - Maximum Allowable Emission Rates", which is hereby made a part of this permit. Each cement kiln is limited to the emissions specified in that attachment.
- g. The total power to the electrostatic precipitator measured on the secondary side of each transformer and totaled shall be no less than 93 kilovolt-amperes (kVA).
- h. The permittee maintains and operates an automatic waste feed cut-off system which shall activate under the conditions listed in Attachment I, entitled, "Waste Feed Cut-Off Systems."
- i. While feeding hazardous waste, the maximum production rate of the kiln shall not exceed 71.1 tons/hr as total raw material dry feed. While feeding hazardous waste, the minimum production rate of the kiln shall not be less than 8 tons/hr as total raw material dry feed.
- j. The flue gas entering the particulate matter control device shall have a maximum temperature of 423°F.

B. LIMITATIONS ON WASTES BURNED

- 1. The feedrate of total wastes to a cement kiln shall not exceed 257 pounds per minute (lb/min). The total pumpable waste feed rate to the a cement kiln shall not exceed 257 lb/min. The feedrate of waste as quenchwater shall not exceed 166 lb/min.
- 2. The total feed rate of metals and chlorine to each cement kiln shall not exceed the limitations set out in Attachment J, entitled "Maximum Constituent Feedrates", at any time.

C. OTHER CEMENT KILN MONITORING, TESTING AND INSPECTION REQUIREMENTS

- 1. The permittee shall monitor and record the parameters listed in Attachment K, entitled "Other Kiln Monitoring Systems."
- 2. Stack oxygen and carbon monoxide concentrations shall be measured using Continuous Emission Monitoring Systems (CEMS) which sample from essentially the same location in the exhaust gas stream. The CEMS shall be certified for use by meeting the design and performance specifications and passing the field tests in 40 CFR Part 266, Appendix IX, Section 2.1. Oxygen concentrations shall be quantified and reported as percent by volume (%) on a dry basis. Carbon monoxide concentrations shall be quantified and reported as parts per million by volume (ppmv), corrected to 7% by volume oxygen, on a dry basis.

[ IV.C.]

3. The permittee shall continuously monitor the exhaust gas stream for total hydrocarbons (THC) while feeding waste to the cement kiln.
  - a. The THC CEMS shall meet the design and performance specifications, pass the field tests, meet the installation requirements and the data analysis and reporting requirements of 40 CFR Part 266, Appendix IX, Section 2.2.
  - b. The THC concentrations shall be reported in ppmv (dry basis) corrected to 7% oxygen on an hourly average basis and in pounds per hour.
4. The continuous emission monitoring systems for CO, THC and Stack Oxygen shall be zeroed and spanned daily for each monitoring range on those days when the cement kiln system is in service. Corrective action shall be taken when the 24-hour span drift exceeds two times the amount specified in 40 CFR Part 266, Appendix IX. Each calendar quarter, monitor accuracy shall be certified using a cylinder gas audit (CGA) as described in 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2. Reference method testing can be substituted for cylinder gas audits if preferred by the permittee. Corrective action shall be taken when the CGA or reference method testing exceeds  $\pm 15$  percent accuracy. Each CO, THC and Stack Oxygen CEMS shall operate at a minimum of 90% uptime, based on a 24-hour period.
5. The waste feed cut-off system and associated alarms for each kiln shall be tested weekly to verify operability. TXI will maintain a "fail safe" valve (i.e., remains in the closed position in event of failure) on each kiln. System testing will be accomplished with an electronic loop test for the components of the system, including sensors, which test the operability of the circuit without actually closing the "fail safe" valve. The waste feed cut-off valve shall be activated once during the weekly inspection. A check of every input to the waste feed cut-off system does not have to activate the waste feed cut-off. If the waste feed cutoff system "trips" (i.e., waste feed is cut off due to a process operations excursion from specified limits) during the 7-day period prior to testing, the actual trip will satisfy the need to test the valve. In addition, a complete inspection and function test shall be performed on all system alarms and emergency control devices at least annually.
6. The monitoring and inspection data collected in Provisions IV.D.1.-6. shall be recorded and the records shall be placed in the operating log as required by 40 CFR §266.102(10). In addition to the specific requirements of that paragraph, the permittee shall also record:
  - a. All occasions when waste is being fed to the cement kiln unit and the operating limits specified in Provision IV.B. are exceeded and/or;
  - b. All occasions when waste feed is cut off by the automatic waste feed cut-off system, including the date, time and parameter that triggered the cut-off.

[ IV.C.]

7. The permittee will continue to maintain the voluntary real time electronic data link with the TNRCC Region 4 Office. The link will provide access to the following operational data: THC, ppm, corrected to 7% O<sub>2</sub>; CO, ppm, corrected to 7% O<sub>2</sub>; SO<sub>2</sub>, ppm, corrected to 7% O<sub>2</sub>; NO<sub>x</sub>, ppm, corrected to 7% O<sub>2</sub>; Stack Opacity, %; Stack Temperature, °F; Stack Velocity, in. H<sub>2</sub>O; and kiln O<sub>2</sub>, %. In addition, the system will indicate whether hazardous waste or quenchwater is being fired. The permittee may upgrade the components of this system or add additional parameters with concurrence with the TNRCC Region 4 Office. TXI will not be held responsible for loss of the linkage due to weather, or other reasons beyond TXI control.

D. CEMENT KILN SAMPLING REQUIREMENTS

1. The permittee may conduct additional trial burn testing in accordance with a trial plan approved by the Executive Director. The results from the additional trial burn testing shall be used for the purpose of determining the feasibility of compliance with the performance standards of 40 CFR §§266.104 through 266.107 and of determining adequate operating conditions under 40 CFR §266.102(e). The permittee may request a permit modification or amendment pursuant to 30 TAC §305.69 or §305.62 based on these additional trial burn results.
2. Upon request of the Executive Director of the TNRCC, additional sampling and analysis of the waste and exhaust emissions shall be conducted to verify that the operating requirements of Provisions IV.B. and IV.C. of this permit achieve the performance standards of 40 CFR §§266.104 through 266.107 as referenced in this permit.

**PERMIT SECTION V - OFFICE OF AIR QUALITY PROVISIONS**

A. GENERAL AIR QUALITY CONDITIONS

1. This facility shall be constructed and operated in accordance with and subject to the Texas Clean Air Act (TCAA) as amended, Chapter 382 of the TEXAS HEALTH AND SAFETY CODE, (Vernon 1992) and all applicable Rules, Regulations and Orders of the TNRCC in effect at the time of issuance. Said construction and operation is subject to any additional or amended Rules, Regulations, and Orders of the TNRCC adopted pursuant to the TCAA.

[ V.A.]

2. The facilities covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Executive Director of the Texas Natural Resource Conservation Commission (TNRCC or Commission) to modify this permit in that regard and such modification is approved pursuant to the requirements of TNRCC Regulation X (30 TAC Chapter 120) and 30 TAC Chapter 335, Subchapter L.
3. **Sampling Requirements.** If sampling of stacks or process vents is required, the permit holder shall contact the TNRCC Quality Assurance Division prior to sampling to obtain the proper data forms and procedures. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. All sampling and testing procedures must be approved by the Executive Director and coordinated with the regional representatives of the Commission. The TNRCC Arlington Regional Office shall be notified prior to the initial start-up of new or modified facility units authorized by this permit and prior to any required monitoring or sampling in such a manner that a representative of the TNRCC may be present at the time of the initial start-up, monitoring, or sampling.
4. Upon request by the Executive Director of the TNRCC, the permittee shall conduct sufficient sampling or other tests to prove satisfactory equipment performance. All calibration, sampling and testing procedures shall be approved by the Executive Director of the TNRCC and coordinated with the TNRCC Arlington Regional Office representatives.
5. **Equivalency of Methods.** It shall be the responsibility of the permit holder to demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the Executive Director prior to their use in fulfilling any requirements of the permit.

[ V.A.]

6. Recordkeeping. A copy of the permit along with information and data sufficient to demonstrate compliance with the permit shall be maintained in a file at the plant site and made available at the request of personnel from the TNRCC or any air pollution control program having jurisdiction. For facilities that normally operate unattended, this information shall be maintained at the nearest staffed location within Texas specified by the permit holder in the permit application. This information shall include, but is not limited to, production records and operating hours. Additional recordkeeping requirements may be specified in special conditions of this permit. Information in the file shall be retained for at least two years following the date that the information or data is obtained.
7. Maximum allowable emission rates. The total emissions of air contaminants from any of the sources of emissions listed in Attachment H, entitled "Emission Sources - Maximum Allowable Emission Rates" shall not exceed the values stated on the table attached to the permit. The annual rates are based on a calendar year basis. If one emission rate limitation is more stringent than another, then the more stringent limitation shall govern and be the standard by which compliance will be demonstrated.
8. Maintenance of Emission Control. The facilities covered by the permit shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. Notification for upsets and maintenance shall be made in accordance with §101.6 and §101.7 of this title (relating to Notification Requirements for Major Upset and Notification Requirements for Maintenance).
9. Compliance with Rules. Acceptance of a permit by a permit applicant constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the Commission issued in conformity with the Texas Clean Air Act and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition are applicable, then the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of Commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit.
10. Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Section 382.003(3) of the Texas Clean Air Act (TCAA) or violate Section 382.085 of the TCAA. If the Executive Director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

[ V.A.]

11. Information and data concerning the date, type and quantity of wastes managed, waste analyses, facility inspections, operating hours, sampling, and monitoring data shall be maintained in the operating record at the plant site in a form suitable for inspection and made available at the request of personnel from the TNRCC, or any local government having jurisdiction under the Texas Clean Air Act.
12. A current copy of this permit, the application for this permit and any associated correspondence shall be kept at the plant site and made available at the request of personnel from the TNRCC, or any local government having jurisdiction under the Texas Clean Air Act.
13. At the request of the Executive Director of the Texas Natural Resource Conservation Commission (TNRCC) or his designated representative, the holder of this permit shall provide an analysis of waste-derived fuel (WDF) or clinker quench wastewater (CQW) (cumulatively referred to hereon as pumpable hazardous waste) received from a generator/supplier. The holder of this permit shall allow the Executive Director of the TNRCC, or his designated representative, to obtain samples of these materials for analysis upon request.

B. Federal Applicability

1. The permittee shall operate the facility units in compliance with all applicable requirements relating to air quality in the Resource Conservation and Recovery Act (RCRA) and the rules promulgated thereunder and in 30 TAC Section 335, Subchapter F (relating to Permitting Standards for Owners and Operators of Hazardous Waste Storage, Processing, and Disposal Facilities), promulgated by the TNRCC pursuant to the Solid Waste Disposal Act, Chapter 361 of the TEXAS HEALTH AND SAFETY CODE, (Vernon 1992), as those rules exist as of the date of permit issuance.
2. These facilities shall comply with all requirements of Environmental Protection Agency Regulations on Standards of Performance for New Stationary Sources promulgated pursuant to authority granted under the Federal Clean Air Act, section 111 as amended and contained in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and Kb.
3. These facilities shall comply with all applicable requirements of Environmental Protection Agency Regulations on National Emission Standards for Hazardous Air Pollutants promulgated pursuant to authority granted under the Federal Clean Air Act, section 112 as amended and contained in Title 40 Code of Federal Regulations Part 61 (40 CFR 61), Subparts A, J, and FF.

C. Cement Kiln Performance Standards

1. The permittee shall maintain and operate each kiln unit so that it will meet the following performance standards:

[ V.C.1.]

- a. The unit shall achieve a destruction and removal efficiency (DRE) of 99.99 % for all organic hazardous constituents in the pumpable hazardous waste feed. DRE shall be determined using the method specified in 40 CFR §266.104(a). Principal organic hazardous constituent (POHC) selection for the purpose of demonstrating compliance with this condition shall require prior approval from the TNRCC.
  - b. Pursuant to 30 TAC 11.124(2), hydrogen chloride (HCl) emissions from each kiln stack greater than four (4.0) pounds per hour shall be controlled with a minimum removal efficiency of ninety-five (95.0) percent. At no time shall the emissions exceed the maximum allowable emission rates specified for HCl in Attachment H.
  - c. The unit shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot measured in accordance with the EPA Method 5 after correction to a stack gas concentration of seven (7) percent oxygen, using procedures prescribed in 40 CFR 60, Appendix A, methods 1 through 5, and Appendix IX of 40 CFR Part 266.
2. While firing pumpable hazardous waste, opacity of emissions from any stack shall not exceed twenty (20.0) percent on a six-minute average, except for uncombined water, other than for those periods described in 30 TAC Rule 111.111, (Regulation I).
  3. Fuels other than WDF shall be defined by Air Permit No. 1360a. Use of any other fuel will require prior approval of the Executive Director of the Texas Natural Resource Conservation Commission.

D. Cement Kiln Continuous Determination of Compliance

1. The holder of this permit shall operate, calibrate, and maintain continuous emission monitoring systems (CEMS) to measure and record the concentrations of oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), opacity in the kiln stacks and kiln O<sub>2</sub> at the kiln exits of each cement kiln. The holder of this permit shall operate, calibrate, and maintain continuous flow rate sensors to measure and record the exhaust flow rate in each kiln stack. NO<sub>x</sub> and SO<sub>2</sub> shall be monitored in accordance with the CEMS requirements of State Air Permit 1360A.

[ V.D.1.]

- a. Each kiln exit O<sub>2</sub> and opacity CEMS shall meet the design and performance specifications, pass the field tests and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specifications in 40 CFR 60, Appendix B (or equivalent procedures specified by the TNRCC Source and Mobile Monitoring Section for kiln exit O<sub>2</sub> CEMS). Each flow rate sensor shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in 40 CFR 60, Appendix B, Performance Specification 6. Written copies of the results shall be submitted within 60 days of completion of the tests to the TNRCC Arlington Regional Office and the TNRCC Source and Mobile Monitoring Manager in Austin.
- b. Each kiln exit O<sub>2</sub> and opacity CEMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amount specified in 40 CFR 60, Appendix B for opacity or the amount specified by the Source and Mobile Monitoring Section for kiln exit O<sub>2</sub> analyzers. 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.
- c. The opacity monitor shall complete a minimum of one cycle of data recording for each successive 10-second period and one cycle of data recording for each successive six-minute period.
- d. The kiln exit O<sub>2</sub> monitoring data shall be reduced to hourly average concentrations at least once every minute using normally at least 60, and a minimum of 30, equally-spaced data points from each one-hour period.
- e. Each opacity CEMS shall be operated in accordance with the quality assurance/quality control (QA/QC) plan approved by the TNRCC Regional Manager. The kiln exit O<sub>2</sub> CEMS shall be operated in accordance with a QA/QC plan approved by the TNRCC Regional Manager. The QA/QC plan for O<sub>2</sub> CEMS shall be submitted within 60 days of completion of the tests required in this permit to the TNRCC Arlington Regional Office and the TNRCC Source and Mobile Monitoring Manager in Austin.
- f. All CGA exceedances of greater than  $\pm 15$  percent accuracy and any CEMS downtime shall be reported to the TNRCC Arlington Regional Office Manager, and necessary corrective action shall be taken. The Regional Manager shall be notified as soon as possible after discovery of any CEMS malfunction which is expected to

result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the Regional Manager.

[ V.D.1.]

- g. For NSPS sources subject to Appendix F, the TNRCC Arlington Regional Office shall be notified at least 30 days prior to each annual relative accuracy testing audit in order to provide the TNRCC staff the opportunity to observe the testing.
- h. The hourly average O<sub>2</sub> content of the kiln exhaust as measured at the kiln exit shall be maintained at/or above one (1.0) percent by volume.

E. Storage and Unloading Area Operational Requirements

- 1. The holder of this permit shall clean up any spills of VOC or inorganic compounds as expeditiously as possible. All collected liquids and spills shall be stored and disposed of in a vapor-tight container such that no detectable emissions to the atmosphere will result. Records of all spills (date of spill, time of spill, and corrective action taken) shall be maintained on-site for a minimum of two years following the date of recorded information and made available to representatives of the TNRCC or local program upon request.
- 2. Operation without visible liquid leaks or spills shall be maintained at the storage and unloading facility, regardless of vapor pressure. This does not apply to momentary dripping associated with the initial connection or disconnection of fittings. Sustained dripping from fittings during unloading operations is not permitted. Any liquid spills that occurs during unloading shall be reported pursuant to 101.6 or 101.7, and shall be cleaned up immediately, to minimize air emissions.

F. Storage and Unloading Area Continuous Determination of Compliance

- 1. Piping, Valves, Pumps, and Compressors in Hazardous Waste Service
  - a. Audio, olfactory, and/or visual checks for any piping, valves, pumps, agitator seals or other components in hazardous waste service within the operating area shall be made at least weekly.
  - b. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
    - (1) Isolate the leak.
    - (2) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate is not possible. Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Natural Resource Conservation Commission (TNRCC) upon request.

[ V.F.]

2. The holder of this permit shall comply with these requirements for all equipment items which contact waste-derived fuel or clinker quench wastewater, except relief valves and sump pumps.
  - a. These provisions shall not apply (1) where the VOC have an aggregate partial pressure or vapor pressure of less than 0.05 psia at 20°C, or (2) to piping and valves two inches nominal size and smaller, or (3) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this provision shall be identified in a list to be made available upon request.
  - b. Construction of new and reworked piping, valves, and pump and compressor systems shall conform to applicable ANSI, API, ASME, or equivalent codes.
  - c. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
  - d. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Nonaccessible valves shall be identified in a list to be made available upon request.
  - e. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line, including unloading lines, shall be equipped with a cap, blind flange, plug, or a second valve.
  - f. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. Sealless/leakless valves (including, but not limited to, bellows and diaphragm valves) and relief valves equipped with a rupture disc or venting to a control device are not required to be monitored.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained.

[ V.F.2.]

- g. All new and replacement pumps and compressors shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include, but are not limited to, dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic driven pumps) may be used to satisfy the requirements of this provision and need not be monitored.

All other pump and compressor seals emitting VOC shall be monitored with an approved gas analyzer at least quarterly.

- h. Damaged or leaking valves, flanges, compressor seals, and pump seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
- I. The results of the required fugitive monitoring and maintenance program shall be made available to the Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken. Records of flange inspections are not required unless a leak is detected.
- j. Compliance with the requirements of this provision does not assure compliance with requirements of TNRCC Regulation V, any applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

[ V.G.]

G. Kiln Sampling Requirements

1. On a two year basis starting with the date of issuance of this permit, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the waste feed composition is consistent with that represented in the permit application and that the emissions from the kiln are consistent with the limitations contained in this permit. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the cement kilns resulting from the use of pumpable hazardous waste. Testing shall be conducted while the kiln is utilizing pumpable hazardous wastes within ten (10.0) percent of the maximum permitted feed rates under normal operating conditions. A test plan shall be submitted no less than 60 days prior to the required testing to the Office Air Quality to afford the to opportunity to comment. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.
  - a. The TNRCC Arlington Regional Office shall be contacted as soon as testing is scheduled, but not less than 60 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit provisions or TNRCC or EPA sampling procedures shall be made available to the TNRCC prior to the pretest meeting. The Regional Manager or the Manager of the Source and Mobile Monitoring Section shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in (c) of this provision shall be submitted to the TNRCC Austin New Source Review Program. Test waivers and alternate or equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the TNRCC Source and Mobile Monitoring Section in Austin.

[ V.G.1.]

b. Sampling ports and platforms shall be incorporated into the design of the kiln stack according to the specifications set forth in Chapter 2 of the Sampling Procedures Manual. Alternate sampling facility designs may be submitted for approval by the TNRCC Office of Air Quality Regional Manager or the Mobile Source and Monitoring Division in Austin.

c. While firing pumpable hazardous waste, the permittee shall conduct a quantitative analysis of the stack gas for total hydrocarbons (THC), carbon monoxide (CO), HCl, chlorine (Cl<sub>2</sub>), O<sub>2</sub>, front and back half particulate matter (PM), dioxin/furans (D/F), the specified metals in Attachment H and opacity.

CEMS data for CO, THC, O<sub>2</sub> and opacity taken during the appropriate sampling period may be submitted in lieu of testing.

d. The plant shall operate at the maximum production rates, flue gas flow rates and other parameters established in this permit during stack emission testing. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

e. The permittee shall conduct the testing required in this condition on a different kiln for each successive two-year testing period, not to repeat the testing on the same kiln until each other kiln has been tested.

f. The sampling report shall include calculations showing the appropriate detection limits and emission rates concentrations of the contaminants to be tested for. HCl, Cl<sub>2</sub> and metals shall be reported in pounds per hour. PM emissions shall be reported in lb/hr and in grains per dry standard cubic foot and corrected to 7 percent oxygen for front half and total catch. The sampling report shall also contain calculations showing the removal efficiencies of HCl. Copies of the final sampling report shall be forwarded to the TNRCC within 60 days after receipt of the sampling results. Sampling reports shall comply with the provisions of Chapter 14 of the TNRCC Sampling Procedures Manual. One copy of the report shall be distributed to each of the following:

- The Office of Air Quality Permits Division - Austin.
- The TNRCC Arlington Regional Office.
- The Mobile Source and Monitoring Division of the TNRCC.

2. Pursuant to the performance testing required by V(G)(1), the following procedures will be used to report and comply with the D/F emission limits in Attachment H:

[ V.G.2.]

- a. D/F emissions shall be reported speciated by congener and on a TEQ basis for each run in lb/hr and ng/dscm corrected to 7 percent oxygen. The TEQ concentration for each test will be expressed as the sum of the products of the congener concentrations and their toxic equivalency factors, as adopted by the U.S. EPA. Congeners not detected will be assumed not to be emitted and reported as zero.
  - b. The TEQ reported for the purposes of performance testing required by this permit will be calculated as the average of the TEQ concentrations of each of the valid individual runs. 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.
3. If based upon the analytical results of the periodic testing, the permittee determines that the kiln failed to achieve any of the performance standards required, the permittee shall notify the Executive Director of the TNRCC within 24 hours of the determination. The Executive Director of the TNRCC may respond to the notification with a directive to the permittee to cease feeding pumpable hazardous waste or to perform such other directive as may be necessary to ensure compliance with this permit.
  4. All submittals required by this permit must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application as outlined in 30 TAC Section 305.44.

H. Record Keeping Requirements

1. Monitoring and Maintenance Records Pursuant to V(F):
  - (1) A list of all components affected by this provision;
  - (2) Checklists indicating that the required inspections are being performed;
  - (3) Checklists indicating the hydrocarbon analyzer inspections are being performed;
  - (4) Summaries including date, time, equipment identification, and monitoring results for all leaking items;
  - (5) Summaries including date, time, equipment identification, and corrective actions for all isolations, replacements and/or repairs performed, including monitoring results immediately after repairs; and
  - (6) Records of the calibration of the portable monitoring instruments.
2. CEMS Records Pursuant to V(D):

- (1) Average kiln exit O<sub>2</sub> and six-minute average opacities which are monitored pursuant to this permit; and

[ V.H.2.]

- (2) The holder of this permit shall maintain a raw data file of all measurements, including continuous monitoring systems, monitoring device and performance testing measurements, all continuous monitoring device calibration checks and adjustments, and maintenance performed on these systems or devices. The file shall be kept in a permanent form suitable for inspection.

The records required shall be maintained at the plant site on a rolling two-year retention basis following the date of such measurements, maintenance, reports, or records and shall be made available to the TNRCC, or any local air pollution agency having jurisdiction, upon request.

I. Reporting

1. The holder of this permit shall submit to the TNRCC Arlington Regional Office quarterly CEMS reports. Such reports are required the cement kiln and storage and unloading area required to be monitored pursuant to V(D) and V(F) of this permit. All such reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:
  - a. The magnitude of excess emissions and the date and time of commencement and completion of each time period of excess emissions.
  - b. For each period of excess emissions, the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted.
  - c. The date and time identifying each period during which each CEMS was inoperative (except for zero and span checks) and the nature of the system repairs or adjustments which occurred during the downtime.
  - d. When no excess emissions have occurred, or no CEMS has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - e. The reporting of excess emissions required by this provision does not relieve the holder of this permit from the notification requirements of upset conditions or maintenance as required by Rules 101.6 and 101.7 of the General Rules of the TNRCC.

**PERMIT SECTION VI - CLOSURE AND FINANCIAL ASSURANCE REQUIREMENTS**

A. GENERAL CLOSURE REQUIREMENTS:

1. The permittee shall provide financial assurance for closure of all permitted units covered by this permit in accordance with the form outlined in 40 CFR Part 264, Subpart H. The financial assurance amount shall be not less than \$ 1,590,000 (1995 dollars) for Permit Units 1-10, 13 and 14. Financial assurance shall be secured and maintained in compliance with 30

PERMIT NO. HW-50316 -001  
NAME: TXI Operations, LP

CONTINUATION SHEET 59 of 46

TAC 335.152 and 40 CFR Part 264, Subpart H. Financial assurance is subject to the following:

[ VI.A.1.]

- a. Increase in Financial Assurance Amount:  
The amount of financial assurance required for closure, shall be increased to \$2,130,000 as permitted units approved through this permit are constructed. This increase in financial assurance shall be accomplished at least 60 days prior to the management of waste within the newly constructed units. Waste management in newly constructed units cannot take place until the certification requirements of I.F.3. and the financial assurance requirements of this provision have been met. The financial assurance increases listed below shall be corrected for inflation according to the year in which the unit is actually built. Increases in financial assurance shall be as follows:
    - (1) The amount of financial assurance for closure, shall be increased by \$2.00 /gallon (1995 dollars) at least 60 days prior to management of wastes within TNRCC Permit Units Nos. 11, 12, 15 and 16.
  - b. Inflation Factor Correction  
Financial assurance for closure, including any adjustments after permit issuance, shall be corrected for inflation according to the methods described by 40 CFR Part 264, Subpart H. Within 30 days after the close of the firm's fiscal year, for firms using the financial test or corporate guarantee, or within 60 days prior to the anniversary date of the establishment of other financial assurance instruments, the facility's closure cost estimate shall be adjusted for inflation and submitted to the Executive Director. The adjustment shall be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator.
  - c. Decreases in Financial Assurance  
The amount of Financial Assurance required for closure may be decreased by the permittee to deduct costs associated with partial facility closure
2. The permittee shall submit to the Executive Director, upon request, such information as may be required to determine the adequacy of the financial assurance.

B. COMMENCEMENT OF FACILITY CLOSURE

Facility closure shall commence:

1. Upon direction of the TNRCC for violation of the permit, TNRCC Rules, or State Statutes; or
2. Upon suspension, cancellation, or revocation of the terms and conditions of this permit concerning the authorization to receive, store, process, or dispose of waste materials; or

[ VI.B.1.]

3. Upon abandonment of the site; or
4. Upon direction of the TNRCC for failure to secure and maintain an adequate bond or other financial assurance as required by Provision VI.A.1.; or
5. When necessary to comply with Provision I.I.2., 40 CFR 264.113, and 40 CFR 266.102(a)(2)(vii).

C. REQUEST FOR PERMIT MODIFICATION OR AMENDMENT

The permittee shall submit a written notification or request for a permit modification or amendment to authorize a change in the approved Closure Plan(s), in accordance with 30 TAC § 305.62, 30 TAC § 305.69, and the time frames of Provision VI.D. The written notification or request shall include a copy of the amended Closure Plan(s) for approval by the Executive Director. The permittee shall submit a written notification or request for a permit modification or amendment to authorize a change in the approved Closure and/or Post-Closure Care Plans whenever:

1. Changes in operating plans or facility design affect the approved Closure Plan(s);
2. There is a change in the expected year of final closure, if applicable;
3. In conducting partial or final closure activities, unexpected events require modification or amendment of the approved Closure Plan;
4. Required by the Executive Director under the conditions described in Provision VI.C.1. through 3. above.

D. TIME FRAMES FOR MODIFICATION\AMENDMENT REQUEST SUBMITTAL

The permittee shall submit a written request for a permit modification or amendment:

1. At least 60 days prior to the proposed change in facility design or operation which will affect the approved Closure Plan(s);
2. No later than 60 days after an unexpected event has occurred which has affected the approved Closure Plan(s);
3. No later than 30 days after an unexpected event has occurred, if the unexpected event occurs during the partial or final closure period;
4. Within 60 days of the Executive Director's requirement pursuant to Provision IV.C.4., or within 30 days if the change in facility conditions occurs during partial or final closure.

[ VI.]

E. CLOSURE NOTICE AND CERTIFICATION REQUIREMENTS

1. The permittee shall notify the Executive Director, in writing, at least 45 days prior to the date on which he expects to begin partial or final closure of processing or storage tanks; or at least 45 days prior to the date on which he expects to begin partial or final closure of a cement kiln, whichever is earlier. A copy of the notice shall be submitted to the TNRCC Region 4 Office.
2. Unless the Executive Director approves an extension to the closure period, as per the requirements of 40 CFR 264.113(b), the permittee must complete partial and final closure activities in accordance with the approved Closure Plan identified in Provision I.I.2., and within 180 days after receiving the final volume of hazardous wastes at the hazardous waste management unit or facility.
3. As per the requirements of 40 CFR 264.115, within 60 days of the completion of final closure, the permittee shall submit to the Executive Director, by registered mail, with a copy to the TNRCC Region 4 Office, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved Closure Plan and this permit. The certification, which shall be signed by the permittee and by an independent registered professional engineer, must be in the form described in Provision I.F.3.a. An engineering report shall be submitted with the required certifications which includes a summary of the activities conducted during closure and the results of all analyses performed. The certification report shall contain the information required by Provision I.F.3.b. Documentation supporting the independent registered professional engineer's certification shall be furnished to the Executive Director upon request until the Executive Director releases the permittee from the financial assurance requirements for closure under 40 CFR 264.143(i).
4. Closure activities shall be performed in accordance with the Closure Plan(s) identified in Provision I.I.2., except as modified in Provisions VI.F. and VI.G. of this permit.
5. Final closure is considered complete when all hazardous waste management units at the facility have been closed in accordance with all applicable closure requirements so that hazardous waste management activities under 40 CFR Part 264 and 265 are no longer conducted at the facility, unless such waste management activities are subject to the requirements of 40 CFR 262.34, and all RCRA Corrective Action requirements of this permit are fulfilled.

F. STORAGE AND PROCESSING FACILITY UNITS CLOSURE REQUIREMENTS

The permittee shall close the storage and processing units listed as TNRCC Permit Unit No(s). 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16 in accordance with the Closure Plans referenced in Provision I.I.2., 264.197, and the following requirements.

[VI.F.]

1. All storage and/or processing facility units, sump, pumps, piping and any other equipment or ancillary components which have come in contact with hazardous wastes shall either be decontaminated by removing all waste and waste residues, or be disposed of in a manner authorized at this facility or disposed of at an authorized off-site facility.
2. All wash water generated during decontamination activities shall be disposed of in a manner authorized at this facility or disposed of at an authorized off-site facility.
3. All hard-surfaced areas within the hazardous waste management unit areas shall be decontaminated and the wash water generated disposed of in a manner authorized at this facility or disposed of at an authorized off-site facility.
4. Verification of decontamination shall be performed by analyzing wash water, and as necessary, soil samples for the hazardous waste constituents which have been in contact with the particular item being decontaminated.
5. Sufficiently detailed analyses of samples representative of soils remaining in non-hard-surfaced areas of the storage and processing facility area shall be performed to verify removal or decontamination of all waste and waste residues.
6. Soil and/or wash-water samples shall be analyzed in accordance with the methods specified in the current editions of "Test Methods for the Evaluation of Solid Waste" (SW-846) or other methods which are officially recommended by the EPA.
7. All accessible interior/exterior surface areas of equipment, etc., which are to be decontaminated shall be visually inspected for evidence of waste or waste residues. A unit, including ancillary equipment, shall not be certified closed by decontamination if visible evidence of contamination or waste residues remain.
8. If not all contaminated soils can be removed or decontaminated, the permittee must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (40 CFR 264.310). In addition, the permittee must meet all the requirements specified in Subparts G and H of 40 CFR Part 264.

G. CEMENT KILN CLOSURE REQUIREMENTS

The permittee shall close the Cement Kilns listed as TNRCC Permit Unit No(s). 1, 2, 3, and 4 in accordance with the Closure Plans referenced in Provision I.I.2., and the following requirements.

1. The permittee shall close the cement kiln area according to the following requirements:

- a. The cement kiln and all components and structures, piping, pumps, conveyors, air emission control equipment, soils and the unit foundation, shall be decontaminated by removing all hazardous waste and waste residues.

[ VI.G.1.]

- b. Hazardous waste and waste residues (including wastes generated during closure and/or decontamination activities) shall be removed and disposed of in a manner authorized at this facility or disposed of at an authorized off-site facility.
- c. Soil and/or wash-water samples shall be analyzed in accordance with the methods specified in the current editions of "Test Methods for the Evaluation of Solid Waste" (SW-846) or other methods which are officially recommended by the EPA.
- d. As applicable, all contaminated equipment/structures (i.e., debris) intended for decontamination shall be decontaminated in a manner which meets or exceeds the debris treatment standards contained in 40 CFR 268.45 or removed and managed at an authorized industrial solid waste management facility.
- e. The permittee shall perform sufficient sampling and analysis to reasonably assure that all waste and waste residues have been removed during decontamination activities. In addition, the permittee shall perform visual inspections of the equipment/structures for visible evidence of contamination. Decontamination shall be deemed complete when no visible evidence of contamination is observed and when the results from verification sampling and analysis indicate that all waste and waste residues have been removed.

#### **PERMIT SECTION VII - CORRECTIVE ACTION REQUIREMENTS**

##### **A. CKD LANDFILL REMEDIAL INVESTIGATION**

The Permittee shall conduct a remedial investigation to determine the rate and extent of migration of hazardous constituents listed in the Solid Waste Management Unit Investigation Workplan dated September 11, 1992, along with arsenic, that have been released into the environment from Unit 1 (active CKD Landfill), Unit 2 (Inactive CKD Landfill), Unit 3 (Class II Landfill), and Unit 4 (surface water impoundment) depicted on Attachment L. The objective of the investigation activities is to define the full lateral and vertical extent of contamination in both soil and ground water with an adequate number of data points. As part of the remedial investigation, the Permittee shall submit to the Executive Director of the Commission, for approval, a report which documents the full extent of contaminants of concern which includes, but is not limited to the following:

1. Soil samples and analytical data to determine the full extent of soil contamination to replace speculative plume boundaries where samples have not been taken.
2. Information and analytical data to characterize the pond adjacent to the landfills, which shall include pH data, information on the presence of seeps or springs discharging into the pond, and the location(s) of and chemical data on discharges from the pond.

[ VII.]

B. SWMU CORRECTIVE MEASURES

If the Executive Director or the Permittee determines from the remedial investigation data that corrective measures are necessary to monitor, stabilize or prevent further migration of contaminants in the ground or surface water, then corrective measures shall be proposed by the Permittee. Upon submittal of the Corrective Measures Study, which shall include a Baseline Risk Assessment if applying for Risk Reduction Rule Standard 3 status, the Permittee shall apply to the Executive Director for a modification to this permit to initiate the final Corrective Action Program for the Solid Waste management Units.

Attachments

- A - Legal Description
- B - Facility Map
- C - Unit Listing
- D - List of Incorporated Application Materials
- E - Application Table IV.C.
- F - Application Table III.D.
- G - Application Table V.C.
- H - MAERT Table
- I - Waste Feed Cutoff Systems
- J - Maximum Constituent Feedrates
- K - Other Kiln Monitoring Systems
- L - Facility Corrective Action Unit Map