TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 28, 2015

Bridget C. Bohac
Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Re: Application by Formosa Utility Venture, Ltd and Formosa Plastics Corporation for a major amendment to TPDES Permit No. WQ0002436000;
TCEQ Docket No. 2015-1528-IWD

Dear Ms. Bohac:

I have enclosed the Executive Director's Response to Hearing Requests in the above-entitled matter. Please let me know if you have any questions.

Sincerely,

Kathy Humphreys
Staff Attorney
Environmental Law Division

Enclosures

cc: Mailing List

TCEQ Docket No. 2015-1528-IWD

APPLICATION BY FORMOSA UTILITY VENTURE, LTD AND FORMOSA PLASTICS CORPORATION, TEXAS FOR A MAJOR AMENDMENT TO TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) PERMIT NO. WQ0002436000	**§**	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS

The Executive Director (ED) of the Texas Commission on Environmental Quality (Commission or TCEQ) files this Response to Hearing Requests on Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas (Formosa) for a major amendment to TPDES Permit No. WQ0002436000. Texas RioGrande Legal Aid, Inc., submitted two timely hearing requests. The first was filed on August 2, 2013 on behalf of Mauricio Blanco, Hurtado Francisco, Jose Luis Cruz, and the Union of Commercial Oysterman of Texas (collectively Union), the second hearing request was filed on September 18, 2015 on behalf of the Union, Texas Injured Workers, and The Water Keeper. Diane Wilson also filed a timely hearing request on behalf of Texas Injured Workers and San Antonio Bay Water Keeper.

Attached for Commission consideration are the following:

Attachment A – Satellite maps of the area
Attachment B – Fact Sheet and ED's Preliminary Decision
Attachment C – Draft permit
Attachment D – ED's Response to Public Comment (RTC)
Attachment E – Compliance History Reports

I. FACILITY DESCRIPTION

Formosa, which operates the Point Comfort Plant, a plastics and organic and inorganic chemicals manufacturing facility, has applied for a major amendment with renewal to TPDES Permit No. WQ0002436000 to establish minimum analytical levels for oil & grease, biochemical oxygen demand (5-day), free available chlorine, and titanium; reduce Lavaca Bay monitoring from quarterly each year to quarterly triennially based on 15 years of no impacts; increase the temperature limit at Outfall 001 from 95 degrees Fahrenheit (^{0}F) to 100 ^{0}F; authorize the discharge of non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, non contact wash water, potable water, air conditioner unit condensate, and ash truck wash water on an intermittent and flow variable basis via Outfall 013; increase the effluent limitations for total copper at Outfall 001; increase the effluent limitations for

chloroform at Outfall 101 (proposed Outfall SUM); authorize the discharge of fire water via Outfalls 001, 101, and 201; create a summation outfall (designated as Outfall SUM) to regulate the effluents monitored via internal Outfalls 101 and 201; authorize the discharge of potable water, and air conditioner unit condensate via Outfalls 001, 101, 201, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 012; and authorize the reuse of miscellaneous wastewaters (including but not limited to contact and non-contact storm water, CFB unit wastewater; cooling tower blowdown, pellet extruder water, and air separation plant condensate) for cooling water make-up water and dust suppression.

The existing permit authorizes the discharge of remediated groundwater and treated previously monitored effluents (via Outfalls 101 and 201) at a daily average flow not to exceed 9,700,000 gallons per day via Outfall 001; treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters at a daily average flow not to exceed 4,400,000 gallons per day via Outfall 101; treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters, equipment/facility washdown, stormwater, and water treatment wastewaters on a continuous and flow variable basis via Outfall 201; non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 002, 003, 004, and 005; and non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 006, 007, 008, 009, 010, 011, and 012.

The facility is located at 201 Formosa Drive, one-mile north of the intersection of State Highway 35 and Farm-to-Market Road 1593, northeast of the City of Point Comfort, Calhoun County, Texas 77978. The effluent is discharged via Outfall 001, through a pipeline to Lavaca Bay/Chocolate Bay; via Outfall 011 from the Dock Tank Farm to a ditch, thence to a drainage pipe directing the flow to Point Comfort turning basin, thence to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay, in Segment No. 2454 of the Bays and Estuaries. The unclassified receiving waters have no significant aquatic life use for the unnamed ditches and high aquatic life use for Cox Lake. The designated uses for Segments 2453 and 2454 are exceptional aquatic life use, contact recreation, and oyster waters.

In accordance with 30 TAC § 307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards (TSWQS), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Cox Lake, which has been identified as having high aquatic life use, or in Cox Bay or Lavaca Bay/Chocolate Bay, which have

been identified as having exceptional aquatic life use. The current TSWQS should be used to determine copper limits for this facility. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The ED has reviewed this action for consistency with the Texas Coastal Management Program (CMP) goals and policies in accordance with the regulations of the General Land Office, and has determined that the action is consistent with the applicable CMP goals and policies.

II. BACKGROUND

TCEQ received the application on February 2, 2010 and declared it administratively complete on April 7, 2010. The ED completed the technical review of the application on September 27, 2010 and prepared a draft permit. The draft permit was originally filed with the TCEQ Office of the Chief Clerk on June 9, 2011; it was remanded back to the Executive Director on August 31, 2011 for further technical review. The draft permit was re-filed with the TCEQ Office of the Chief Clerk on May 9, 2013. The Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI) was published on April 28, 2010 in English in the *Port Lavaca Wave*, and on May 5, 2010 in Spanish in the *Revista de Victoria*. The Notice of Application and Preliminary Decision (NAPD) was published on June 12, 2013 in English in the *Port Lavaca Wave,* and on July 3, 2013 in Spanish in the *Revista de Victoria*. The comment period ended on August 2, 2013; the RTC was filed on August 17, 2015; the Hearing Request period ended on September 21, 2015.

The public comment period ended on August 2, 2013. If the NAPD is mailed more than two years after the NORI is mailed, the applicant must submit an updated landowner map and list.[1] The ED was unable to verify whether Formosa submitted the updated information before the NORI was mailed in June 2013; therefore, the ED required Formosa to submit a new landowner map and list prior to completing the Response. On June 10, 2015, the ED mailed the NORI to the landowners that are on the list Formosa submitted in 2015 that were not on the original landowner list. The ED did not receive any additional comments.

Since this application was administratively complete after September 1, 1999, it is subject to House Bill 801 (76th Legislature, 1999).

III. THE EVALUATION PROCESS FOR HEARING REQUESTS

House Bill 801 established statutory procedures for public participation in certain environmental permitting proceedings. For those applications declared administratively complete on or after September 1, 1999, it established new procedures for providing public notice and public comment and for the Commission's consideration

[1] 30 TAC § 39.551.

of hearing requests. The application in this case was declared administratively complete on May 9, 2013. Therefore, it is subject to the House Bill 801 requirements. The Commission implemented House Bill 801 by adopting procedural rules in title 30, chapters 39, 50, and 55 of the Texas Administrative Code.

A. Response to Requests

"The ED, the public interest counsel, and the applicant may submit written responses to [hearing] requests . . . ."[2]

According to 30 TAC § 55.209(e), responses to hearing requests must specifically address the following:

(1) Whether the requester is an affected person
(2) Which issues raised in the hearing request are disputed
(3) Whether the dispute involves questions of fact or law
(4) Whether the issues were raised during the public comment period
(5) Whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the ED's RTC
(6) Whether the issues are relevant and material to the decision on the application
(7) A maximum expected duration for the contested case hearing

B. Hearing Request Requirements

For the Commission to consider a hearing request, the Commission must first determine whether the request meets certain requirements. As noted in 30 TAC § 55.201(c), "A request for a contested case hearing by an affected person must be in writing, must be filed with the chief clerk within the time provided . . . and may not be based on an issue that was raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the ED's RTC."

According to 30 TAC § 55.201(d), a hearing request must substantially comply with the following:

(1) Give the name, address, daytime telephone number, and, where possible, fax number of the person who files the request. If the request is made by a group or association, the request must identify one person by name, address, daytime telephone number, and, where possible, fax number, who shall be responsible for receiving all official communications and documents for the group.

[2] 30 TEX. ADMIN. CODE § 55.209(d) (West 2015).

(2) Identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requester's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requester believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public.
(3) Request a contested case hearing.
(4) List all relevant and material disputed issues of fact that were raised during the public comment period and that are the basis of the hearing request. To facilitate the commission's determination of the number and scope of issues to be referred to hearing, the requester should, to the extent possible, specify any of the ED's responses to comments that the requester disputes and the factual basis of the dispute and list any disputed issues of law or policy.
(5) Provide any other information specified in the public notice of application.

C. Requirement that Requester Be an Affected Person

To grant a contested case hearing, the Commission must determine that a requester is an affected person. The factors to consider in making this determination are found in 30 TAC § 55.203 and are as follows:

(a) For any application, an affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. An interest common to members of the general public does not qualify as a personal justiciable interest.
(b) Governmental entities, including local governments and public agencies, with authority under state law over issues raised by the application may be considered affected persons.
(c) In determining whether a person is an affected person, all factors shall be considered, including, but not limited to, the following:
    (1) Whether the interest claimed is one protected by the law under which the application will be considered
    (2) Distance restrictions or other limitations imposed by law on the affected interest
    (3) Whether a reasonable relationship exists between the interest claimed and the activity regulated
    (4) Likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person
    (5) Likely impact of the regulated activity on use of the impacted natural resource by the person
    (6) For governmental entities, their statutory authority over or interest in the issues relevant to the application.

When the requester is a group or association, it must also comply with requirements found in 30 TAC § 55.205 which provides:

(a) A group or association may request a contested case hearing only if the group or association meets all of the following requirements:
(1) one or more members of the group or association would otherwise have standing to request a hearing in their own right;
(2) the interests the group or association seeks to protect are germane to the organization's purpose; and
(3) neither the claim asserted nor the relief requested requires the participation of the individual members in the case.

(b) The executive director, the public interest counsel, or the applicant may request that a group or association provide an explanation of how the group or association meets the requirements of subsection (a) of this section. The request and reply shall be filed according to the procedure in §55.209 of this title (relating to Processing Requests for Reconsideration and Contested Case Hearing).

D. Referral to the State Office of Administrative Hearings (SOAH)

Section 50.115(b) of 30 TAC details how the Commission refers a matter to SOAH: "When the commission grants a request for a contested case hearing, the commission shall issue an order specifying the number and scope of the issues to be referred to SOAH for a hearing." Section 50.115(c) further states, "The commission may not refer an issue to SOAH for a contested case hearing unless the commission determines that the issue: (1) involves a disputed question of fact; (2) was raised during the public comment period; and (3) is relevant and material to the decision on the application."

IV. HEARING REQUEST ANALYSIS

A. Whether the Hearing Requests Comply with 30 TAC § 55.201(c) and (d)

Mauricio Blanco, Hurtado Francisco, Jose Luis Cruz, Union, Texas Injured Workers, and San Antonio Water Keeper, submitted timely hearing requests that raised issues presented during the public comment period that have not been withdrawn. They provided their addresses and phone numbers, or those of their representative, and requested a hearing. They identified themselves as persons with what they believed to be personal justiciable interests affected by the application, which will be discussed in greater detail below, and provided lists of disputed issues of fact that were raised during the public comment period. The ED concludes that these hearing requests substantially comply with the section 55.201(c) and (d) requirements.

B. Whether the Individual Requesters Meet the Affected Person Requirements

1. Mauricio Blanco

Mr. Blanco's property is not located adjacent to the proposed facility site or the discharge route, however, according to his hearing request, Mr. Blanco is a shrimper and oysterman who fishes in Lavaca Bay. Considering the factors listed in 30 TAC § 55.203(c) used to determine affected person status, Mr. Blanco's profession as a shrimper and oysterman who earns his living by fishing from Lavaca Bay, the discharges from the Formosa facility could impact his use of the bay.[3]

Previously, the Commission referred two applications to SOAH for a determination of affectedness based on the requestors' economic interest in the potentially affected natural resources.[4] In both cases SOAH found that the requesters had a personal justiciable interest and granted them party status. Therefore, based on Mr. Blanco's economic interest in Lavaca Bay, the ED recommends that the Commission find that Mr. Blanco has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application not common to members of the general public and is an affected person.[5]

The ED recommends that the Commission find that Mauricio Blanco is an affected person.

2. Hurtado Francisco

Mr. Francisco's property is not located adjacent to the proposed facility site or the discharge route, however, according to his hearing request, Mr. Francisco is a shrimper and oysterman who fishes in Lavaca Bay. Considering the factors listed in 30 TAC § 55.203(c) used to determine affected person status, Mr. Francisco's profession as a shrimper and oysterman who earns his living by fishing from Lavaca Bay, the discharges from the Formosa facility could possibly impact his use of the bay.[6]

Previously, the Commission referred two applications to SOAH for a determination of affectedness based on the requestors' economic interest in the potentially affected natural resources.[7] In both cases SOAH found that the requesters

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[3] *See* 30 TEX. ADMIN. CODE § 55.203(c)(5) (listing the likely impact of the regulated activity on the use of the impacted natural resource by the person as a factor the Commission shall consider when determining if a person is an affected person).
[4] City of Bullard (a TPDES permit application) and GBRA (a water rights permit application).
[5] *Id.* § 55.203(a); *see also id.* § 55.211(c)(2) (addressing hearing requests from affected persons that will be granted).
[6] *See* 30 TEX. ADMIN. CODE § 55.203(c)(5) (listing the likely impact of the regulated activity on the use of the impacted natural resource by the person as a factor the Commission shall consider when determining if a person is an affected person).
[7] City of Bullard (a TPDES permit application) and GBRA (a water rights permit application).

had a personal justiciable interest and granted them party status. Therefore, based on Mr. Francisco's economic interest in Lavaca Bay, the ED recommends that the Commission find that Mr. Francisco has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application not common to members of the general public and is an affected person.[8]

The ED recommends that the Commission find that Hurtado Francisco is an affected person.

3. Jose Luis Cruz

Mr. Cruz's property is not located adjacent to the proposed facility site or the discharge route, however, according to his hearing request, Mr. Cruz is a shrimper and oysterman who fishes in Lavaca Bay. Considering the factors listed in 30 TAC § 55.203(c) used to determine affected person status, Mr. Cruz's profession as a shrimper and oysterman who earns his living by fishing from Lavaca Bay, the discharges from the Formosa facility could possibly impact his use of the bay.[9]

Previously, the Commission referred two applications to SOAH for a determination of affectedness based on the requestors' economic interest in the potentially affected natural resources.[10] In both cases SOAH found that the requesters had a personal justiciable interest and granted them party status. Therefore, based on Mr. Cruz's economic interest in Lavaca Bay, the ED recommends that the Commission find that Mr. Cruz has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application not common to members of the general public and is an affected person.[11]

The ED recommends that the Commission find that Jose Cruz is an affected person.

B. Whether the Groups or Associations Meet the Affected Person Requirements

For a group or association to be granted affected person status, the group or organization must demonstrate that: at least one member of the group or organization would have standing to request a contested case hearing in their own right, that the interest the group or association seeks to protect are germane to the organization's

[8] *Id.* § 55.203(a); *see also id.* § 55.211(c)(2) (addressing hearing requests from affected persons that will be granted).
[9] *See* 30 TEX. ADMIN. CODE § 55.203(c)(5) (listing the likely impact of the regulated activity on the use of the impacted natural resource by the person as a factor the Commission shall consider when determining if a person is an affected person).
[10] City of Bullard (a TPDES permit application) and GBRA (a water rights permit application).
[11] *Id.* § 55.203(a); *see also id.* § 55.211(c)(2) (addressing hearing requests from affected persons that will be granted).

purpose; and neither the claim asserted nor the relief requested requires the participation of the individual members in the case.[12]

1. Union of Commercial Oysterman of Texas

a. Whether one or more members of the group or association would otherwise have standing to request a hearing in their own right.[13]

Diane Wilson and Legal Aid identified Mauricio Blanco, Hurtado Francisco, Jose Luis Cruz, and Diane Wilson as members of the Union that would have standing to request a contested case hearing in their own right. As discussed above, Mauricio Blanco, Hurtado Francisco, and Jose Luis Cruz have demonstrated that they have a personal justiciable interest that is not in common to the general public.

Diane Wilson and Legal Aid also identified Diane Wilson as an individual member of the Union that would have standing in her own right, but did not provide any information regarding her personal justiciable interest.

Because Mauricio Blanco, Hurtado Francisco, and Jose Luis Cruz demonstrated that have standing in their own right, the ED has determined that the union has met this requirement for association standing.

b. Whether the interests the group or association seeks to protect are germane to the organization's purpose.[14]

According to its hearing request, Union members are shrimpers and oystermen who fish and/or earn their livelihoods in Lavaca Bay, Chocolate Bay and other bays in the vicinity. Also, according to Union, the bays, shrimp, and oysters are directly affected by the wastewater discharged from Formosa, and thus, the discharge impacts the Union members' ability to earn a living is directly affected by discharges from the Formosa WWTF. The Union, however, did not provide information on its purpose nor on how Union's purpose is germane to the interests it seeks to protect.

Therefore, the ED has determined that the Union has not met this this requirement for associational standing.

c. Whether the claim asserted or the relief requested requires the participation of the individual members in the case.[15]

[12] 30 TAC § 55.205.
[13] 30 TAC § 55.201(a)(1).
[14] 30 TAC § 55.201 (a)(2).
[15] 30 TAC § 55.205 (a)(3).

The relief requested by Union does not require the participation of any individual member of the Union. Thus, the ED has determined that Union has met this requirement for associational standing.

d. Recommendation.

Because the Union has not met all three requirements for associational standing, the ED recommends that the Commission find that the Union of Commercial Oysterman of Texas is not an affected person.

2. Texas Injured Workers

During the comment period Diane Wilson requested a contested case hearing on behalf of Texas Injured Workers and its members; during the hearing request period, Texas RioGrande Legal Aid, Inc. (Legal Aid) submitted a hearing request on behalf of Texas Injured Workers.

a. Whether one or more members of the group or association would otherwise have standing to request a hearing in their own right.[16]

Ms. Wilson identified Ronnie Hamrick as a member of Texas Injured Workers that would have standing in his own right. According to Ms. Wilson, Mr. Hamrick's "love and enjoyment of Lavaca Bay as a recreational fisherman, and as a local citizen who values the aesthetics and beauty of the water, both for himself and his grandchildren, will be put at risk by the increased discharges." Neither Mr. Hamrick's use of Lavaca by as a recreational fisherman nor his enjoyment of the aesthetics of the bay is a personal justiciable interest that is not in common with the general public. Therefore, therefore, Mr. Hamrick does not have standing in his own right.[17]

Legal Aid identified Dale Jurasek, Ronnie Hamrick and Diane Wilson as individual members of Texas Injured Workers that would have standing in their own right, but did not provide any information regarding their personal justiciable interest.

ED is unable to determine that Ronnie Hamrick, Dale Jurasek or Diane Wilson have standing in their own right.

b. Whether the interests the group or association seeks to protect are germane to the organization's purpose.[18]

According to Ms. Wilson, Texas Injured Workers (Injured Workers) is a grassroots group that consists primarily of injured workers, former workers, and

[16] 30 TAC § 55.201(a)(1).
[17] See id. § 55.205(a)(1) (providing that for a group or association to have standing in a contested case hearing one or more members of the association must have standing in their own right).
[18] 30 TAC § 55.201 (a)(2).

whistleblowers from the local petrochemical, gas, and oil industries on the Texas Gulf Coast. Ms. Wilson, however, does not provide information regarding the interests Injured Workers seeks to protect through the contested case hearing process, nor does she provide any information on how the purpose of the group is germane to the interest it seeks to protect.[19]

According to Legal Aid, Texas Injured Workers is an "organization of current and former workers from local petrochemical, gas, and oil industries on the Texas Gulf Coast who advocate for the health and safety protections in the workplace and value the aesthetics and beauty of the bays as well as the recreational opportunities they afford."[20] Injured Workers' asserts that its members' livelihoods, health and safety, and recreation opportunities would be affected by Formosa's wastewater discharge. Legal Aid, however, did not provide information regarding the interests Texas Injured Workers seeks to protect through the contested case hearing process, nor did it provide any information on how the purpose of the group is germane to the interest it seeks to protect.[21]

The ED has determined that Texas Injured Workers has not met this requirement for associational standing.

c. Whether the claim asserted or the relief requested requires the participation of the individual members in the case.[22]

The relief requested by Texas Injured Workers does not require the participation of any individual member of the organization. Thus, the ED has determined that Texas Injured Workers has met this requirement for associational standing.

d. Recommendation.

Because Texas Injured Workers has not met all three requirements for associational standing, it has not demonstrated that it is an affected person. The ED recommends that the Commission find that the Texas Injured Workers is not an affected person.

3. San Antonio Bay Water Keeper

During the comment period Diane Wilson requested a contested case hearing on behalf of San Antonio Bay Water Keeper; during the hearing request period, Legal Aid submitted a hearing request on behalf of San Antonio Bay Water Keeper (Water Keeper).

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[19] *See* 30 TEX. ADMIN. CODE § 55.205(a)(2)(providing that a group or association must have an interest that it seeks to protect that is germane to the organization's purpose).
[20] Hearing Request filed 9/18/15.
[21] *See* 30 TEX. ADMIN. CODE § 55.205(a)(2)(providing that a group or association must have an interest that it seeks to protect that is germane to the organization's purpose).
[22] 30 TAC § 55.205 (a)(3).

a. Whether one or more members of the group or association would otherwise have standing to request a hearing in their own right.[23]

Ms. Wilson identified David and Christi Campos (Campos) of Port Lavaca as members of Water Keeper that would have standing in their own right. According to Ms. Wilson, the Campos livelihood depends on the viability and health of the oysters in Lavaca/Matagorda Bay. Ms. Wilson did not, however, describe how the Campos livelihood is tied to the health of the oysters in the bay. The ED, therefore, cannot find that the Campos would have a personal justiciable interest not in common with the general public that would give them standing in their own right.

Legal Aid also identified the Campos as members of Water Keeper that would have standing in their own right, but did not provide any additional information to assist the ED in determining that the Campos would have standing to request a hearing in their own right. Legal Aid also identified Diane Wilson as a person who would have standing to request a contested case hearing in her own right, but did not provide any information regarding her personal justiciable interest.

ED is unable to determine that David Campos, Christi Campos, or Diane Wilson have standing in their own right.

b. Whether the interests the group or association seeks to protect are germane to the organization's purpose.[24]

According to both Ms. Wilson and Legal Aid, Water Keeper is a grassroots group that is committed to preserving and protecting the health of San Antonio, Lavaca, and Matagorda Bays and the associated watersheds for their children, economy and future. According to Ms. Wilson and Legal Aid, Water Keeper promotes reservation and protection of the bays through advocacy, education, and enforcement of the Clean Water Act. Both Ms. Wilson and Legal Aid assert that the use and enjoyment of the bays and watershed by the members of Water Keeper will be affected.

The ED has determined that Injured Workers has met this requirement for associational standing.

c. Whether the claim asserted or the relief requested requires the participation of the individual members in the case.[25]

The relief requested by Water Keeper does not require the participation of any individual member of the Water Keeper. Thus, the ED has determined that Water Keeper has met this requirement for associational standing.

[23] 30 TAC § 55.201(a)(1).
[24] 30 TAC § 55.201 (a)(2).
[25] 30 TAC § 55.205 (a)(3).

d. Recommendation.

Because Water Keeper has not met all three requirements for associational standing, it has not demonstrated that it is an affected person. The ED recommends that the Commission find that Water Keeper is not an affected person.

D. Whether Issues Raised Are Referable to SOAH for a Contested Case Hearing

The ED analyzed the issues raised in the hearing requests that it has recommended granting in accordance with the regulatory criteria and provides the following recommendations regarding whether the issues can be referred to SOAH if the Commission grants the hearing requests. Except where noted, all issues were raised during the public comment period, and none of the issues were withdrawn. All identified issues are considered disputed unless otherwise noted. The ED has also listed the relevant RTC responses.

1. Whether the permit needs more specific standards to prohibit Formosa from discharging floating debris and suspended solids such as polyethylene pellets or PVC dust. (Responses 1 and 2)

This is a disputed issue of fact; however, it is not relevant and material to a decision on the application, because the application does not authorize the discharge of solids and any discharge of floating debris and suspended solids.

The ED recommends that the **Commission not refer** this issue to SOAH if it grants the hearing requests.

2. Whether Formosa should be required to immediately remove any polyethylene pellets in its discharge and report its actions to the TCEQ. (Response 3)

This is a disputed issue of fact. If it can be shown that Formosa does not immediately remove polyethylene pellets, that information would be relevant and material to a decision on the application.

The ED recommends the **Commission refer** this issue to SOAH if it grants the hearing requests.

3. *Whether the permit should authorize Formosa to discharge phthalates.* (Response 4)

This is a disputed issue of fact. If it can be shown that Formosa's discharge of phthalates contributes to phthalates in Lavaca Bay that cause exceedances of the applicable TSWQS that information would be relevant and material to the a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

4. *Whether the effect of the plasticizers in Formosa's discharge have been evaluated on humans.* (Response 5)

This is a disputed issue of fact; however, it is not relevant and material to a decision on the application. The ED screened the quality of the effluent discharged via Formosa's permitted outfalls against the calculated water quality-based effluent limitations necessary for the protection of the Texas Surface Water Quality Standards (30 TAC Chapter 307) criteria for aquatic life and human health protection.

The ED recommend that **the Commission not refer** this issue to SOAH if the Commission grants the hearing requests.

5. *Whether the effluent limit for copper is appropriate.* (Responses 6 and 7)

This is a disputed issue of fact. If it can be shown that the effluent limit for copper is in violation of EPA's anti-backsliding regulations or causes a violation of the water quality standards or the applicable water quality management plant, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

6. *Whether the increased copper discharges violate the anti-backsliding provisions of the Clean Water Act.* (Response 6)

This is a disputed issue of fact. If it can be shown that the increased copper discharges would violate the anti-backsliding provisions of the Clean Water Act, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

7. *Whether the effluent limits in Formosa's permit should be both concentration based and mass based.* (Response 8)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

8. *Whether the synergistic effect of copper with mercury from Alcoa's nearby mercury Superfund site, coupled with an increase in copper loadings trigger an unforeseen synergistic effect on the marine life and ecosystem in Lavaca Bay.* (Response 9)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

9. *Whether the five-degree increase in temperature will negatively affect the oysters. (*Response 10)

This is a disputed issue of fact that is relevant and material to a decision on the application; however, during the ED's review of the application, Formosa withdrew its request to increase the temperature limit.

The ED recommends **the Commission not refer** this issue to SOAH if the Commission grants the hearing requests.

10. *Whether the Formosa discharge would negatively impact oyster reefs in Lavaca Bay and the surrounding area.* (Responses 11 and 12)

This is a disputed issue of fact. If it can be shown that the Formosa discharge would negatively impact oyster reefs in Lavaca Bay and the surrounding area, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

11. *Whether the effluent limits in the draft permit should be different for periods of low tide and high tide.* (Response 13)

This is a disputed issue of fact. If it can be shown that the effluent limits should be different for periods of low and high tide, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

12. *Whether, based on its compliance history, Formosa's request for a major amendment should be granted.* (Response 14)

This is a disputed issue of fact. If it can be shown that Formosa's compliance

history does not indicate that Formosa would be able to comply with the terms and conditions of its permit, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

13. *Whether the TCEQ accurately determined Formosa's compliance history.* (Response 14)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

14. *Whether discharges from the Formosa facility, under the terms in the draft permit would cause degradation of Segments 2453 and 2454, including Cox Lake, Cox Bay, and Lavaca Bay/Chocolate Bay.* (Response 15)

This is a disputed issue of fact. If it can be shown that the Formosa discharge would cause degradation of Segments 2453 and 2454, including Cox Lake, Cox Bay, and Lavaca Bay/Chocolate Bay, that would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

15. *Whether Formosa's request to reduce its monitoring frequency should be approved.* (Response 16)

This is a disputed issue of fact that is relevant and material to a decision on the application; however, during the ED's review of the application, Formosa withdrew its request to reduce monitoring frequencies.

The ED recommends **the Commission not refer** this issue to SOAH if the Commission grants the hearing requests.

16. *Whether, based on a 1997 agreement, Formosa should be allowed to discharge any wastewater.* (Response 17)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not** refer this issue to SOAH if it grants

the hearing requests.

17. *Whether the draft permit is consistent with the Coastal Management Program.* (Response 18)

This is a disputed issue of fact. If it can be shown that the draft permit is not consistent with the Coastal Management Program, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

18. *Whether the Executive Director appropriately applied the New Source Performance Standards in preparing the draft permit.* (Response 19)

This is a disputed issue of fact. If it can be shown that the ED did not appropriately apply the New Source Performance Standards, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

19. *Whether the temperature limit of 100 degrees Fahrenheit is appropriate.* (Response 20)

This is a disputed issue of fact that is relevant and material to a decision on the application; however, the ED denied Formosa's request to raise the temperature limit to 100 degrees Fahrenheit because Formosa failed to provide sufficient justification in accordance with EPA's anti-backsliding regulations.

The ED recommends **the Commission not** refer this issue to SOAH if the Commission grants the hearing requests.

20. *Whether the reporting requirements for temperature in the draft permit are appropriate.* (Response 20)

This is a disputed issue of fact. If it can be shown that the reporting requirements in the draft permit allow too much temperature variation, thereby negatively impacting aquatic life, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

21. *Whether the effluent limits for chloroform in the draft permit violate EPA's*

regulations regarding backsliding. (Response 21)

This is a disputed issue of fact. If it can be shown that the effluent limits for chloroform do not comply with the anti-backsliding rules, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

22. *Whether allowing Formosa three years to comply with dioxin and furan effluent limits violates the Clean Water Act.* (Response 22)

This is a disputed issue of fact. If it can be shown that providing Formosa with three years to comply with the dioxin and furan effluent limits violates the Clean Water Act, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

23. *Whether discharges under the terms of the draft permit would result in a taking of endangered species or would harm threatened species.* (Response 23)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

24. *Whether the draft permit includes appropriate limits for the discharge of domestic wastewater.* (Response 24)

This is a disputed issue of fact. If it can be shown that the effluent limits in the draft permit for bacteria are not appropriate to protect the Lavaca Bay, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

25. *Whether the draft permit authorizes discharges from the Alcoa mud flats.* (Response 25)

This is a disputed issue of fact, however it is not relevant and material to a decision on the application.

The ED recommends **the Commission not** refer this issue to SOAH if it grants

the hearing requests.

26. *Whether the monitoring requirements in Formosa's permit must comply with 40 CFR Part 136, and testing of pollutants must comply with 40 CFR § 122.41(j)(4).* (Response 26)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

27. *Whether TCEQ's MALs (minimum analytical levels) must be consistent with EPA's MQL (maximum quantitation level).* (Response 27)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

28. *Whether Formosa should be required to report violations of certain effluent limits within 24 hours.* (Response 28)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not** refer this issue to SOAH if it grants the hearing requests.

29. *Whether Formosa should be required to send notice of noncompliance to individuals who request it and whether information regarding the noncompliance should be available at the Calhoun County Branch Library in Point Comfort.* (Response 29)

This is a disputed issue of fact; however, it is not relevant and material to a decision on the application.

The ED recommends **the Commission not** refer this issue to SOAH if the Commission grants the hearing requests.

30. Whether the draft permit should state clearly which kinds of situations must be reported as endangering the health of persons or aquatic life. (Response 30)

This is a disputed issue of law rather than fact and is therefore not relevant and

material to a decision on the application.

The ED recommends the **Commission not refer** this issue to SOAH if it grants the hearing requests.

31. *Whether the pH limit in the draft permit is appropriate.* (Response 31)

This is a disputed issue of fact. If it can be shown that the pH limit in the draft permit will threaten aquatic life, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

32. *Whether the draft permit should include additional requirements regarding leak protection equipment.* (Response 32)

This is a disputed issue of fact. If it can be shown that Formosa has not installed the required leak protection equipment, that information is relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

33. *Whether the draft permit should include a provision regarding the disposition of lead-contaminated water removed from the holding ponds.* (Response 33)

This is a disputed issue of fact. If it can be shown that the lead-contaminated water will be discharged under the provisions in the draft permit, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

34. *Whether the draft permit should limit the volume* of *remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters that Formosa can discharge.* (Response 34)

This is a disputed issue of fact. If it can be shown that the draft permit should limit the volume of various waste streams that Formosa should be allowed to discharge in order to protect the receiving waters, that information would be relevant and material to a decision on the application.

The ED **recommends the Commission** refer this issue to SOAH if it grants

the hearing requests.

35. *Whether the discharge of remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters that Formosa can discharge will negatively impact the wildlife.* (Response 34)

This is a disputed issue of fact. If it can be shown that the discharge of various waste streams will negatively impact wildlife, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

36. *Whether the remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters authorized by the draft permit will contain lead or other toxins.* (Response 35)

This is a disputed issue of fact. If it can be shown that the discharge of various waste streams will contain lead or other toxins, that information is relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

37. *Whether TCEQ should have consulted with the United States Fish and Wildlife Service (USFWS) and the Texas Parks and Wildlife Department (TPW) before issuing the draft permit.* (Response 36)

This is a disputed issue of fact; however it is not relevant and material to a decision on the application. The TCEQ is not required to consult with USFWS or the TPWD during the permitting process. The legislature provided that "the commission is the agency of the state given primary responsibility for implementing the constitution and laws of this state relating to the conservation of natural resources and the protection of the environment."[26]

The ED recommends **the Commission not** refer this issue to SOAH if the Commission grants the hearing requests.

38. *Whether TCEQ should require Formosa to: have a mailing list (which could be by email or hard copy) that interested parties can join; send notices of reports of monitoring data to that mailing list, and make the data available on-line.* (Response 37)

[26] TWC § 5.012.

This is a disputed issue of fact; however it is not relevant and material to a decision on the application.

The ED recommends **the Commission not** refer this issue to SOAH if it grants the hearing requests.

39. *Whether the term "significant toxicity" as it is used in reference to WET testing should be clarified in draft permit.* (Response 38)

This is a disputed issue of law rather than fact and is therefore not relevant and material to a decision on the application.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

40. *Whether the draft permit should require Formosa to initiate a Toxicity Reduction Evaluation (TRE) after two toxic events within two months, or, depending on the severity of the toxic event, TCEQ should require TRE after one event.* (Response 39)

This is a disputed issue of fact. If it can be shown that Formosa should initate a TRE after two severe toxic events, that information would be relevant and material to a decision on the application.

The ED recommends **the Commission refer** this issue to SOAH if it grants the hearing requests.

41. Whether the increased limits for copper or chloroform will threaten aquatic species.

This is a disputed issue of fact. If it can be shown that the increase in copper or cholorform would threaten aquatic species, that information would be relevant and material to a decision on the application. However, this issue was not raised during the comment period.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

42. Whether effluent limits based on Best Professional Judgment must clearly document and evaluate whether stricter, including zero discharge limits, are proper.

This is a disputed issue of fact that is relevant and material to a decision on the application, however it was not raised during the comment period.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

43. Whether the draft permit should require that all samples and measurements taken for the purpose of monitoring the regulated discharge are representative of the monitored activity.

This is a disputed issue of fact that is relevant and material to a decision on the application, however it was not raised during the comment period.

The ED recommends **the Commission not refer** this issue to SOAH if it grants the hearing requests.

V. CONTESTED CASE HEARING DURATION

If there is a contested case hearing on this application, the ED recommends that because of the complexity of the issues raised, the duration of the hearing be 12 months from the preliminary hearing to the presentation of a proposal for decision to the Commission.

VI. CONCLUSION

The ED recommends the following actions by the Commission:

1. The ED recommends that the Commission find Mauricio Blanco, Hurtado Francisco, and Jose Luis Cruz, are affected persons and grant their hearing requests.

2. The ED recommends that the Commission find that the Union of Commercial Oystermen of Texas, Texas Injured Workers, and San Antonio Bay Water Keeper are not affected persons and deny their hearing request.

3. If referred to SOAH, first refer the matter to Alternative Dispute Resolution for a reasonable period.

4. If referred to SOAH, refer the following issues as identified by the ED:

   Issue 2. Whether Formosa should be required to immediately remove any polyethylene pellets in its discharge and report its actions to the TCEQ.

   Issue 3. Whether the draft permit should allow the discharge of phthalates.

   Issue 5. Whether the effluent limit for copper is appropriate.

Issue 6. Whether the increased copper discharges violate the anti-backsliding provisions of the Clean Water Act.

Issue 10. Whether the Formosa discharge would negatively impact oyster reefs in Lavaca Bay and the surrounding area.

Issue 11. Whether the effluent limits in the draft permit should be different for periods of low tide and high tide.

Issue 12. Whether, based on its compliance history, Formosa's request for a major amendment should be granted.

Issue 14. Whether discharges from the Formosa facility, under the terms in the draft permit would cause degradation of Segments 2453 and 2454, including Cox Lake, Cox Bay, and Lavaca Bay/Chocolate Bay.

Issue 17. Whether the draft permit is consistent with the Coastal Management Program.

Issue 18. Whether the Executive Director appropriately applied the New Source Performance Standards in preparing the draft permit.

Issue 20. Whether the reporting requirements for temperature in the draft permit are appropriate.

Issue 21. Whether the effluent limits for chloroform in the draft permit violate EPA's regulations regarding backsliding.

Issue 22. Whether allowing Formosa three years to comply with dioxin and furan effluent limits violates the Clean Water Act.

Issue 24. Whether the draft permit includes appropriate limits for the discharge of domestic wastewater.

Issue 31. Whether the pH limit in the draft permit is appropriate.

Issue 32. Whether the draft permit should include additional requirements regarding leak protection equipment.

Issue 33. Whether the draft permit should include a provision regarding the disposition of lead-contaminated water removed from the holding ponds.

Issue 34. Whether the draft permit should limit the volume of remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters that Formosa can discharge.

Issue 35. Whether the discharge of remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters that Formosa can discharge will negatively impact the wildlife.

Issue 36. Whether the remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters authorized by the draft permit will contain lead or other toxins.

Issue 40. Whether the draft permit should require Formosa to initiate a Toxicity Reduction Evaluation (TRE) after two toxic events within two months, or, depending on the severity of the toxic event, TCEQ should require TRE after one event.

5. If referred to SOAH, deny all other issues as identified by the ED.

Respectfully submitted,

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Richard A. Hyde, P.E., Executive Director

Robert Martinez, Director
Environmental Law Division

By: Kathy J Humphreys _____
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CERTIFICATE OF SERVICE

I certify that on December 28, 2015, the original and seven copies of the "Executive Director's Response to Hearing Request" for the major amendment to Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas' TPDES permit number WQ000243000, were filed with the TCEQ's Office of the Chief Clerk, and a copy was served to all persons listed on the attached mailing list via hand delivery, facsimile transmission, inter-agency mail, electronic submittal, or by deposit in the U.S. Mail.

Kathy Humphreys

MAILING LIST
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FORMOSA UTILITY VENTURE, LTD.
DOCKET NO. 2015-1528-IWD; PERMIT NO.
WQ0002436000

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Manager Water Resources
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Edna, Texas 77957-0429

Bob Lindsey
San Antonio Bay Waterkeeper
Waterkeepers Alliance, Inc.
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Port O'Connor, Texas 77982-0254

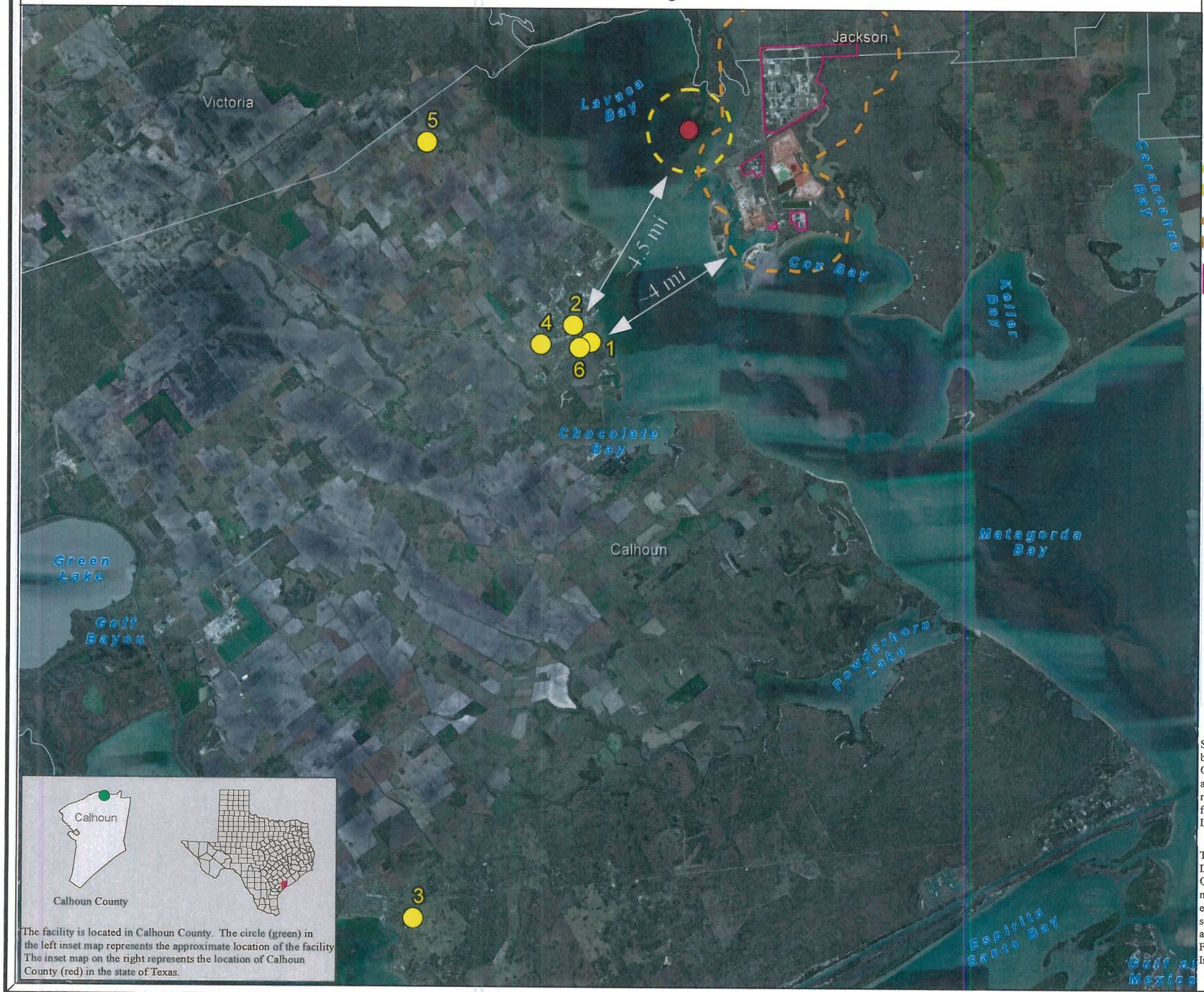
ATTACHMENT A

Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas
TPDES Permit No. WQ0002436000

Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda

N

0 2 4 Miles



The facility is located in Calhoun County. The circle (green) in the left inset map represents the approximate location of the facility. The inset map on the right represents the location of Calhoun County (red) in the state of Texas.

Protecting Texas by Reducing and Preventing Pollution

TCEQ

Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087

Date: 12/22/2015

- Outfall 001
- 1 radial mile from Outfall 001
- 1 radial mile from facility boundaries
- Facility Boundary
- County Boundary
- Requester

ID	Name
1	Mauricio Blanco
2	Hurtado Francisco and Jose Luis Cruz
3	Diane Wilson
4	Dale Jurasek
5	Ronnie Hamrick
6	David and Christi Campos

Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information from the applicant and the requestor information from the requestor. The background imagery of this map is from the current Environmental Systems Research Institute (ESRI) map service, as of the date of this map.

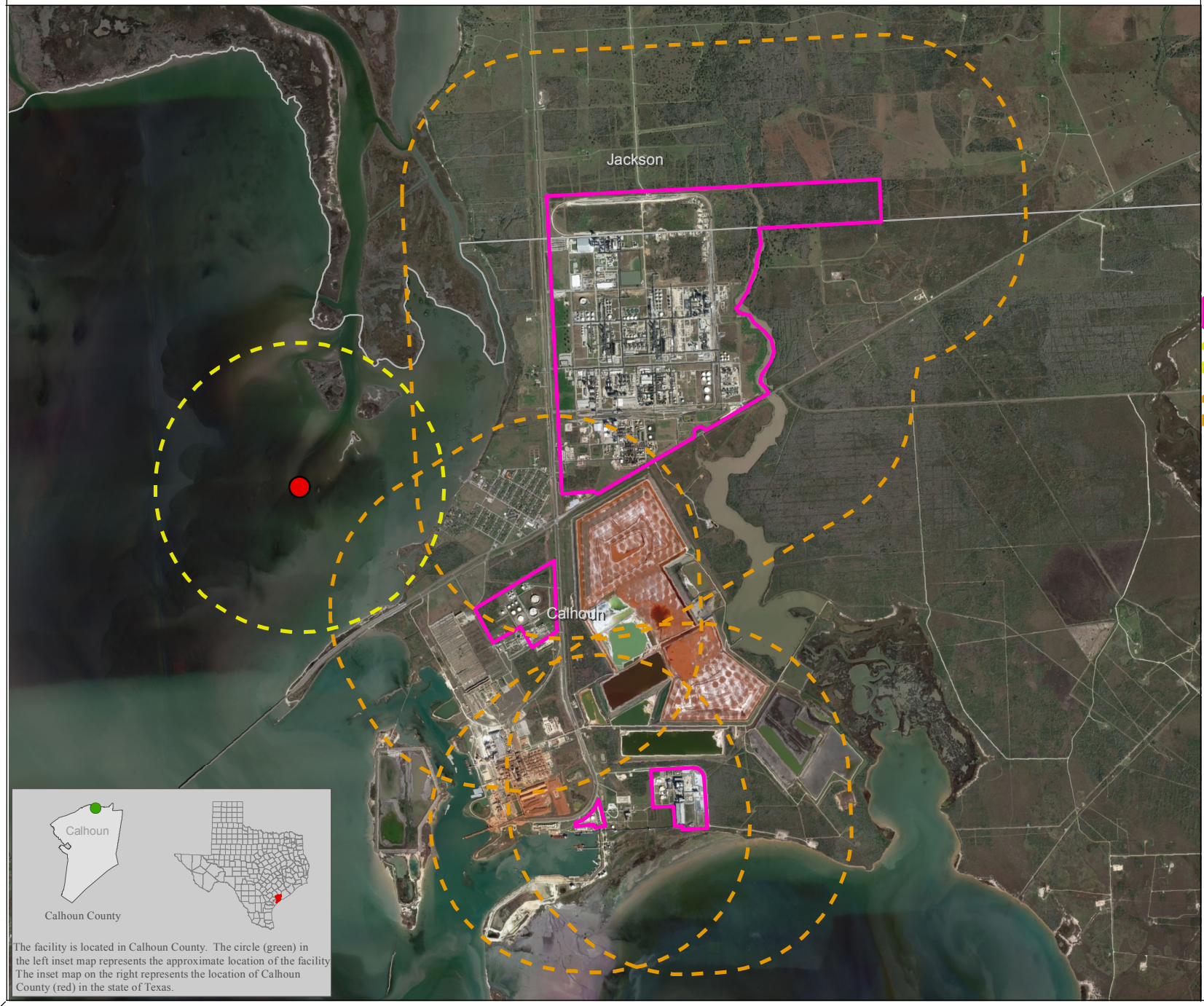
This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.

CRF 467975

Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas

TPDES Permit No. WQ0002436000

Map Requested by TCEQ Office of Legal Services
for Commissioners' Agenda



Protecting Texas by Reducing and Preventing Pollution

TCEQ

Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087

Date: 12/16/2015

N

0 0.5 1 Miles

- Outfall 001
- Facility Boundary
- 1 radial mile from Outfall 001
- 1 radial mile from facility boundary
- County Boundary

The facility is located in Calhoun County. The circle (green) in the left inset map represents the approximate location of the facility. The inset map on the right represents the location of Calhoun County (red) in the state of Texas.

Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information from the applicant and the requestor information from the requestor. The background imagery of this map is from the current Environmental Systems Research Institute (ESRI) map service, as of the date of this map.

This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.

CRF 467975 facview

ATTACHMENT B

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System TPDES Permit No. WQ0002436000, EPA ID No. TX0085570 to discharge to water in the State.

Issuing Office:	Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	Formosa Utility Venture, Ltd. And Formosa Plastics Corporation, Texas P.O. Box 700 Point Comfort, Texas 77978-0700
Prepared By:	Michael Sunderlin Wastewater Permitting Section Water Quality Division (512) 239-4523
Date:	February 27, 2014 (Revised November 13, 2014)
Permit Action:	Major Amendment; TPDES Permit No. WQ0002436000

I. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. It is proposed the permit be issued to expire on January 1, 2019 following the requirements of 30 TAC §305.71.

II. APPLICANT ACTIVITY

The applicant currently operates the Point Comfort Plant, a plastics and organic and inorganic chemicals manufacturing facility.

III. DISCHARGE LOCATION

As described in the application, the plant site is located at 201 Formosa Drive, one-mile north of the intersection of State Highway 35 and Farm-to-Market Road 1593, northeast of the City of Point Comfort, Calhoun County, Texas. Discharge is via Outfall 001 and 011 directly to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay in Segment No. 2454 of the Bays and Estuaries.

IV. RECEIVING STREAM USES

The unclassified receiving waters have no significant aquatic life use for the unnamed ditches and high aquatic life use for Cox Lake. The designated uses for Segments 2453 and 2454 are exceptional aquatic life use, contact recreation, and oyster waters.

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§307.1 - 307.10, effective August 17, 2000.

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the Monthly Effluent Report data for the period of January 2005 through June 2010. The "Average of Daily Avg." values presented in the following table are the average of all daily average values for the reporting period for each parameter. The "Maximum of Daily Max." values presented in the following table are the individual maximum values for the reporting period for each parameter.

A. Flow			
Outfall	**Frequency**	**Average of Daily Avg.**	**Maximum of Daily Max**
001	Continuous	5.7 MGD	8.5 MGD
101	Continuous	2.8 MGD	5.0 MGD
201	Continuous	3.15 MGD	4.8 MGD

B. Temperature (degrees F)			
Outfall		**Average of Daily Avg.**	**Maximum of Daily Max**
001		N/A	95 ^{0}F

C. Effluent Characteristics			
Outfall	**Parameter**	**Average of Daily Avg**	**Maximum of Daily Max**
001	Carbonaceous Biochemical Oxygen Demand (5-day)	131 lbs/day 2.8 mg/l	5,200 lbs/day 128 mg/l
	Chemical Oxygen Demand	2,497 lbs/day 53 mg/l	15,437 lbs/day 380 mg/l
	Total Organic Carbon	898 lbs/day	2,356 lbs/day
	Total Suspended Solids	615 lbs/day 12.9 mg/l	2850 lbs/day 59 mg/l
	Ammonia as Nitrogen	7.03 lbs/day 0.13 mg/l	149 lbs/day 4.0 mg/l
	Oil and Grease	75.6 lbs/day N/A	257 lbs/day 4.0 mg/l
	Fecal Coliform (colonies/100 ml)	3.2 #/100 mls	N/A
	Total Chromium	0.0048 lbs/day 0 mg/l	0.9 lbs/day 0.02 mg/l
	Hexavalent Chromium	0.0048 lbs/day 0.00016 mg/l	0.9 lbs/day 0.02 mg/l
	Total Copper	0.74 lbs/day 0.016 mg/l	2.35 lbs/day 0.05 mg/l
	Total Lead	0.046 lbs/day 0.00034 mg/l	1.2 lbs/day 0.03 mg/l
	Total Mercury	0.00048 lbs/day 0 mg/l	0.22 lbs/day 0.01 mg/l

Outfall	**Parameter**	**Average of Daily Avg**	**Maximum of Daily Max**
001 cont.	Total Zinc	0.54 lbs/day 0.012 mg/l	9.3 lbs/day 0.14 mg/l
	Benzene	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	1,2-Dichloroethane	0.070 lbs/day 0.0014 mg/l	5.8 lbs/day 0.15 mg/l
	Phenol	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Toluene	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Trichloroethylene	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Vinyl Chloride	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Dissolved Oxygen	5.5 mg/l (min)	9.5 mg/l
	Temperature (°F)	N/A	95 ^{0}F
	2,3,7,8-TCDD Equivalents	47.3 ug/day 2.39 ppq	1221 ug/day 66.9 ppq
	pH	6.2 SU (min)	10.5 SU
101	Biochemical Oxygen Demand	76 lbs/day 4.1 mg/l	1917 lbs/day 431 mg/l
	Total Suspended Solids	259 lbs/day 10.9 mg/l	906 lbs/day 34 mg/l
	Chemical Oxygen Demand	1354 lbs/day 59.1 mg/l	4021 lbs/day 904 mg/l
	Acenaphthene	0 lbs/day	0 lbs/day
	Acrylonitrile	0 lbs/day	0 lbs/day
	Benzene	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Carbon Tetrachloride	0 lbs/day	0 lbs/day
	Chlorobenzene	0 lbs/day	0 lbs/day
	1,2,4-Trichlorobenzene	0 lbs/day	0 lbs/day
	Hexachlorobenzene	0 lbs/day	0 lbs/day
	1,2-Dichloroethane	0.048 lbs/day 0.0019 mg/l	6.18 lbs/day 0.27 mg/l
	1,1,1-Trichloroethane	0 lbs/day	0 lbs/day
	Hexachloroethane	0 lbs/day	0 lbs/day
	1,1-Dichloroethane	0 lbs/day	0 lbs/day
	1,1,2-Trichloroethane	0 lbs/day	0 lbs/day
	Chloroethane	0 lbs/day	0 lbs/day
	Chloroform	0.042 lbs/day	0.71 lbs/day
	2-Chlorophenol	0 lbs/day	0 lbs/day
	1,2-Dichlorobenzene	0 lbs/day	0 lbs/day
	1,3-Dichlorobenzene	0 lbs/day	0 lbs/day
	1,4-Dichlorobenzene	0 lbs/day	0 lbs/day
	1,1-Dichloroethylene	0 lbs/day	0 lbs/day

Outfall	**Parameter**	**Average of Daily Avg**	**Maximum of Daily Max**
101 cont.	1,2-trans-Dichloroethylene	0 lbs/day	0 lbs/day
	2,4-Dichlorophenol	0 lbs/day	0 lbs/day
	1,2-Dichloropropane	0 lbs/day	0 lbs/day
	1,3-Dichloropropylene	0 lbs/day	0 lbs/day
	2,4-Dimethylphenol	0 lbs/day	0 lbs/day
	2,4-Dinitrotoluene	0 lbs/day	0 lbs/day
	2,6-Dinitrotoluene	0 lbs/day	0 lbs/day
	Ethylbenzene	0 lbs/day	0 lbs/day
	Fluoranthene	0 lbs/day	0 lbs/day
	Methylene Chloride	0 lbs/day	0 lbs/day
	Methyl Chloride	0 lbs/day	0 lbs/day
	Hexachlorobutadiene	0 lbs/day	0 lbs/day
	Naphthalene	0.019 lbs/day	0.38 lbs/day
	Nitrobenzene	0 lbs/day	0 lbs/day
	2-Nitrophenol	0 lbs/day	0 lbs/day
	4-Nitrophenol	0 lbs/day	0 lbs/day
	2,4-Dinitrophenol	0 lbs/day	0 lbs/day
	4,6-Dinitro-o-cresol	0 lbs/day	0 lbs/day
	Phenol	0 lbs/day 0 mg/l	0 lbs/day 0 mg/l
	Bis(2-ethylhexyl) phthalate	0 lbs/day	0 lbs/day
	Di-n-butyl phthalate	0 lbs/day	0 lbs/day
	Diethyl phthalate	0 lbs/day	0 lbs/day
	Dimethyl phthalate	0 lbs/day	0 lbs/day
	Benzo(a)anthracene	0 lbs/day	0 lbs/day
	Benzo(a)pyrene	0 lbs/day	0 lbs/day
	3,4-Benzofluoranthene	0 lbs/day	0 lbs/day
	Benzo(k)fluoranthene	0 lbs/day	0 lbs/day
	Chrysene	0 lbs/day	0 lbs/day
	Acenaphthylene	0 lbs/day	0 lbs/day
	Anthracene	0 lbs/day	0 lbs/day
	Fluorene	0 lbs/day	0 lbs/day
	Phenanthrene	0 lbs/day	0 lbs/day
	Pyrene	0 lbs/day	0 lbs/day
	Tetrachloroethylene	0 lbs/day	0 lbs/day
	Toluene	0 lbs/day	0 lbs/day
	Trichloroethylene	0 lbs/day	0 lbs/day
	Vinyl Chloride	0 lbs/day	0 lbs/day
	pH	5.9 SU (min)	9.0 SU
201	Biochemical Oxygen Demand	91.3 lbs/day 3.45 mg/l	489 lbs/day 17 mg/l
	Chemical Oxygen Demand	1808 lbs/day 69.7 mg/l	9787 lbs/day 368 mg/l
	Total Suspended Solids	269 lbs/day 10.2 mg/l	889 lbs/day 33 mg/l
	Total Copper	0.35 lbs/day 0.014 mg/l	1.81 lbs/day 0.08 mg/l

Outfall	**Parameter**	**Average of Daily Avg**	**Maximum of Daily Max**
201 cont.	Total Lead	0.029 lbs/day 0.0005 mg/l	0.66 lbs/day 0.02 mg/l
	Total Nickel	0.81 lbs/day 0.031 mg/l	6.75 lbs/day 0.35 mg/l
	Total Titanium	0.11 lbs/day 0.004 mg/l	0.62 lbs/day 0.02 mg/l
	Total Residual Chlorine	0.46 lbs/day 0.016 mg/l	1.38 lbs/day 0.05 mg/l
	pH	6.4 SU (min)	8.8 SU
002	Total Organic Carbon	N/A	40 mg/l
	Oil and Grease	N/A	4 mg/l
	1,2-Dichloroethane	N/A	0.3 mg/l
	Total Purgeable Hydrocarbons	0.005 mg/l	0.3 mg/l
	pH	7.0 SU (min)	8.6 mg/l
003	Total Organic Carbon	N/A	27 mg/l
	Oil and Grease	N/A	6.0 mg/l
	1,2-Dichloroethane	N/A	0 mg/l
	Total Purgeable Hydrocarbons	0 mg/l	0.1 mg/l
	pH	6.9 SU (min)	8.8 mg/l
004	Total Organic Carbon	N/A	28 mg/l
	Oil and Grease	N/A	5 mg/l
	1,2-Dichloroethane	N/A	0.1 mg/l
	Total Purgeable Hydrocarbons	0.005 mg/l	0.1 mg/l
	pH	7.0 SU (min)	8.4 SU
005	Total Organic Carbon	N/A	28 mg/l
	Oil and Grease	N/A	6.0 mg/l
	1,2-Dichloroethane	N/A	0.1 mg/l
	Total Purgeable Hydrocarbons	0 mg/l	0.1 mg/l
	pH	6.9 SU (min)	8.9 SU
006	Total Organic Carbon	N/A	31 mg/l
	Oil and Grease	N/A	6 mg/l
	pH	6.3 SU (min)	9.5 SU
007	Total Organic Carbon	N/A	37 mg/l
	Oil and Grease	N/A	5.0 mg/l
	pH	6.9 SU (min)	9.0 SU
008	Total Organic Carbon	N/A	28 mg/l
	Oil and Grease	N/A	7.0 mg/l
	pH	6.1 SU (min)	8.9 SU

Outfall	**Parameter**	**Average of Daily Avg**	**Maximum of Daily Max**
009	Total Organic Carbon	N/A	16 mg/l
	Oil and Grease	N/A	6.0 mg/l
	pH	7.2 SU (min)	8.9 SU
010	Total Organic Carbon	N/A	24 mg/l
	Oil and Grease	N/A	4.0 mg/l
	pH	6.6 SU (min)	9.5 SU
011	Total Organic Carbon	N/A	17 mg/l
	Oil and Grease	N/A	5.0 mg/l
	pH	6.8 SU (min)	8.8 SU
012	Total Organic Carbon	N/A	No Discharge
	Oil and Grease	N/A	No Discharge
	pH	No Discharge	No Discharge

D. Effluent Limitation Exceedances			
Outfall	**Parameter**	**Months of Daily Avg**	**Months of Daily Max**
001	CBOD-5	1	1
	Total Mercury	0	1
	COD	0	1
	Total Zinc	0	1
	2,3,7,8-TCDD Equivalents	1	1
101	1,2-Dichloroethane	0	1
201	BOD-5	0	1
006	pH	0	1
010	pH	0	1

The limited number of effluent limitation exceedances noted above does not require any additional changes to the draft permit.

VII. PROPOSED EFFLUENT LIMITATIONS

Final effluent limitations are established in the draft permit as follows:

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
001	Flow	9.7 MGD	15.1 MGD
	Temperature (°F)	N/A	95 ^{0}F
	Carbonaceous Biochemical Oxygen Demand (5-day)	1102 14 mg/l	2727 34 mg/l
	Chemical Oxygen Demand	9000 200 mg/l	16000 300 mg/l
	Total Suspended Solids	3110 40 mg/l	6476 80 mg/l
	Ammonia (as Nitrogen)	243 3.0 mg/l	405 5.0 mg/l
	Hexavalent Chromium	3.7 Report (mg/l)	7.3 Report (mg/l)
	Total Chromium	3.7 Report (mg/l)	7.3 Report (mg/l)
	Total Copper	1.47 Report (mg/l)	3.11 Report (mg/l)
	Total Lead	6.5 Report (mg/l)	16.0 Report (mg/l)
	Total Mercury	0.03 Report (mg/l)	0.06 Report (mg/l)
	Oil and Grease	222 N/A	332 15 mg/l
	Total Organic Carbon	5939	8484
	Total Zinc	2.8 Report (mg/l)	5.5 Report (mg/l)
	Benzene	1.05 Report (mg/l)	3.85 Report (mg/l)
	1,2-Dichloroethane	1.92 Report (mg/l)	5.97 Report (mg/l)
	Phenol	0.42 Report (mg/l)	0.74 Report (mg/l)
	Toluene	0.74 Report (mg/l)	2.26 Report (mg/l)
	Trichloroethylene	0.59 Report (mg/l)	1.53 Report (mg/l)
	Vinyl Chloride	2.94 Report (mg/l)	7.58 Report (mg/l)
	Dissolved Oxygen	2.0 mg/l (min)	N/A
	Fecal Coliform (CFU or MPN/100 mls) [1]	(140)	N/A
	Enterococci (CFU or MPN/100 mls) [1]	(Report)	N/A
	Enterococci (CFU or MPN/100 mls) [2]	(14)	N/A

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
001 cont.	2,3,7,8-TCDD Equivalents [1]	352µg/day 9.57 ppq	744 µg/day 20.2 ppq
	2,3,7,8-TCDD Equivalents [2]	80.5µg/day 2.19 ppq	170 µg/day 4.63 ppq
	7-Day Chronic WET *Mysidopsis bahia*	≥ 10% NOEC	≥ 10% NOEC
	7-Day Chronic WET *Menidia beryllina*	≥ 10% NOEC	≥ 10% NOEC
	24-hour Acute WET *Mysidopsis bahia*	≥100% LC50	≥100% LC50
	pH	6.0 SU (min)	9.0 SU
101	Flow	4.4 MGD	6.0 MGD
	Biochemical Oxygen Demand	731 Report (mg/l)	1959 Report (mg/l)
	Total Suspended Solids	1149 Report (mg/l)	3735 Report (mg/l)
	Chemical Oxygen Demand	6676 Report (mg/l)	10,014 Report (mg/l)
	Benzene	Report Report (mg/l)	Report Report (mg/l)
	Carbon Tetrachloride	Report	Report
	Chlorobenzene	Report	Report
	Chloroform	Report	Report
	1,1-Dichloroethane	Report	Report
	1,2-Dichloroethane	Report Report (mg/l)	Report Report (mg/l)
	Methyl Chloride	Report	Report
	Methylene Chloride	Report	Report
	Phenol	Report Report (mg/l)	Report Report (mg/l)
	Tetrachloroethylene	Report	Report
	1,1,1-Trichloroethane	Report	Report
	Acenaphthene	Report	Report
	Acenaphthylene	Report	Report
	Acrylonitrile	Report	Report
	Anthracene	Report	Report
	Benzo(a)anthracene	Report	Report
	Benzo(a)pyrene	Report	Report
	3,4-Benzofluoranthene	Report	Report
	Benzo(k)fluoranthene	Report	Report
	Bis(2-ethylhexyl) phthalate	Report	Report
	Chloroethane	Report	Report
	2-Chlorophenol	Report	Report
	Chrysene	Report	Report
	1,2-Dichlorobenzene	Report	Report

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
101 cont.	1,3-Dichlorobenzene	Report	Report
	1,4-Dichlorobenzene	Report	Report
	1,1-Dichloroethylene	Report	Report
	1,2-trans-Dichloroethylene	Report	Report
	2,4-Dichlorophenol	Report	Report
	1,2-Dichloropropane	Report	Report
	1,3-Dichloropropylene	Report	Report
	Diethyl phthalate	Report	Report
	2,4-Dimethylphenol	Report	Report
	Dimethyl phthalate	Report	Report
	Di-n-butyl phthalate	Report	Report
	4,6-Dinitro-o-cresol	Report	Report
	2,4-Dinitrophenol	Report	Report
	2,4-Dinitrotoluene	Report	Report
	2,6-Dinitrotoluene	Report	Report
	Ethylbenzene	Report	Report
	Fluoranthene	Report	Report
	Fluorene	Report	Report
	Hexachlorobenzene	Report	Report
	Hexachlorobutadiene	Report	Report
	Hexachloroethane	Report	Report
	Naphthalene	Report	Report
	Nitrobenzene	Report	Report
	2-Nitrophenol	Report	Report
	4-Nitrophenol	Report	Report
	Phenanthrene	Report	Report
	Pyrene	Report	Report
	1,2,4-Trichlorobenzene	Report	Report
	1,1,2-Trichloroethane	Report	Report
	Toluene	Report	Report
	Trichloroethylene	Report	Report
	Vinyl Chloride	Report	Report
	pH	6.0 SU (min)	9.0 SU
201	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand	237 Report (mg/l)	474 Report (mg/l)
	Chemical Oxygen Demand	Report Report (mg/l)	Report Report (mg/l)
	Total Suspended Solids	1729 Report (mg/l)	3006 Report (mg/l)
	Total Copper	Report Report (mg/l)	Report Report (mg/l)
	Total Lead	6.5 Report (mg/l)	16.0 Report (mg/l)
	Total Nickel	6.89 Report (mg/l)	14.60 Report (mg/l)

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
201 cont.	Total Titanium	Report Report (mg/l)	Report Report (mg/l)
	Total Residual Chlorine	26.3 Report (mg/l)	44.33 Report (mg/l)
	Benzene	Report Report (mg/l)	Report Report (mg/l)
	Carbon Tetrachloride	Report	Report
	Chlorobenzene	Report	Report
	Chloroform	Report	Report
	1,1-Dichloroethane	Report	Report
	1,2-Dichloroethane	Report Report (mg/l)	Report Report (mg/l)
	Methyl Chloride	Report	Report
	Methylene Chloride	Report	Report
	Phenol	Report Report (mg/l)	Report Report (mg/l)
	Tetrachloroethylene	Report	Report
	1,1,1-Trichloroethane	Report	Report
	Acenaphthene	Report	Report
	Acenaphthylene	Report	Report
	Acrylonitrile	Report	Report
	Anthracene	Report	Report
	Benzo(a)anthracene	Report	Report
	Benzo(a)pyrene	Report	Report
	3,4-Benzofluoranthene	Report	Report
	Benzo(k)fluoranthene	Report	Report
	Bis(2-ethylhexyl) phthalate	Report	Report
	Chloroethane	Report	Report
	2-Chlorophenol	Report	Report
	Chrysene	Report	Report
	1,2-Dichlorobenzene	Report	Report
	1,3-Dichlorobenzene	Report	Report
	1,4-Dichlorobenzene	Report	Report
	1,1-Dichloroethylene	Report	Report
	1,2-trans-Dichloroethylene	Report	Report
	2,4-Dichlorophenol	Report	Report
	1,2-Dichloropropane	Report	Report
	1,3-Dichloropropylene	Report	Report
	Diethyl phthalate	Report	Report
	2,4-Dimethylphenol	Report	Report
	Dimethyl phthalate	Report	Report
	Di-n-butyl phthalate	Report	Report
	4,6-Dinitro-o-cresol	Report	Report
	2,4-Dinitrophenol	Report	Report
	2,4-Dinitrotoluene	Report	Report
	2,6-Dinitrotoluene	Report	Report

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
201 cont.	Ethylbenzene	Report	Report
	Fluoranthene	Report	Report
	Fluorene	Report	Report
	Hexachlorobenzene	Report	Report
	Hexachlorobutadiene	Report	Report
	Hexachloroethane	Report	Report
	Naphthalene	Report	Report
	Nitrobenzene	Report	Report
	2-Nitrophenol	Report	Report
	4-Nitrophenol	Report	Report
	Phenanthrene	Report	Report
	Pyrene	Report	Report
	1,2,4-Trichlorobenzene	Report	Report
	1,1,2-Trichloroethane	Report	Report
	Toluene	Report	Report
	Trichloroethylene	Report	Report
	Vinyl Chloride	Report	Report
	pH	6.0 SU (min)	9.0 SU
SUM	Benzene	0.97	3.55
	Carbon Tetrachloride	0.47	0.99
	Chlorobenzene	0.39	0.73
	Chloroform	1.89	4.99
	1,1-Dichloroethane	0.57	1.54
	1,2-Dichloroethane	1.78	5.51
	Methyl Chloride	2.25	4.96
	Methylene Chloride	1.04	2.32
	Phenol	0.39	0.68
	Tetrachloroethylene	0.57	1.46
	1,1,1-Trichloroethane	0.55	1.41
	Acenaphthene	0.57	1.54
	Acenaphthylene	0.57	1.54
	Acrylonitrile	2.51	6.32
	Anthracene	0.57	1.54
	Benzo(a)anthracene	0.57	1.54
	Benzo(a)pyrene	0.60	1.59
	3,4-Benzofluoranthene	0.60	1.59
	Benzo(k)fluoranthene	0.57	1.54
	Bis(2-ethylhexyl) phthalate	2.69	7.29
	Chloroethane	2.72	7.00
	2-Chlorophenol	0.81	2.56
	Chrysene	0.57	1.54
	1,2-Dichlorobenzene	2.01	4.26
	1,3-Dichlorobenzene	0.81	1.15
	1,4-Dichlorobenzene	0.39	0.73

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
SUM	1,1-Dichloroethylene	0.42	0.65
	1,2-trans-Dichloroethylene	0.55	1.41
	2,4-Dichlorophenol	1.02	2.93
	1,2-Dichloropropane	4.00	6.01
	1,3-Dichloropropylene	0.75	1.15
	Diethyl phthalate	2.12	5.30
	2,4-Dimethylphenol	0.47	0.94
	Dimethyl phthalate	0.50	1.23
	Di-n-butyl phthalate	0.71	1.49
	4,6-Dinitro-o-cresol	2.04	7.24
	2,4-Dinitrophenol	1.85	3.21
	2,4-Dinitrotoluene	2.95	7.44
	2,6-Dinitrotoluene	6.66	16.74
	Ethylbenzene	0.84	2.82
	Fluoranthene	0.65	1.78
	Fluorene	0.57	1.54
	Hexachlorobenzene	0.010	0.021
	Hexachlorobutadiene	0.52	1.28
	Hexachloroethane	0.55	1.41
	Naphthalene	0.57	1.54
	Nitrobenzene	0.71	1.78
	2-Nitrophenol	1.07	1.80
	4-Nitrophenol	1.88	3.24
	Phenanthrene	0.53	1.12
	Pyrene	0.65	1.75
	1,2,4-Trichlorobenzene	1.78	3.66
	1,1,2-Trichloroethane	0.55	1.41
	Toluene	0.68	2.09
	Trichloroethylene	0.55	1.41
	Vinyl Chloride	1.67	3.33
901	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	Report mg/l
	pH	6.0 SU (min)	9.0 SU
002-005	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	55 mg/l
	Oil and Grease	N/A	15 mg/l
	1,2-Dichloroethane	N/A	0.4 mg/l
	Total Purgeable Hydrocarbons	Report (mg/l)	Report (mg/l)
	pH	6.0 SU (min)	9.0 SU
006-013	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	55 mg/l
	Oil and Grease	N/A	15 mg/l
	pH	6.0 SU (min)	9.0 SU

[1] Effective beginning upon date of permit issuance and lasting for three (3) years.
[2] Effective beginning three (3) years after permit issuance and lasting through permit expiration.

VIII. SUMMARY OF CHANGES FROM APPLICATION

A. The applicant requested the following changes in their amendment request that the Executive Director did not grant.

1. Increase the temperature limit at Outfall 001 from 95 ^{0}F to 100 ^{0}F. This effluent limitation was not increased because sufficient justification has not been provided in accordance with EPA anti-backsliding regulations [40 CFR Part 122.44(l)]. It is noted that there have not been any exceedances of the existing effluent limitation during the current permit term and there have been no proposed modifications to the facility that would be classified as material and substantial alterations to the permitted facility.

2. Reduce Lavaca Bay monitoring frequency from quarterly each year to quarterly triannually based on 15 years of no impacts. The applicant has withdrawn this request.

B. The following changes have been made from the application that makes the draft permit more stringent.

1. The proposed permit includes more stringent effluent limitations for 2,3,7,8-TCDD Equivalents (Dioxin/Furans) at Outfall 001. The calculated water quality-based effluent limitations (based on current criteria and critical conditions) for 2,3,7,8-TCDD Equivalents (Dioxin/Furans) at Outfall 001 are more stringent than the current effluent limitations. A three-year compliance period to meet the more stringent effluent limitations has been included in the proposed permit.

2. Added monitoring/reporting requirements for flow at Outfalls 002 – 012 as required by EPA Region VI.

3. Reduced the daily average effluent limitation for total residual chlorine at Outfall 201 based on technology-based effluent limitations calculated based on best professional judgement (BPJ).

4. The effluent limitations for fecal coliform bacteria at Outfall 001 have been replaced with effluent limitations for *Enterococci* bacteria based on the requirements of the current Texas Surface Water Quality Standards (30 TAC Chapter 307).

5. The proposed permit includes more stringent effluent limitations for hexachlorobenzene at Outfall SUM. The calculated water quality-based effluent limitations (based on current criteria and critical conditions) for hexachlorobenzene at Outfall SUM are more stringent than the current effluent limitations at internal Outfall 101.

See the next section for additional changes to the existing permit.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

A. The applicant requested the following changes in their amendment request that the Executive Director has recommended granting.

1. Establish minimum analytical levels (MALs) for oil & grease, biochemical oxygen demand (5-day), and free available chlorine. The requested MALs for these parameters are consistent with the level of analytical detection typically observed for these parameters and are also at levels that will demonstrate compliance with the respective effluent limitations. The applicant included titanium in its request in Question No. 12 of the application's Technical Report but did not included any additional discussion related to titanium in Attachment H where more detailed information was provided for the other parameters. The MAL for titanium included in the draft permit is derived from the *Procedures to Implement the Texas Surface Water Quality Standards*, Texas Commission on Environmental Quality, January 2003.

2. Increase the effluent limitations for total copper at Outfall 001. The effluent limitations were increased in accordance with EPA anti-backsliding regulations [40 CFR Part 122.44(l)]. The applicant asserts that past and pending process changes include new and modified maufacturing processes that affect the copper content of the wastewater discharged via Outfall 001. Even though the applicant has historically maintain compliance with the existing mass effluent limitations, the process changes have increased (and are projected to continue increasing) actual copper discharge quantities. Recent trends in copper measurements indicate that the current mass effluent limitations will soon be infeasible to meet on a consistent basis.

3. Increase the effluent limitations for chloroform at Outfall SUM (formerly applied at internal Outfall 101). The effluent limitations were increased in accordance with EPA anti-backsliding regulations [40 CFR Part 122.44(l)]. Recent testing performed demonstrates that the cooling tower blowdown wastestream is a contributing source for chloroform that has not been previously recognised and not considered when existing effluent limitations were established. The submittal of this information is new information not previously available for review and consideration.

4. Create a summation outfall (designated as Outfall SUM) to regulate the toxic pollutants (acenaphthene; acenaphthylene; acrylonitrile; anthracene; benzene; benzo(a)anthracene; benzo(a)pyrene; 3,4-benzofluoranthene; benzo(k)fluoranthene; bis(2-ethylhexyl) phthalate; carbon tetrachloride; chlorobenzene; chloroethane; chloroform; 2-chlorophenol; chrysene; 1,2-dichlorobenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethylene; 1,2-trans-dichloroethylene; 2,4-dichlorophenol; 1,2-dichloropropane; 1,3-dichloropropylene; diethyl phthalate; 2,4-dimethylphenol; dimethyl phthalate; di-n-butyl phthalate; 4,6-dinitro-o-cresol; 2,4-dinitrophenol; 2,4-dinitrotoluene; 2,6-dinitrotoluene; ethylbenzene; fluoranthene; fluorene; hexachlorobenzene; hexachlorobutadiene; hexachloroethane; methyl chloride; methylene chloride; naphthalene; nitrobenzene; 2-nitrophenol; 4-nitrophenol; phenanthrene; phenol; pyrene; tetrachloroethylene; toluene; 1,2,4-trichlorobenzene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; and vinyl chloride) required by EPA categorical guidelines in 40 CFR Part 414 Subpart I. Due to the reuse of some process wastewaters as cooling tower make-up water (prior to discharge via internal Outfall 101), the summation outfall will make sure that all wastewaters subject to the guidelines are monitored and the guideline effluent limitations are applied accordingly. The summation outfall regulates the sum of the effluents monitored via internal Outfalls 101 and 201. The limitations for these parameters at Outfall 101 in the current permit have been replaced with report requirements at Outfalls 101 & 201, and limitations at Outfall SUM.

5. Authorize the discharge of non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water on an intermittent and flow variable basis via Outfall 013.

6. Authorize the discharge of potable water and air conditioner unit condensate on an intermittent and flow variable basis via Outfalls 001, 101, 201, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 012.

7. Authorize the discharge of fire water via Outfalls 001, 101, and 201;

8. Authorize the reuse of miscellaneous wastewaters (including but not limited to contact and non-contact storm water; CFB unit wastewater; cooling tower blowdown; pellet extruder water; and air separation plant condensate) for cooling water make-up water and dust suppression. Other Requirement Provision No. 19 was modified for this purpose.

B. The following additional changes have been made to the draft permit.

1. The permit includes the most current standard language for permit requirements (MAL, biomonitoring, & boiler plate).

2. The effluent limitations for Outfall 101 were reorganized on the effluent pages based on specified monitoring frequencies.

3. Modified Other Requirement Provision No. 13 to incorporate reference the new methodology for determining the Channel Marker 22 bay depth measurement.

4. Added Other Requirement Provision No. 25 to clarify the TPDES permit's regulatory role with respect to the acceptance and discharge of wastes received from third parties.

5. No changes were necessary to incorporate the new Specialty PVC (SPVC) process wastewaters. The existing listing of "treated process wastewater" at Outfall 101 is inclusive of this new wastestream.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment to Permit No. WQ0002436000 to establish minimum analytical levels for oil & grease, biochemical oxygen demand (5-day), free available chlorine, and titanium; reduce Lavaca Bay monitoring from quarterly each year to quarterly triannually based on 15 years of no impacts; increase the temperature limit at Outfall 001 from 95 ^{0}F to 100 ^{0}F; authorize the discharge of non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash

water on an intermittent and flow variable basis via Outfall 013; increase the effluent limitations for total copper at Outfall 001; increase the effluent limitations for chloroform at Outfall 101 (proposed Outfall SUM); authorize the discharge of fire water via Outfalls 001, 101, and 201; create a summation outfall (designated as Outfall SUM) to regulate the effluents monitored via internal Outfalls 101 and 201; and authorize the discharge of potable water and air conditioner unit condensate on an intermittent and flow variable basis via Outfalls 001, 101, 201, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 012. The current permit authorizes the discharge of remediated groundwater and treated previously monitored effluents (via Outfalls 101 and 201) at a daily average flow not to exceed 9,700,000 gallons per day via Outfall 001; treated process wastewater, equipment/facility washdown, storm water, and utility wastewaters at a daily average flow not to exceed 4,400,000 gallons per day via Outfall 101; treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters, equipment/facility washdown, storm water, and water treatment wastewaters on a continous and flow variable basis via Outfall 201; non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 002, 003, 004, and 005; and non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 006, 007, 008, 009, 010, 011, and 012.

The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office (GLO) and has determined that the action is consistent with the applicable CMP goals and policies.

B. WATER QUALITY SUMMARY

The discharge route is via Outfall 001 and 011 directly to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay, Segment No. 2454 of the Bays and Estuaries. The unclassified receiving waters have no significant aquatic life use for the unnamed ditches and high aquatic life use for Cox Lake. The designated uses for Segments 2453 and 2454 are exceptional aquatic life use, contact recreation, and oyster waters. Effluent limitations and/or conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit will be found at Section X.D. of this fact sheet.

In accordance with §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards, an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Cox Lake, which has been identified as having high aquatic life use, or in Cox Bay or Lavaca Bay/Chocolate Bay which have been identified as having exceptional aquatic life use. The current Texas Surface Water Quality Standards should be used to determine copper limits for this facility. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

A priority watershed of critical concern has been identified in Calhoun County. Therefore, the whooping crane, *Grus americana* (Linnaeus), an endangered aquatic dependent species, has been determined to occur in the watershed of Calhoun County. To make this determination for Texas Pollutant Discharge Elimination System (TPDES) permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the United States Fish and Wildlife Service's (USFWS) biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The presence of the endangered Whooping Crane requires EPA review and, if appropriate, consultation with USFWS. The piping plover, *Charadrius melodus* Ord, can also occur in Calhoun County, but the county is north of Copano Bay and not a watershed of high priority per Appendix A of the biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of the piping plover, *Charardrius melodus* Ord.

Segments 2453 and 2454 are currently listed on the State's inventory of impaired and threatened waters (the 2010 Clean Water Act Section 303(d) list). The listing for Segment 2453 is specifically for elevated bacteria levels (oyster waters) in the North-northeastern portion of the bay near Point Comfort and in the Chocolate Bay area (AUs 2453_02, 2453_03). Segment 2454 is listed for elevated bacteria levels (oyster waters) in the North end of the bay near Cox Creek (AU 2454_01). The issuance of this permit is not anticipated to cause any additional adverse impact to the receiving waters with respect to the listed impairments. The historical monitoring data for fecal coliform bacteria confirms only minimal levels (well below the segment standards) of fecal coliform bacteria in the effluent. The existing permit has a daily average effluent limitation for fecal coliform bacteria which is replaced with a daily average effluent limitation for *Enterococci* bacteria based on current segment criteria.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

Regulations promulgated in Title 40 of the Code of Federal Regulations (40 CFR) require technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, and/or on best professional judgment (BPJ) in the absence of guidelines.

The proposed draft permit authorizes the discharge of remediated groundwater and treated previously monitored effluents (via Outfalls 101 and 201) at a daily average flow not to exceed 9,700,000 gallons per day via Outfall 001; treated process wastewater, equipment/facility washdown, storm water, and utility wastewaters at a daily average flow not to exceed 4,400,000 gallons per day via Outfall 101; treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters, equipment/facility washdown, storm water, and water treatment wastewaters on a continous and flow variable basis via Outfall 201; non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 002, 003, 004, and 005; and non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate on an intermittent and flow variable basis via Outfalls 006, 007, 008, 009, 010, 011, and 012; and non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water on an intermittent and flow variable basis via Outfall 013.

The discharge of process wastewater via Outfall 101 from this facility is subject to federal effluent limitation guidelines at 40 CFR 414. A new source determination was performed and the discharge of process wastewaters subject to the 40 CFR 414 categorical guidelines is not a new source as defined at 40 CFR §122.2. Therefore new source performance standards (NSPS) are not required for this discharge.

The discharge of remediated groundwater, potable water, and air conditioner unit condensate via Outfall 001; equipment/facility washdown, storm water, utility wastewaters, potable water, and air conditioner unit condensate via Outfall 101; treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters, equipment/facility washdown, storm water, water treatment wastewaters, potable water, and air conditioner unit condensate on a continous and flow variable basis via Outfall 201; non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water via Outfalls 002, 003, 004, and 005; and non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate via Outfalls 006, 007, 008, 009, 010, 011, and 012; and non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water on an intermittent and flow variable basis via Outfall 013 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

Raw water drawn from Lake Texana is pumped and piped by the Lavaca-Navidad River Authority (LNRA) to two Formosa Plastics Corporation - Texas (FPC-TX) raw water ponds. Clarified and filtered raw water is referred to as Industrial Water and usually used for such purposes as washdown, cooling tower make-up, and other operations where water purity is not critical. Industrial water that is carbon filtered is referred to as Ultra Pure Water and used where water comes in direct contact with the product and for cogeneration (steam) operations.

Outfall 001

Boiler blowdown is either returned to a raw water pond or used as make-up to an on-site cooling tower. Potable water supplied by LNRA is used for sanitary purposes with the resulting wastewater either routed to the Authority for treatment and discharge (warehouse, maintenance shops, administrative buildings, and Regulatory Affairs buildings) or to the on-site sanitary treatment unit thence to the cooling tower (CT) M/U for reuse along with PVC water that has been biologically treated (all other areas).

Except for VCM and IEM, condensate generated from a process typically is returned to the Cooling Tower associated with the process. VCM condensate is routed to the PVC unit as a source of hot water in the Hot Water Area and IEM condensate may be routed to the Ultra Pure water treatment system in lieu of the Chlor/Alkali Cooling Tower.

Wastewaters routed to the biological treatment unit of the Combined Wastewater Treatment Plant (CWTP) enter one of the twin pretreatment units consisting of a degasser, fans, equalization, pH adjustment, and dissolved air flotation. The pretreated wastewaters move on to either of the twin trains consisting of a bioreactor, clarifier, and fluid bed reactors. The wastewaters recombine for "tertiary treatment," (pH adjustment, clarification, and bi-media filtration), thence discharge via internal Outfall 101.

Unless noted otherwise, cooling tower blowdown (CTBD) receives physical treatment at the Combined Wastewater Treatment Plant (CWTP). Wastewaters routed to the IEM/DEMIN treatment unit of the CWTP and wastewaters routed to the CTBD of the CWTP are equalized, neutralized accordingly to facilitate precipitation of solids, clarified, then discharged via internal Outfall 201.

Internal Outfall 101 effluent combines with internal Outfall 201 effluent and remediated groundwater for discharge via Outfall 001.

Contact storm water is routed to the biological treatment unit of the CWTP. Noncontact storm water is routed separately, tested and, where test results indicate it may be discharged via the respective storm water outfall. Otherwise the noncontact storm water would be collected and likely pumped for transport to the CWTP, biological treatment unit.

The following wastewaters are recycled and reused for cooling water make-up purposes: contact and non-contact storm water; CFB unit wastewaters; pellet extruder water; and air separation plant condensate. Cooling tower blowdown may be supplied to ALCOA to be used for dust suppression of the mud pit areas provided all required authorizations are obtained.

Outfall 002 serves the non-process areas in and around the PVC and VCM units. No treatment is provided.

Outfall 003 serves the non-process areas in and around the Utilities Block, including the west end of the Vinyl Plant. No treatment is provided.

Outfall 004 serves the non-process areas in and around the west end of the out-of-service wastewater treatment plant and undeveloped areas between said plant and the VCM/PVC process areas. No treatment is provided.

Outfall 005 serves the non-process areas in and around the undeveloped areas east of the out-of-service wastewater treatment area. No treatment is provided.

Outfall 006 serves the non-process areas on the south end of the CWTP and the south side of FPC-TX Expansion Complex. No treatment is provided.

Outfall 007 serves the areas outside the CWTP process area and outside the truck loading station. No treatment is provided.

Outfall 008 serves the non-process areas between the north side of East/West Road 28 and Road 40, north of the Olefins, Utility (DEMIN), PP-II, and EG areas. No treatment is provided. Should flow be excessive, it may overflow into Outfall 009.

Outfall 009 serves the non-process areas north of the area drained by Outfall 008, i.e., Olefins Offsite, Utility Raw Water Treating, Warehouse, Maintenance Shops, Olefins Flare, PE-II, and the Raw Water Pond. No treatment is provided.

Outfall 010 serves primarily the Marine Tank Farm. No treatment is provided.

Outfall 011 serves primarily the Dock Tank Farm. No treatment is provided.

Outfall 012 serves the non-process areas along either side of "contractor's row" and extending north to the northern side of the FPC-TX rail car storage area. This outfall has not yet been constructed. No treatment is provided.

Outfall 013 serves the Pet/Coke Coal Fired Energy Generating Facility (CFB Plant). No treatment is provided.

2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

Technology-based effluent limitations for flow; temperature; chemical oxygen demand; total suspended solids; hexavalent chromium; total chromium; oil and grease; total organic carbon; benzene; 1,2-dichloroethane; phenol; toluene; trichloroethylene; vinyl chloride; and pH at Outfall 001 are continued from the existing permit and are based on BPJ.

Technology-based effluent limitations for biochemical oxygen demand; total suspended solids; and pH at Outfall 101 are continued from the existing permit and are based on EPA categorical guidelines (40 CFR Part 414).

Technology-based effluent limitations for benzene; carbon tetrachloride; chlorobenzene; 1,1-dichloroethane; 1,2-dichloroethane; methyl chloride; methylene chloride; phenol; tetrachloroethylene; 1,1,1-trichloroethane; acenaphthene; acenaphthylene; acrylonitrile; anthracene; benzo(a)anthracene; benzo(a)pyrene; 3,4-benzofluoranthene; benzo(k)fluoranthene; bis(2-ethylhexyl) phthalate; chloroethane; 2-chlorophenol; chrysene; 1,2-dichlorobenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; 1,1-dichloroethylene; 1,2-trans-dichloroethylene; 2,4-dichlorophenol; 1,2-dichloropropane; 1,3-dichloropropylene; diethyl phthalate; 2,4-dimethylphenol; dimethyl phthalate; di-n-butyl phthalate; 4,6-dinitro-o-cresol; 2,4-dinitrophenol; 2,4-dinitrotoluene; 2,6-dinitrotoluene; ethylbenzene; fluoranthene; fluorene; hexachlorobutadiene; hexachloroethane; naphthalene; nitrobenzene; 2-nitrophenol; 4-nitrophenol; pyrene; 1,2,4-trichlorobenzene; 1,1,2-trichloroethane; toluene; trichloroethylene; and vinyl chloride at Outfall SUM are continued from and transferred from Outfall 101 of the existing permit and are based on EPA categorical guidelines (40 CFR Part 414).

Technology-based effluent limitations for chloroform at Outfall SUM are calculated based on applicable EPA categorical guidelines (40 CFR Part 414) for process wastewaters and BPJ allocations for cooling tower blowdown sources.

Technology-based effluent limitations for flow and chemical oxygen demand at Outfall 101 are continued from the existing permit and are based on BPJ.

Technology-based effluent limitations for flow; biochemical oxygen demand; chemical oxygen demand; total suspended solids; total copper; total lead; total titanium; total residual chlorine; pH at Outfall 201 are continued from the existing permit and are based on BPJ.

Technology-based effluent limitations for total residual chlorine at Outfall 201 are based on BPJ and are equivalent to and/or more stringent than the existing effluent limitations.

Technology-based effluent limitations for flow; total organic carbon; oil and grease; 1,2-dichloroethane; total purgeable hydrocarbons; and pH at Outfalls 002 - 005 are continued from the existing permit and are based on BPJ.

Technology-based effluent limitations for flow; total organic carbon; oil and grease; and pH at Outfalls 006 - 012 are continued from the existing permit and are based on BPJ.

Technology-based effluent limitations for flow; total organic carbon; oil and grease; and pH at Outfall 013 are based on the continued effluent limitations from similar discharges (Outfalls 006 – 012) and are based on BPJ.

The following technology-based effluent limitations are proposed in the draft permit:

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
001	Flow	9.7 MGD	15.1 MGD
	Temperature	N/A	95 ^{0}F
	Chemical Oxygen Demand	9,000 200 mg/l	16,000 300 mg/l
	Total Suspended Solids	3,110 40 mg/l	6,476 80 mg/l
	Oil and Grease	222 N/A	332 15 mg/l
	Total Organic Carbon	5,939	8,484
	pH	6.0 SU (min)	9.0 SU
101	Flow	4.4 MGD	6.0 MGD
	Biochemical Oxygen Demand (5-day)	731 Report (mg/l)	1,959 Report (mg/l)
	Total Suspended Solids	1,149 Report (mg/l)	3,735 Report (mg/l)
	Chemical Oxygen Demand	6,676 Report (mg/l)	10,014 Report (mg/l)
	Benzene	Report Report (mg/l)	Report Report (mg/l)
	Carbon Tetrachloride	Report	Report
	Chlorobenzene	Report	Report
	Chloroform	Report	Report
	1,1-Dichloroethane	Report	Report
	1,2-Dichloroethane	Report Report (mg/l)	Report Report (mg/l)
	Methyl Chloride	Report	Report
	Methylene Chloride	Report	Report

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
101 cont.	Phenol	Report Report (mg/l)	Report Report (mg/l)
	Tetrachloroethylene	Report	Report
	1,1,1-Trichloroethane	Report	Report
	Acenaphthene	Report	Report
	Acenaphthylene	Report	Report
	Acrylonitrile	Report	Report
	Anthracene	Report	Report
	Benzo(a)anthracene	Report	Report
	Benzo(a)pyrene	Report	Report
	3,4-Benzofluoranthene	Report	Report
	Benzo(k)fluoranthene	Report	Report
	Bis(2-ethylhexyl) phthalate	Report	Report
	Chloroethane	Report	Report
	2-Chlorophenol	Report	Report
	Chrysene	Report	Report
	1,2-Dichlorobenzene	Report	Report
	1,3-Dichlorobenzene	Report	Report
	1,4-Dichlorobenzene	Report	Report
	1,1-Dichloroethylene	Report	Report
	1,2-trans-Dichloroethylene	Report	Report
	2,4-Dichlorophenol	Report	Report
	1,2-Dichloropropane	Report	Report
	1,3-Dichloropropylene	Report	Report
	Diethyl phthalate	Report	Report
	2,4-Dimethylphenol	Report	Report
	Dimethyl phthalate	Report	Report
	Di-n-butyl phthalate	Report	Report
	4,6-Dinitro-o-cresol	Report	Report
	2,4-Dinitrophenol	Report	Report
	2,4-Dinitrotoluene	Report	Report
	2,6-Dinitrotoluene	Report	Report
	Ethylbenzene	Report	Report
	Fluoranthene	Report	Report
	Fluorene	Report	Report
	Hexachlorobutadiene	Report	Report
	Hexachloroethane	Report	Report
	Naphthalene	Report	Report
	Nitrobenzene	Report	Report
	2-Nitrophenol	Report	Report
	4-Nitrophenol	Report	Report
	Pyrene	Report	Report
	1,2,4-Trichlorobenzene	Report	Report
	1,1,2-Trichloroethane	Report	Report
	Toluene	Report	Report

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
101 cont.	Trichloroethylene	Report	Report
	Vinyl Chloride	Report	Report
	pH	6.0 SU (min)	9.0 SU
201	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand	237 Report (mg/l)	474 Report (mg/l)
	Chemical Oxygen Demand	Report Report (mg/l)	Report Report (mg/l)
	Total Suspended Solids	1,729 Report (mg/l)	3,006 Report (mg/l)
	Total Copper	Report Report (mg/l)	Report Report (mg/l)
	Total Lead	6.5 Report (mg/l)	16.0 Report (mg/l)
	Total Titanium	Report Report (mg/l)	Report Report (mg/l)
	Total Residual Chlorine	26.3 Report (mg/l)	44.33 Report (mg/l)
	Benzene	Report Report (mg/l)	Report Report (mg/l)
	Carbon Tetrachloride	Report	Report
	Chlorobenzene	Report	Report
	Chloroform	Report	Report
	1,1-Dichloroethane	Report	Report
	1,2-Dichloroethane	Report Report (mg/l)	Report Report (mg/l)
	Methyl Chloride	Report	Report
	Methylene Chloride	Report	Report
	Phenol	Report Report (mg/l)	Report Report (mg/l)
	Tetrachloroethylene	Report	Report
	1,1,1-Trichloroethane	Report	Report
	Acenaphthene	Report	Report
	Acenaphthylene	Report	Report
	Acrylonitrile	Report	Report
	Anthracene	Report	Report
	Benzo(a)anthracene	Report	Report
	Benzo(a)pyrene	Report	Report
	3,4-Benzofluoranthene	Report	Report
	Benzo(k)fluoranthene	Report	Report
	Bis(2-ethylhexyl)phthalate	Report	Report
	Chloroethane	Report	Report
	2-Chlorophenol	Report	Report
	Chrysene	Report	Report
	1,2-Dichlorobenzene	Report	Report

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
201 cont.	1,3-Dichlorobenzene	Report	Report
	1,4-Dichlorobenzene	Report	Report
	1,1-Dichloroethylene	Report	Report
	1,2-trans-Dichloroethylene	Report	Report
	2,4-Dichlorophenol	Report	Report
	1,2-Dichloropropane	Report	Report
	1,3-Dichloropropylene	Report	Report
	Diethyl phthalate	Report	Report
	2,4-Dimethylphenol	Report	Report
	Dimethyl phthalate	Report	Report
	Di-n-butyl phthalate	Report	Report
	4,6-Dinitro-o-cresol	Report	Report
	2,4-Dinitrophenol	Report	Report
	2,4-Dinitrotoluene	Report	Report
	2,6-Dinitrotoluene	Report	Report
	Ethylbenzene	Report	Report
	Fluoranthene	Report	Report
	Fluorene	Report	Report
	Hexachlorobutadiene	Report	Report
	Hexachloroethane	Report	Report
	Naphthalene	Report	Report
	Nitrobenzene	Report	Report
	2-Nitrophenol	Report	Report
	4-Nitrophenol	Report	Report
	Phenanthrene	Report	Report
	Pyrene	Report	Report
	1,2,4-Trichlorobenzene	Report	Report
	1,1,2-Trichloroethane	Report	Report
	Toluene	Report	Report
	Trichloroethylene	Report	Report
	Vinyl Chloride	Report	Report
	pH	6.0 SU (min)	9.0 SU
SUM	Benzene	0.97	3.55
	Carbon Tetrachloride	0.47	0.99
	Chlorobenzene	0.39	0.73
	Chloroform	1.89	4.99
	1,1-Dichloroethane	0.57	1.54
	1,2-Dichloroethane	1.78	5.51
	Methyl Chloride	2.25	4.96
	Methylene Chloride	1.04	2.32
	Phenol	0.39	0.68
	Tetrachloroethylene	0.57	1.46
	1,1,1-Trichloroethane	0.55	1.41
	Acenaphthene	0.57	1.54

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
SUM	Acenaphthylene	0.57	1.54
	Acrylonitrile	2.51	6.32
	Anthracene	0.57	1.54
	Benzo(a)anthracene	0.57	1.54
	Benzo(a)pyrene	0.60	1.59
	3,4-Benzofluoranthene	0.60	1.59
	Benzo(k)fluoranthene	0.57	1.54
	Bis(2-ethylhexyl) phthalate	2.69	7.29
	Chloroethane	2.72	7.00
	2-Chlorophenol	0.81	2.56
	Chrysene	0.57	1.54
	1,2-Dichlorobenzene	2.01	4.26
	1,3-Dichlorobenzene	0.81	1.15
	1,4-Dichlorobenzene	0.39	0.73
	1,1-Dichloroethylene	0.42	0.65
	1,2-trans-Dichloroethylene	0.55	1.41
	2,4-Dichlorophenol	1.02	2.93
	1,2-Dichloropropane	4.00	6.01
	1,3-Dichloropropylene	0.75	1.15
	Diethyl phthalate	2.12	5.30
	2,4-Dimethylphenol	0.47	0.94
	Dimethyl phthalate	0.50	1.23
	Di-n-butyl phthalate	0.71	1.49
	4,6-Dinitro-o-cresol	2.04	7.24
	2,4-Dinitrophenol	1.85	3.21
	2,4-Dinitrotoluene	2.95	7.44
	2,6-Dinitrotoluene	6.66	16.74
	Ethylbenzene	0.84	2.82
	Fluoranthene	0.65	1.78
	Fluorene	0.57	1.54
	Hexachlorobutadiene	0.52	1.28
	Hexachloroethane	0.55	1.41
	Naphthalene	0.57	1.54
	Nitrobenzene	0.71	1.78
	2-Nitrophenol	1.07	1.80
	4-Nitrophenol	1.88	3.24
	Phenanthrene	0.53	1.12
	Pyrene	0.65	1.75
	1,2,4-Trichlorobenzene	1.78	3.66
	1,1,2-Trichloroethane	0.55	1.41
	Toluene	0.68	2.09
	Trichloroethylene	0.55	1.41
	Vinyl Chloride	1.67	3.33

Outfall	**Parameters**	**Dly Avg Lbs/day**	**Dly Max Lbs/day**
901	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	Report mg/l
	pH	6.0 SU (min)	9.0 SU
002-005	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	55 mg/l
	Oil and Grease	N/A	15 mg/l
	1,2-Dichloroethane	N/A	0.4 mg/l
	Total Purgeable Hydrocarbons	Report (mg/l)	Report (mg/l)
	pH	6.0 SU (min)	9.0 SU
006-013	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	55 mg/l
	Oil and Grease	N/A	15 mg/l
	pH	6.0 SU (min)	9.0 SU

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The Texas Surface Water Quality Standards found at 30 TAC Chapter 307 state that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to insure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to insure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits can be found in Appendix C of this fact sheet.

2. AQUATIC LIFE CRITERIA

a. SCREENING

Water quality-based effluent limitations are calculated from freshwater/marine aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

Acute marine criteria are applied at the edge of the zone of initial dilution (ZID) and chronic marine criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as 50 feet from the point where the discharge enters Lavaca Bay. The aquatic life mixing zone for this discharge is defined as a radius of 200 feet from the point where the discharge enters Lavaca Bay.

The following critical effluent percentages are based on the results of the hearing in 1993 and on diffuser validation studies done in 1995:

Acute Effluent %	40%
Chronic Effluent %	10%

Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when after mixing in the receiving stream, the instream numerical criteria will not be exceeded. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12). Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH and total suspended solids (TSS) according to the segment-specific values contained in the TCEQ guidance document, *Procedures to Implement the Texas Surface Water Quality Standards (IPs).* The segment values are 1538 mg/L $CaCO_3$ for hardness, 9900 mg/L Chlorides, 7.8 standard units for pH, and 12 mg/L for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life.

Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection.

The effluent limitations for total copper at Outfall 001 are calculated water quality-based effluent limitations for aquatic life protection. These effluent limitations are more stringent than the required technology-based effluent limitations. These effluent limitations were increased from the current effluent limitations based on the applicant's amendment request.

The existing effluent limitations for hexavalent chromium, total chromium, total lead, and total zinc at Outfall 001 were established in previous permit actions (previous NPDES permit prior to delegation) and are continued into the proposed permit. These limitations were presumably water quality-based for aquatic life protection and are more stringent than the calculated water quality-based effluent limitations at final Outfall 001 and the required technology-based effluent limitations at Outfalls 101 and/or 201.

The existing effluent limitations for phenanthrene at Outfall 101 are water quality-based for aquatic life protection and are more stringent than the calculated water quality-based effluent limitations at final Outfall 001 and the required technology-based effluent limitations at Outfall 101. These limitations are continued into the proposed permit at Outfall SUM.

The existing effluent limitations for total nickel at Outfall 201 are water quality-based for aquatic life protection and are more stringent than the calculated water quality-based effluent limitations at final Outfall 001 and the required technology-based effluent limitations at Outfall 201. These limitations are continued into the proposed permit at Outfall 201.

Outfall	**Parameters**	**Dly Avg**	**Dly Max**
001	Hexavalent Chromium	3.7 Report (mg/l)	7.3 Report (mg/l)
	Total Chromium	3.7 Report (mg/l)	7.3 Report (mg/l)
	Total Copper	1.47 Report (mg/l)	3.11 Report (mg/l)
	Total Lead	6.5 Report (mg/l)	16.0 Report (mg/l)
	Total Zinc	2.8 Report (mg/l)	5.5 Report (mg/l)
SUM	Phenanthrene	0.53 lbs/day	1.12 lbs/day
201	Total Nickel	6.89 Report (mg/l)	14.60 Report (mg/l)

3. AQUATIC ORGANISM TOXICITY CRITERIA (7-DAY CHRONIC)

a. SCREENING

The existing permit includes chronic marine biomonitoring requirements at Outfall 001.

In the past five years, the permittee has performed nineteen chronic tests with no demonstrations of significant toxicity (i.e., no failures) by either test species.

Species	**Date of Failure**	**Result (NOEC)**	**Endpoint**
Inland silverside	n/a		
Mysid shrimp	n/a		

A reasonable potential (RP) determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous five years of WET testing. The table below identifies the thresholds for the number of test failures required to necessitate that a WET limit be placed in the permit or the consideration of additional Best Professional Judgment (BPJ) factors, such as the duration and magnitude of the failures.

WET REASONABLE POTENTIAL DETERMINATION THRESHOLDS
More than 3 failures in the past five years = WET limit
3 failures with 2 or 3 occurring in the past 3 years = WET limit
1 to 3 failures in the past five years but 1 or less in last 3 years = BPJ
0 failures = No limit

With no failures in the past five years by either test species, a determination of no reasonable potential was made. If RP is not demonstrated, the test species are eligible for the testing frequency reduction. All of the test results were used for this determination.

The lethal WET limits are retained for both species.

Analytical data submitted with the application does not indicate violation of any numerical water quality-based effluent limitation for aquatic life protection.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Based on information contained in the permit application, TCEQ has determined that there may be pollutants present in the effluent(s) that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent biomonitoring is the most direct measure of potential toxicity, which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*). The frequency of the testing shall be once per quarter.

ii) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*). The frequency of the testing shall be once per quarter.

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition*, EPA/600/4-90/027F. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

If none of the first four consecutive quarterly tests demonstrates significant lethal or sub-lethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the mysid shrimp (*Mysidopsis bahia*) and once per year for the inland silverside (*Menidia beryllina*). If one or more of the first four consecutive quarterly tests demonstrates significant sub-lethal effects, the permittee shall continue quarterly testing for that species until four consecutive quarterly tests demonstrate no significant sub-lethal effects. At that time, the permittee may apply for the appropriate testing frequency reduction for that species. If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee shall continue quarterly testing for that species until the permit is reissued.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 4%, 6%, 8%, 10%, and 13%. The low-flow effluent concentration (critical dilution) is defined as 10% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is calculated in section X.D.2.a. of this fact sheet.

d. WHOLE EFFLUENT TOXICITY (WET) LIMITATIONS

The following whole effluent toxicity (WET) limits are proposed in the draft permit at Outfall 001.

Species	Dly Avg	Dly Max
7-Day Chronic WET [1] *Mysidopsis bahia*	≥ 10% NOEC [2]	≥ 10% NOEC [2]
7-Day Chronic WET [1] *Menidia beryllina*	≥ 10% NOEC [2]	≥ 10% NOEC [2]

[1] The WET limit No Observed Effect Concentration (NOEC) of not less than 10% is effective at the permit issue date.

[2] The NOEC is defined as the greatest effluent dilution at which no significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between a specified effluent dilution and the control.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)

a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring language for Outfall 001. In the past five years, the permittee has performed twenty 24-hour acute tests, with no demonstrations of significant mortality. The 24-hour acute WET limit is retained for the mysid shrimp. The permittee is also authorized to use the previously approved ion-adjustment protocol for the 24-hour acute mysid shrimp testing.

b. PERMIT ACTION

24-hour 100% acute biomonitoring tests are required at Outfall 001 at a frequency of once per six months for the life of the permit.

The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

c. WHOLE EFFLUENT TOXICITY (WET) LIMITATIONS

The following whole effluent toxicity (WET) limits are proposed in the draft permit at Outfall 001.

Species	Dly Avg	Dly Max
24-hour Acute WET [1] *Mysidopsis bahia*	≥100% LC50 [2]	≥100% LC50 [2]

[1] The WET limit Lethal Concentration (LC) 50 of greater than 100% is effective at the permit issue date.

[2] The LC50 is defined as the effluent dilution at which 50% of the organisms survive.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of marine fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Marine fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into bays, estuaries and wide tidal rivers. The human health mixing zone for this discharge is defined as a 400-foot radius from the point where the discharge enters Lavaca Bay. The following critical effluent percentage is based on the results of the hearing in 1993 and on diffuser validation studies done in 1995:

Human Health Effluent %:	5%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection.

The proposed permit includes more stringent effluent limitations for hexachlorobenzene at Outfall SUM. The calculated water quality-based effluent limitations (based on current criteria and critical conditions) for hexachlorobenzene are more stringent that the current effluent limitations at Outfall 101.

The existing effluent limitations for total mercury at Outfall 001 were established in previous permit actions. These limitations were water quality-based for human health protection and are more stringent than the calculated water quality-based effluent limitations at final Outfall 001 and/or the required technology-based effluent limitations at Outfall 201.

The proposed permit includes more stringent effluent limitations for 2,3,7,8-TCDD Equivalents (Dioxin/Furans) at Outfall 001. The calculated water quality-based effluent limitations (based on current criteria and critical conditions) for 2,3,7,8-TCDD Equivalents (Dioxin/Furans) at Outfall 001 are more stringent that the current effluent limitations. A three-year compliance period to meet the more stringent effluent limitations has been included in the proposed permit.

Outfall	**Parameters**	**Dly Avg**	**Dly Max**
001	Total Mercury	0.03 Report (mg/l)	0.06 Report (mg/l)
	Benzene	1.05 Report (mg/l)	3.85 Report (mg/l)
	1,2-Dichloroethane	1.92 Report (mg/l)	5.97 Report (mg/l)
	Phenol	0.42 Report (mg/l)	0.74 Report (mg/l)
	Toluene	0.74 Report (mg/l)	2.26 Report (mg/l)
	Trichloroethylene	0.59 Report (mg/l)	1.53 Report (mg/l)
	Vinyl Chloride	2.94 Report (mg/l)	7.58 Report (mg/l)
	2,3,7,8-TCDD Equivalents (*1)	352 ug/day 9.57 ppq	744 ug/day 20.2 ppq
	2,3,7,8-TCDD Equivalents (*2)	80.5µg/day 2.19 ppq	170 µg/day 4.63 ppq
SUM	Hexachlorobenzene	0.010 lbs/day	0.021 lbs/day

(*1) Effective beginning upon date of permit of permit issuance and lasting for a period of three (3) years.

(*2) Effective beginning three (3) years after permit issuance and lasting through date of permit expiration.

An interim three (3) year compliance period is being established for 2,3,7,8-TCDD Equivalents in accordance with 30 TAC §307.2(f).

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Water Quality Segments Nos. 2453 and 2454, which receives the discharges from this facility, are not designated as public water supplies. Screening reported analytical data against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

b. PERMIT ACTION

None.

7. BACTERIA PROTECTION

a. SCREENING

The current TPDES permit includes effluent limitations for fecal coliform bacteria at Outfall 001. *Enterococci* is the indicator bacteria designated for Segments Nos. 2453 and 2454 in 30 TAC 307.10 (Appendix A).

b. PERMIT ACTION

Based on the existence of effluent limitations for fecal coliform bacteria at Outfall 001 in the current and the designation of *Enterococci* as the indicator bacteria for Segments Nos 2453 and 2454, effluent limitations and monitoring requirements for *Enterococci* bacteria have been included in the proposed draft permit to replace existing effluent limitations for fecal coliform bacteria at Outfall 001 (which is monitored at the exit of the sanitary treatment system).

The following effluent limitations and/or monitoring requirements are included in the proposed permit:

Outfall	**Parameter**	**Daily Avg**	**Daily Max**
001	Fecal Coliform (CFU or MPN/100 mls) [1]	(140)	N/A
	Enterococci (CFU or MPN/100 mls) [1]	(Report)	N/A
	Enterococci (CFU or MPN/100 mls) [2]	(14)	N/A

[1] Effective beginning upon date of permit issuance and lasting for three (3) years.

[2] Effective beginning three (3) years after permit issuance and lasting through permit expiration.

An interim three (3) year compliance period is being established for *Enterococci* in accordance with 30 TAC §307.2(f).

8. DISSOLVED OXYGEN PROTECTION

a. SCREENING

The effluent limitations for carbonaceous biochemical oxygen demand (5-day), ammonia (as nitrogen), and dissolved oxygen at Outfall 001 are continued from the current permit and are based on the modeling recommendations in the TCEQ IOM dated May 5, 2010.

b. PERMIT ACTION

The following permit limitations and/or monitoring/reporting requirements are proposed in the draft permit for protection of the dissolved oxygen criterion:

Outfall	**Parameter**	**Daily Avg Lbs/day**	**Daily Max Lbs/day**
001	Carbonaceous Biochemical Oxygen Demand (5-day)	1102 14 mg/l	2727 34 mg/l
	Ammonia (as Nitrogen)	243 3.0 mg/l	405 5.0 mg/l
	Dissolved Oxygen	2.0 mg/l (min)	N/A

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works (POTW). Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application contact Michael Sunderlin at (512) 239-4523

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A PERMIT

TCEQ Permit No. WQ0002436000 issued on August 30, 2005.

B. APPLICATION

TPDES wastewater permit application received on February 2, 2010. Additional information received via letters dated March 30, 2010; July 21, 2011; and July 31, 2012.Additional information received via miscellaneous emails and telephone conversations..

C. 40 CFR CITATION(S)

40 CFR Part 414

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

TCEQ IOM from Reilly (Standards Implementation Team) to Industrial Permits Team dated April 29, 2010.

TCEQ IOM from Webb (Water Quality Assessment Team) to Industrial Permits Team dated April 30, 2010.

TCEQ IOM from Rudolph (Water Quality Assessment Team) to Industrial Permits Team dated May 5, 2010.

TCEQ IOMs from Pfeil (Standards Implementation Team) to Industrial Permits Team dated May 5, 2010 and March 11, 2011.

E. MISCELLANEOUS

Quality Criteria for Water (1986), EPA 440/5-86-001, 5/1/86.

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective July 22, 2012, as approved by EPA Region 6

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 Standards not yet approved by EPA Region 6

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600/4-90/027F.

Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003.

Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

Appendix A
Calculated Technology-Based Effluent Limits

I. Outfall 101

A. OCPSF - CONVENTIONAL POLLUTANTS

Thermoplastic Resins (414.41 - Subpart D)	29.8 %
Commodity Organic (414.61 - Subpart F)	70.2 %
	100 %

BOD5-Avg			
Sub-D	(24 mg/l) * (0.298)	=	7.152
Sub-F	(30 mg/l) * (0.702)	=	21.060
			28.212 mg/l
BOD5-Max			
Sub-D	(64 mg/l) * (0.298)	=	19.072
Sub-F	(80 mg/l) * (0.702)	=	56.160
			75.232 mg/l
TSS-Avg			
Sub-D	(40 mg/l) * (0.298)	=	11.920
Sub-F	(46 mg/l) * (0.702)	=	32.292
			44.212 mg/l
TSS-Max			
Sub-D	(130 mg/l) * (0.298)	=	38.740
Sub-F	(149 mg/l) * (0.702)	=	104.598
			143.338 mg/l

BOD AVG	28.212 mg/l * 4.045 MGD * 8.345	=	952.31 lbs/day
BOD MAX	75.232 mg/l * 4.045 MGD * 8.345	=	2539.50 lbs/day
TSS AVG	44.212 mg/l * 4.045 MGD * 8.345	=	1492.40 lbs/day
TSS MAX	143.338 mg/l * 4.045 MGD * 8.345	=	4838.45 lbs/day

Limitations for the above parameters in the existing TPDES permit are more stringent than the calculated limitations above and are continued into the proposed draft TPDES permit.

B. OCPSF – TOXIC & NON-CONVENTIONAL POLLUTANTS

BAT Effluent Limitations for the OCPSF Category - 40 CFR 414.91 (Subpart I)

Total Flow from Outfall	4.4 MGD
Process Wastewater Flow	4.045 MGD
Metal Bearing Wastewater Flow (Total Copper only)	0.3905 MGD
Cyanide Bearing Wastewater Flow	0 MGD

Pollutant	**Daily Avg (ug/l)**	**Daily Max (ug/l)**		**Daily Avg (lb/day)**	**Daily Max (lb/day)**
Chromium	1110	2770		N/A	N/A
Zinc	1050	2610		N/A	N/A
Copper	1450	3380		4.72	11.01
Lead	320	690		N/A	N/A
Nickel	1690	3980		N/A	N/A
Cyanide	420	1200		N/A	N/A
Acenaphthene	22	59		0.74	1.99
Acenaphthylene	22	59		0.74	1.99
Acrylonitrile	96	242		3.24	8.17
Anthracene	22	59		0.74	1.99
Benzene	37	136		1.25	4.59
Benzo(a)anthracene	22	59		0.74	1.99
Benzo(a)pyrene	23	61		0.78	2.06
3,4-Benzofluoranthene	23	61		0.78	2.06
Benzo(k)fluoranthene	22	59		0.74	1.99
Bis(2-ethylhexyl)phthalate	103	279		3.48	9.42
Carbon Tetrachloride	18	38		0.61	1.28
Chlorobenzene	15	28		0.51	0.95
Chloroethane	104	268		3.51	9.05
Chloroform	21	46		0.71	1.55
2-Chlorophenol	31	98		1.05	3.31
Chrysene	22	59		0.74	1.99
1,2-Dichlorobenzene	77	163		2.60	5.50
1,3-Dichlorobenzene	31	44		1.05	1.49
1,4-Dichlorobenzene	15	28		0.51	0.95
1,1-Dichloroethane	22	59		0.74	1.99
1,2-Dichloroethane	68	211		2.30	7.12
1,1-Dichloroethylene	16	25		0.54	0.84
1,2-trans Dichloroethylene	21	54		0.71	1.82
2,4-Dichlorophenol	39	112		1.32	3.78
1,2-Dichloropropane	153	230		5.16	7.76
1,3-Dichloropropylene	29	44		0.98	1.49
Diethyl phthalate	81	203		2.73	6.85
2,4-Dimethylphenol	18	36		0.61	1.22
Dimethyl phthalate	19	47		0.64	1.59
Di-n-butyl phthalate	27	57		0.91	1.92
4,6-Dinitro-o-cresol	78	277		2.63	9.35
2,4-Dinitrophenol	71	123		2.40	4.15
2,4-Dinitrotoluene	113	285		3.81	9.62
2,6-Dinitrotoluene	255	641		8.61	21.64

Pollutant	**Daily Avg (ug/l)**	**Daily Max (ug/l)**		**Daily Avg (lb/day)**	**Daily Max (lb/day)**
Ethylbenzene	32	108		1.08	3.65
Fluoranthene	25	68		0.84	2.30
Fluorene	22	59		0.74	1.99
Hexachlorobenzene	15	28		0.51	0.95
Hexachloroethane	21	54		0.71	1.82
Hexachlorobutadiene	20	49		0.68	1.65
Methyl Chloride	86	190		2.90	6.41
Methylene Chloride	40	89		1.35	3.00
Naphthalene	22	59		0.74	1.99
Nitrobenzene	27	68		0.91	2.30
2-Nitrophenol	41	69		1.38	2.33
4-Nitrophenol	72	124		2.43	4.19
Phenanthrene	22	59		0.74	1.99
Phenol	15	26		0.51	0.88
Pyrene	25	67		0.84	2.26
Tetrachloroethylene	22	56		0.74	1.89
Toluene	26	80		0.88	2.70
1,2,4-Trichlorobenzene	68	140		2.30	4.73
1,1,1-Trichloroethane	21	54		0.71	1.82
1,1,2-Trichloroethane	21	54		0.71	1.82
Trichloroethylene	21	54		0.71	1.82
Vinyl Chloride	104	268		3.51	9.05

II. Outfall 201

Outfall 201 regulates the discharge of process wastewater from the chlor-alkali process units and other utility wastewaters. The applicant uses the ***membrane process*** to convert sodium brine into chlorine, caustic, and hydrogen. EPA categorical guidelines for the Chlor-Alkali subcategory (40 CFR Part 415 Subpart F) are applicable for the ***diaphragm cell process*** and the ***mercury cell process*** but are not applicable for the ***membrane process***.

In the absence of an applicable EPA categorical guideline, effluent limitations for heavy metals at Outfall 201 and effluent limitation allocations for Outfall 001 are calculated based on BPJ.

Effluent limitations for Outfall 201 are calculated using the following equation:

[conc. (mg/l)] * [dly avg flow (MGD)] * [8.345] = Mass lbs/day

Example - Dly Avg Total Lead:

[0.5 mg/l] * [3.15 MGD] * [8.345] = 13.14 lbs/day

Pollutant	Dly Avg mg/l	Dly Max mg/l	Dly Avg Lbs/day	Dly Max Lbs/day
Biochemical Oxygen Demand	20	45	525.74	1182.90
Total Suspended Solids	75	150	1971.51	3943.01
Total Lead	0.5	1.0	13.14	26.28
Total Nickel	1.0	2.0	26.28	52.57
Total Res. Cl	1.0	2.0	26.28	52.57

III. Outfall 001 – BPJ Calculations

Effluent limitations for select parameter at Outfall 001 are calculated using the following equation:

[conc. (mg/l)] * [dly avg flow (MGD)] * [8.345] = Mass lbs/day

Example - Dly Avg Total Copper:

[0.5 mg/l] * [9.7 MGD] * [8.345] = 0.116 lbs/day

Pollutant	Dly Avg mg/l	Dly Max mg/l	Dly Avg Lbs/day	Dly Max Lbs/day
Chemical Oxygen Demand	200	300	16189	24284
Total Organic Carbon	75	150	6071	12142
Ammonia as Nitrogen	3.0	10	242.84	809.46
Oil and Grease	10	15	809.46	1214.20
Total Chromium	0.5	1.0	40.47	80.95
Total Copper	0.5	1.0	40.47	80.95
Total Lead	0.5	1.0	40.47	80.95
Total Mercury	0.005	0.005	0.405	0.405
Total Zinc	1.0	2.0	80.95	161.89

IV. Cooling Tower Blowdown – Chloroform Allocations

Chlorine is used in the cooling tower as a bacteria inhibitor and chloroform is a typical by-product from this type of application.

Effluent limitation allocations for chloroform from cooling tower blowdown (CTB) sources are calculated utilizing the concentration criteria from 40 CFR 414.101 (Toxic pollutant effluent limitations and standards for direct discharge point sources that do not use end-of-pipe biological treatment) as a BPJ concentration criteria.

Effluent limitation allocations for chloroform from CTB sources are calculated using the following equation:

[conc. (mg/l)] * [dly avg flow (MGD)] * [8.345] = Mass lbs/day

Example - Dly Avg Chloroform:

[0.111 mg/l] * [1.2695 MGD] * [8.345] = 0.22 lbs/day

Pollutant	Dly Avg mg/l	Dly Max mg/l	Dly Avg Lbs/day	Dly Max Lbs/day
Chloroform	0.111	0.325	1.18	3.44

V. Outfall 001 - Summations

Effluent limitations for select parameter at Outfall 001 are calculated by adding together the contributing allocations from multiple sources:

Pollutant	Contributing Sources	Dly Avg Lbs/day	Dly Max Lbs/day
Biochemical Oxygen Demand (5-day)	Outfall 101	952.31	2539.50
	Outfall 201	525.74	1182.90
	Total	1478.05	3722.40
Total Suspended Solids	Outfall 101	1492.40	4838.45
	Outfall 201	1971.51	3943.01
	Total	3463.91	8781.46
Chloroform	OCPSF Process WW	0.71	1.55
	CTB	1.18	3.44
	Total	1.89	4.99

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #5 - BAY OR WIDE TIDAL RIVER

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2010 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 2, 2010 Texas Surface Water Quality Standards for Human Health (except Mercury)
Table 3, 2000 Texas Surface Water Quality Standards for Human Health (Mercury)
"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, June 2010

PERMIT INFORMATION

Permittee Name:	Formosa Utility Venture, Ltd and Formosa Plastics Corporation, Texas-Point Comfort
TPDES Permit No:	WQ0002436000
Outfall No:	001
Prepared by:	Michael Sunderlin
Date:	November 1, 2013

DISCHARGE INFORMATION

Receiving Waterbody:	Lavaca Bay
Segment No:	2453
TSS (mg/L):	12
Chloride (mg/L):	9900
Effluent Flow for Aquatic Life (MGD)	< 10 MGD
Percent Effluent for Mixing Zone:	10
Percent Effluent for Zone of Initial Dilution:	40
Oyster Waters:	**yes**
Effluent Flow for Human Health (MGD):	< 10
Percent Effluent for Human Health:	5

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Estuarine Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*		*Water Effect Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (Total)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (+3)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	4.85	-0.72	11830	0.88		1.00	Assumed
Lead	6.06	-0.85	138898	0.37		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	5.86	-0.74	115188	0.42		1.00	Assumed
Zinc	5.36	-0.52	62925	0.57		1.00	Assumed

CONVERT TISSUE-BASED CRITERIA TO WATER COLUMN CRITERIA:

Parameter	*Fish Only Criterion (ug/kg)*	*BCF (l/kg)*	*Fish Only Criterion (ug/L)*
4,4'-DDD	166.16	53600	0.0031
4,4'-DDE	214.4	53600	0.004
4,4'-DDT	209.04	53600	0.0039
Dioxins/Furans	0.0004	5000	8.00E-08
Mercury			
Polychlorinated Biphenyls (PCBs)	19.96	31200	6.40E-04

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*SW Acute Criterion (ug/L)*	*SW Chronic Criterion (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	1.3	N/A	3.25	N/A	1.04	N/A	1.53	3.23
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	373	780	119	476	175	371
Cadmium	40	8.75	100	87.5	32.0	53.4	47.0	100
Carbaryl	613	N/A	1533	N/A	490	N/A	721	1525
Chlordane	0.09	0.004	0.225	0.040	0.072	0.024	0.036	0.076
Chlorpyrifos	0.011	0.006	0.028	0.060	0.009	0.037	0.013	0.027
Chromium (+3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (+6)	1090	49.6	2725	496	872	303	445	941
Copper	13.5	3.6	38.5	41.1	12.3	25.1	18.1	38.4
Copper (oyster waters)	3.6	N/A	41.1	N/A	13.2	N/A	19.3	40.9
Cyanide	5.6	5.6	14.0	56.0	4.48	34.2	6.59	13.9
4,4'-DDT	0.13	0.001	0.325	0.010	0.104	0.006	0.009	0.019
Demeton	N/A	0.1	N/A	1.00	N/A	0.610	0.897	1.90
Diazinon	0.819	0.819	2.05	8.19	0.655	5.00	0.963	2.04
Dicofol	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	1.78	0.020	0.568	0.012	0.018	0.038
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (alpha)	0.034	0.009	0.085	0.090	0.027	0.055	0.040	0.085
Endosulfan II (beta)	0.034	0.009	0.085	0.090	0.027	0.055	0.040	0.085
Endosulfan sulfate	0.034	0.009	0.085	0.090	0.027	0.055	0.040	0.085
Endrin	0.037	0.002	0.093	0.020	0.030	0.012	0.018	0.038
Guthion	N/A	0.01	N/A	0.100	N/A	0.061	0.090	0.190
Heptachlor	0.053	0.004	0.133	0.040	0.042	0.024	0.036	0.076
Hexachlorocyclohexane (Lindane)	0.16	N/A	0.400	N/A	0.128	N/A	0.188	0.398
Lead	133	5.3	887	141	284	86	127	268
Malathion	N/A	0.01	N/A	0.100	N/A	0.061	0.090	0.190
Mercury	2.1	1.1	5.25	11.0	1.68	6.71	2.47	5.22
Methoxychlor	N/A	0.03	N/A	0.300	N/A	0.183	0.269	0.569
Mirex	N/A	0.001	N/A	0.010	N/A	0.006	0.009	0.019
Nickel	118	13.1	295	131	94.4	79.9	117	249
Nonylphenol	7	1.7	17.5	17.0	5.60	10.4	8.23	17.4
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	37.8	96.0	12.1	58.6	17.8	37.6
Phenanthrene	7.7	4.6	19.3	46.0	6.16	28.1	9.06	19.2
Polychlorinated Biphenyls (PCBs)	10	0.03	25.0	0.300	8.00	0.183	0.269	0.569
Selenium	564	136	1410	1360	451	830	663	1403
Silver (free ion)	2	N/A	11.9	N/A	3.81	N/A	5.60	11.9
Toxaphene	0.21	0.0002	0.525	0.0020	0.168	0.0012	0.0018	0.0038
Tributyltin (TBT)	0.24	0.0074	0.600	0.074	0.192	0.045	0.066	0.140
2,4,5 Trichlorophenol	259	12	648	120	207	73.2	108	228
Zinc	92.7	84.2	407	1478	130	901	191	405

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	3.8	76.0	70.7	104	220
Aldrin	0.001	0.020	0.019	0.027	0.058
Anthracene	N/A	N/A	N/A	N/A	N/A
Antimony	1071	21420	19921	29283	61953
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	513	10260	9542	14026	29675
Benzidine	0.002	0.040	0.037	0.055	0.116
Benzo(a)anthracene	0.33	6.60	6.14	9.02	19.1
Benzo(a)pyrene	0.33	6.60	6.14	9.02	19.1
Bis(chloromethyl)ether	0.44	8.80	8.18	12.0	25.5
Bis(2-chloroethyl)ether	5.27	105	98	144	305
Bis(2-ethylhexyl)phthalate	41	820	763	1121	2372
Bromodichloromethane	322	6440	5989	8804	18626
Bromoform	2175	43500	40455	59469	125815
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	29	580	539	793	1678
Chlordane	0.0081	0.162	0.151	0.221	0.469
Chlorobenzene	5201	104020	96739	142206	300857
Chlorodibromomethane (Dibromochloromethane)	239	4780	4445	6535	13825
Chloroform	7143	142860	132860	195304	413194
Chromium (+6)	502	10040	9337	13726	29039
Chrysene	327	6540	6082	8941	18916
Cresols	1981	39620	36847	54165	114593
Cyanide	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.0031	0.062	0.058	0.085	0.179
4,4'-DDE	0.004	0.080	0.074	0.109	0.231
4,4'-DDT	0.0039	0.078	0.073	0.107	0.226
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol	5.44	109	101	149	315
1,2-Dibromoethane	2.13	42.6	39.6	58.2	123
m-Dichlorobenzene	1445	28900	26877	39509	83587
o-Dichlorobenzene	4336	86720	80650	118555	250820
p-Dichlorobenzene	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	0.44	8.80	8.18	12.0	25.5
1,2-Dichloroethane	553	11060	10286	15120	31989
1,1-Dichloroethylene	23916	478320	444838	653911	1383445
Dichloromethane	5926	118520	110224	162029	342795
1,2-Dichloropropane	226	4520	4204	6179	13073
1,3-Dichloropropene (1,3- Dichloropropylene)	211	4220	3925	5769	12206
Dicofol	0.076	1.52	1.41	2.08	4.40
Dieldrin	0.0005	0.010	0.009	0.014	0.029
2,4-Dimethylphenol	571	11420	10621	15612	33030
Di-n-Butyl Phthalate	3010	60200	55986	82299	174116
Dioxins/Furans (TCDD Equivalents)	8.00E-08	1.60E-06	1.49E-06	2.19E-06	4.63E-06
Endrin	0.2	4.00	3.72	5.47	11.6
Ethylbenzene	7143	142860	132860	195304	413194
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0015	0.0300	0.0279	0.0410	0.0868
Heptachlor Epoxide	0.00075	0.0150	0.0140	0.0205	0.0434
Hexachlorobenzene	0.0045	0.0900	0.0837	0.123	0.260

HUMAN HEALTH - CONTINUED

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	Fish Only Criterion (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Hexachlorobutadiene	274	5480	5096	7492	15850
Hexachlorocyclohexane (alpha)	0.093	1.86	1.73	2.54	5.38
Hexachlorocyclohexane (beta)	0.33	6.60	6.14	9.02	19.1
Hexachlorocyclohexane (gamma) (Lindane)	6.2	124	115	170	359
Hexachlorocyclopentadiene	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	62	1240	1153	1695	3586
Hexachlorophene	0.008	0.160	0.149	0.219	0.463
Lead	3.83	204	190	279	591
Mercury	0.0122	0.244	0.227	0.334	0.706
Methoxychlor	0.33	6.60	6.14	9.02	19.1
Methyl Ethyl Ketone	1500000	3.00E+07	2.79E+07	4.10E+07	8.68E+07
Nickel	1140	22800	21204	31170	65944
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	463	9260	8612	12659	26783
N-Nitrosodiethylamine	2.1	42.0	39.1	57.4	121
N-Nitroso-di-n-Butylamine	4.2	84.0	78.1	115	243
Pentachlorobenzene	1	20.0	18.6	27.3	57.8
Pentachlorophenol	57	1140	1060	1558	3297
Polychlorinated Biphenyls (PCBs)	6.40E-04	0.0128	0.0119	0.0175	0.0370
Pyridine	2014	40280	37460	55067	116502
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.71	14.2	13.2	19.4	41.1
1,1,2,2-Tetrachloroethane	76	1520	1414	2078	4396
Tetrachloroethylene	49	980	911	1340	2834
Thallium	1.5	30.0	27.9	41.0	86.8
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.0053	0.106	0.099	0.145	0.307
2,4,5-TP (Silvex)	7.6	152	141	208	440
1,1,1-Trichloroethane	956663	19133260	17793932	26157080	55339128
1,1,2-Trichloroethane	295	5900	5487	8066	17065
Trichloroethylene	649	12980	12071	17745	37542
2,4,5-Trichlorophenol	2435	48700	45291	66578	140855
TTHM (Sum of Total Trihalomethanes)	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	24	480	446	656	1388

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life

Parameter	*70%*	*85%*
Aldrin	1.07	1.30
Aluminum	N/A	N/A
Arsenic	123	149
Cadmium	32.9	40.0
Carbaryl	505	613
Chlordane	0.025	0.030
Chlorpyrifos	0.009	0.011
Chromium (+3)	N/A	N/A
Chromium (+6)	311	378
Copper	12.7	15.4
Copper (oyster waters)	13.5	16.4
Cyanide	4.61	5.60
4,4'-DDT	0.006	0.008
Demeton	0.628	0.762
Diazinon	0.674	0.819
Dicofol	N/A	N/A
Dieldrin	0.013	0.015
Diuron	N/A	N/A
Endosulfan (alpha)	0.028	0.034
Endosulfan (beta)	0.028	0.034
Endosulfan sulfate	0.028	0.034
Endrin	0.013	0.015
Guthion	0.063	0.076
Heptachlor	0.025	0.030
Hexachlorocyclohexane (Lindane)	0.132	0.160
Lead	88.7	108
Malathion	0.063	0.076
Mercury	1.73	2.10
Methoxychlor	0.188	0.229
Mirex	0.006	0.008
Nickel	82.2	99.8
Nonylphenol	5.762	6.997
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	12.4	15.1
Phenanthrene	6.339	7.697
Polychlorinated Biphenyls (PCBs)	0.188	0.229
Selenium	464	564
Silver, (free ion)	3.92	4.76
Toxaphene	0.0013	0.0015
Tributyltin (TBT)	0.046	0.056
2,4,5 Trichlorophenol	75.3	91.5
Zinc	134	163

Human Health

Parameter	*70%*	*85%*
Acrylonitrile	72.7	88.3
Aldrin	0.019	0.023
Anthracene	N/A	N/A
Antimony	20498	24891
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	9819	11922
Benzidine	0.038	0.046
Benzo(a)anthracene	6.32	7.67
Benzo(a)pyrene	6.32	7.67
Bis(chloromethyl)ether	8.42	10.2
Bis(2-chloroethyl)ether	101	122
Bis(2-ethylhexyl)phthalate	785	953
Bromodichloromethane	6163	7484
Bromoform	41628	50549
Cadmium	N/A	N/A
Carbon Tetrachloride	555	674
Chlordane	0.155	0.188
Chlorobenzene	99544	120875
Chlorodibromomethane (Dibromochloromethane)	4574	5555
Chloroform	136713	166008
Chromium (+6)	9608	11667
Chrysene	6259	7600
Cresols	37915	46040
Cyanide	N/A	N/A
4,4'-DDD	0.059	0.072
4,4'-DDE	0.077	0.093
4,4'-DDT	0.075	0.091
2,4'-D	N/A	N/A
Danitol	104	126
1,2-Dibromoethane	40.8	49.5
m-Dichlorobenzene	27656	33583
o-Dichlorobenzene	82988	100772
p-Dichlorobenzene	N/A	N/A
3,3'-Dichlorobenzidine	8.42	10.2
1,2-Dichloroethane	10584	12852
1,1-Dichloroethylene	457738	555825
Dichloromethane	113420	137724
1,2-Dichloropropane	4326	5252
1,3-Dichloropropene (1,3- Dichloropropylene)	4038	4904
Dicofol	1.45	1.77
Dieldrin	0.010	0.012
2,4-Dimethylphenol	10929	13270
Di-n-Butyl Phthalate	57610	69955
Dioxins/Furans (TCDD Equivalents)	1.53E-06	1.86E-06
Endrin	3.83	4.65
Ethylbenzene	136713	166008
Fluoride	N/A	N/A
Heptachlor	0.029	0.035
Heptachlor Epoxide	0.014	0.017
Hexachlorobenzene	0.086	0.105
Hexachlorobutadiene	5244	6368

Human Health - Continued

Parameter	*70%*	*85%*
Hexachlorocyclohexane (alpha)	1.78	2.16
Hexachlorocyclohexane (beta)	6.32	7.67
Hexachlorocyclohexane (gamma) (Lindane)	119	144
Hexachlorocyclopentadiene	N/A	N/A
Hexachloroethane	1187	1441
Hexachlorophene	0.153	0.186
Lead	195	237
Mercury	0.234	0.284
Methoxychlor	6.32	7.67
Methyl Ethyl Ketone	2.87E+07	3.49E+07
Nickel	21819	26494
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	8862	10760
N-Nitrosodiethylamine	40.2	48.8
N-Nitroso-di-n-Butylamine	80.4	97.6
Pentachlorobenzene	19.1	23.2
Pentachlorophenol	1091	1325
Polychlorinated Biphenyls (PCBs)	0.012	0.015
Pyridine	38547	46807
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	13.6	16.5
1,1,2,2-Tetrachloroethane	1455	1766
Tetrachloroethylene	938	1139
Thallium	28.7	34.9
Toluene	N/A	N/A
Toxaphene	0.101	0.123
2,4,5-TP (Silvex)	145	177
1,1,1-Trichloroethane	18309956	22233518
1,1,2-Trichloroethane	5646	6856
Trichloroethylene	12421	15083
2,4,5-Trichlorophenol	46604	56591
TTHM (Sum of Total Trihalomethanes)	N/A	N/A
Vinyl Chloride	459	558

Dioxins/Furans (TCDD Equivalents) Water quality-based mass effluent limitations for Dioxins/Furans (TCDD Equivalents) are calculated as follows:

Dly Avg	0.00000219 ug/l * 3.78 l/gal * 9,700,000 gal/day	=	80.3 ug/day
Dly Max	0.00000463 ug/l * 3.78 l/gal * 9,700,000 gal/day	=	170 ug/day

Water quality-based mass effluent limitations are calculated by using the following formula:

Mass limits = [(concentration limits ug/l)/1000] * [9.70 MGD] * [8.345] = limits lbs/day

POLLUTANT	Dly Avg ug/l	Dly Max ug/l		Dly Avg lbs/day	Dly Max lbs/day
Acrylonitrile	104	220		8.42	17.8
Anthracene	N/A	N/A		N/A	N/A
Benzene	14026	29675		1135	2402
Benzo(a)anthracene	9.02	19.1		0.730	1.55
Benzo(a)pyrene	9.02	19.1		0.730	1.55
Bis(2-ethylhexyl)phthalate	1121	2372		90.7	192
Carbon Tetrachloride	793	1678		64.2	136
Chlorobenzene	142206	300857		11511	24353
Chloroform	195304	413194		15809	33447
Chrysene	8941	18916		724	1531
m-Dichlorobenzene	39509	83587		3198	6766
o-Dichlorobenzene	118555	250820		9597	20303
p-Dichlorobenzene	N/A	N/A		N/A	N/A
1,2-Dichloroethane	15120	31989		1224	2589
1,1-Dichloroethylene	653911	1383445		52932	111985
1,2-Dichloropropane	6179	13073		500	1058
1,3-Dichloropropene (1,3- Dichloropropylene)	5769	12206		467	988
2,4-Dimethylphenol	15612	33030		1264	2674
Di-n-Butyl Phthalate	82299	174116		6662	14094
Ethylbenzene	195304	413194		15809	33447
Hexachlorobenzene	0.123	0.26		0.0100	0.0210
Hexachlorobutadiene	7492	15850		606	1283
Hexachloroethane	1695	3586		137	290
Nitrobenzene	12659	26783		1025	2168
Phenanthrene	9.06	19.2		0.733	1.55
Tetrachloroethylene	1340	2834		108	229
Toluene	N/A	N/A		N/A	N/A
1,1,1-Trichloroethane	26157080	55339128		2117324	4479509
1,1,2-Trichloroethane	8066	17065		653	1381
Trichloroethylene	17745	37542		1436	3039
Vinyl Chloride	656	1388		53.1	112
Chromium (+6)	445	941		36.0	76.2
Copper	18.1	38.4		1.47	3.11
Lead	127	268		10.3	21.7
Mercury	2.47	5.22		0.200	0.423
Nickel	117	249		9.47	20.2
Zinc	191	405		15.5	32.8

Appendix C
Comparison of Technology-Based Effluent Limits and Water Quality-Based Effluent Limits

The following table is a summary of technology based effluent limitations calculated/assessed in the draft permit (Technology Based), effluent limitations from the current permit (Current Permit), and calculated/assessed water quality based effluent limitations (Water Quality). Please note that the "Current Permit" values for Outfall SUM are from Outfall 101 of the current permit.

		Current Permit		WQ Based		Tech Based	
Outfall	Parameter	Dly Avg Lbs/day	Dly Max Lbs/day	Dly Avg Lbs/day	Dly Max Lbs/day	Dly Avg Lbs/day	Dly Max Lbs/day
001	Flow	9.7 MGD	15.1 MGD	****	****	****	****
	CBOD-5/BOD-5	1102 14 mg/l	2727 34 mg/l	**** 14 mg/l	**** ****	1478 ****	3722 ****
	COD	9000 200 mg/l	16000 300 mg/l	**** ****	**** ****	16189 ****	24284 ****
	Total Organic Carbon	5939	8484	****	****	6071	12142
	Total Suspended Solids	3110 40 mg/l	6476 80 mg/l	**** ****	**** ****	3464 ****	8781 ****
	Ammonia as Nitrogen	243 3 mg/l	405 5 mg/l	**** 3 mg/l	**** ****	243 ****	809 ****
	Oil and Grease	222	332	****	****	809	1214
	Fecal Coliform	140 #/100mls	N/A	(*1)	(*1)	****	****
	Total Chromium	3.7	7.3	4905	10376	40.47	80.95
	Hexavalent Chromium	3.7	7.3	36.0	76.2	****	****
	Total Copper	1.37 (*2)	2.90 (*2)	1.47	3.11	40.47	80.95
	Total Lead	6.5	16.0	10.3	21.7	40.47	80.95
	Total Mercury	0.03	0.06	0.200	0.423	0.405	0.405
	Total Zinc	2.8	5.5	15.5	32.8	80.95	161.89
	Benzene	1.05	3.85	1135	2402	****	****
	1,2-Dichloroethane	1.92	5.97	1224	2589	****	****
	Phenol	0.42	0.74	****	****	****	****
	Toluene	0.74	2.26	****	****	****	****
	Trichloroethylene	0.59	1.53	1436	3039	****	****
	Vinyl Chloride	2.94	7.58	53.1	112	****	****
	Dissolved Oxygen	2.0 mg/l (min)	N/A	2.0 mg/l (min)	N/A	****	****
	Temperature (°F)	N/A	95 ^{0}F	****	****	****	****
	2,3,7,8-TCDD Equivalents	352µg/day 9.57 ppq	744 µg/day 20.2 ppq	80.3 ug/day 2.19 ppq	170 ug/day 4.63 ppq	**** ****	**** ****
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU
101	Flow	4.4 MGD	6.0 MGD	****	****	****	****
	BOD-5	731	1959	****	****	952	2539
	TSS	1149	3735	****	****	1492	4838
	COD	6676	10,014	****	****	****	****
	Total Copper	****	****	1.47	3.11	4.71	11.01
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU
201	BOD-5	237	474	****	****	525.74	1182.90
	COD	Report	Report	****	****	****	****

		Current Permit		WQ Based		Tech Based	
Outfall	Parameter	Dly Avg Lbs/day	Dly Max Lbs/day	Dly Avg Lbs/day	Dly Max Lbs/day	Dly Avg Lbs/day	Dly Max Lbs/day
201 cont.	TSS	1729	3006	****	****	788.60	2628.68
	Total Copper	Report	Report	****	****	****	****
	Total Lead	6.5	16.0	10.3	21.7	13.14	26.28
	Total Nickel	6.89	14.60	9.47	20.2	26.28	52.57
	Total Titanium	Report	Report	****	****	****	****
	Total Residual Chlorine	26.9	44.33	****	****	26.3	52.57
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU
SUM	Benzene	0.97	3.55	1135	2402	1.25	4.59
	Carbon Tetrachloride	0.47	0.99	64.2	136	0.61	1.28
	Chlorobenzene	0.39	0.73	11511	24353	0.51	0.95
	Chloroform	(*2)	(*2)	15809	33447	1.89	4.99
	1,1-Dichloroethane	0.57	1.54	****	****	0.74	1.99
	1,2-Dichloroethane	1.78	5.51	1224	2589	2.30	7.12
	Methyl Chloride	2.25	4.96	****	****	2.90	6.41
	Methylene Chloride	1.04	2.32	****	****	1.35	3.00
	Phenol	0.39	0.68	****	****	0.51	0.88
	Tetrachloroethylene	0.57	1.46	108	229	0.74	1.89
	1,1,1-Trichloroethane	0.55	1.41	2117324	4479509	0.71	1.82
	Acenaphthene	0.57	1.54	****	****	0.74	1.99
	Acenaphthylene	0.57	1.54	****	****	0.74	1.99
	Acrylonitrile	2.51	6.32	8.42	17.8	3.24	8.17
	Anthracene	0.57	1.54	****	****	0.74	1.99
	Benzo(a)anthracene	0.57	1.54	0.730	1.55	0.74	1.99
	Benzo(a)pyrene	0.60	1.59	0.730	1.55	0.78	2.06
	3,4-Benzofluoranthene	0.60	1.59	****	****	0.78	2.06
	Benzo(k)fluoranthene	0.57	1.54	****	****	0.74	1.99
	Bis(2-ethylhexyl)phthalate	2.69	7.29	90.7	192	3.48	9.42
	Chloroethane	2.72	7.00	****	****	3.51	9.05
	2-Chlorophenol	0.81	2.56	****	****	1.05	3.31
	Chrysene	0.57	1.54	724	1531	0.74	1.99
	1,2-Dichlorobenzene	2.01	4.26	9597	20303	2.60	5.50
	1,3-Dichlorobenzene	0.81	1.15	3198	6766	1.05	1.49
	1,4-Dichlorobenzene	0.39	0.73	****	****	0.51	0.95
	1,1-Dichloroethylene	0.42	0.65	52932	111985	0.54	0.84
	1,2-trans-Dichloroethylene	0.55	1.41	****	****	0.71	1.82
	2,4-Dichlorophenol	1.02	2.93	****	****	1.32	3.78
	1,2-Dichloropropane	4.00	6.01	500	1058	5.16	7.76
	1,3-Dichloropropylene	0.75	1.15	467	988	0.98	1.49
	Diethyl phthalate	2.12	5.30	****	****	2.73	6.85
	2,4-Dimethylphenol	0.47	0.94	1264	2674	0.61	1.22
	Dimethyl phthalate	0.50	1.23	****	****	0.64	1.59
	Di-n-butyl phthalate	0.71	1.49	6662	14094	0.91	1.92
	4,6-Dinitro-o-cresol	2.04	7.24	****	****	2.63	9.35
	2,4-Dinitrophenol	1.85	3.21	****	****	2.40	4.15
	2,4-Dinitrotoluene	2.95	7.44	****	****	3.81	9.62
	2,6-Dinitrotoluene	6.66	16.74	****	****	8.61	21.64

Outfall	Parameter	Current Permit Dly Avg Lbs/day	Current Permit Dly Max Lbs/day	WQ Based Dly Avg Lbs/day	WQ Based Dly Max Lbs/day	Tech Based Dly Avg Lbs/day	Tech Based Dly Max Lbs/day
SUM cont.	Ethylbenzene	0.84	2.82	15809	33447	1.08	3.65
	Fluoranthene	0.65	1.78	****	****	0.84	2.30
	Fluorene	0.57	1.54	****	****	0.74	1.99
	Hexachlorobenzene	0.012	0.026	0.010	0.021	0.51	0.95
	Hexachlorobutadiene	0.52	1.28	606	1283	0.71	1.82
	Hexachloroethane	0.55	1.41	137	290	0.68	1.65
	Naphthalene	0.57	1.54	****	****	0.74	1.99
	Nitrobenzene	0.71	1.78	1025	2168	0.91	2.30
	2-Nitrophenol	1.07	1.80	****	****	1.38	2.33
	4-Nitrophenol	1.88	3.24	****	****	2.43	4.19
	Phenanthrene	0.53	1.12	0.733	1.55	0.74	1.99
	Pyrene	0.65	1.75	****	****	0.84	2.26
	1,2,4-Trichlorobenzene	1.78	3.66	****	****	2.30	4.73
	1,1,2-Trichloroethane	0.55	1.41	653	1381	0.71	1.82
	Toluene	0.68	2.09	****	****	0.88	2.70
	Trichloroethylene	0.55	1.41	1436	3039	0.71	1.82
	Vinyl Chloride	1.67	3.33	53.1	112	3.51	9.05

(*1) Current Texas Surface Water Quality Standards require effluent limitations for *Enterococci* as the designated bacteria indicator parameter for marine receiving waters.

(*2) Applicant is requesting an increase of the existing effluent limitations in the current permit.

ATTACHMENT C

TPDES PERMIT NO. WQ0002436000
[For TCEQ office use only -
EPA I.D. No. TX0085570]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P. O. Box 13087
Austin, Texas 78711-3087

This permit supersedes and replaces TPDES Permit No. WQ0002436000, issued on August 30, 2005.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Formosa Utility Venture, Ltd. And Formosa Plastics Corporation, Texas

whose mailing address is

P.O. Box 700
Point Comfort, Texas 77978-0700

is authorized to treat and discharge wastes from the Point Comfort Plant, a plastics and organic and inorganic chemicals manufacturing facility (SIC 2821, 2812, and 2869)

located at 201 Formosa Drive, one-mile north of the intersection of State Highway 35 and Farm-to-Market Road 1593, northeast of the City of Point Comfort, Calhoun County, Texas

via Outfall 001 and 011 directly to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay in Segment No. 2454 of the Bays and Estuaries

only according to effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight on January 1, 2019.

ISSUED DATE:

_____
For the Commission

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge remediated groundwater, fire water, and treated previously monitored effluents (via Outfalls 101 and 201) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 9.7 million gallons per day (MGD). The daily maximum flow shall not exceed 15.1 MGD.

Effluent Characteristics	**Discharge Limitations**					**Minimum Self-Monitoring Requirements**	
	Daily Average		**Daily Maximum**		**Single Grab**	**Report Daily Average and Daily Maximum**	
	lbs/day	**mg/l**	**lbs/day**	**mg/l**	**mg/l**	**Measurement Frequency**	**Sample Type**
Flow	9.7 MGD		15.1 MGD		N/A	Continuous	Record
Temperature (°F)	N/A	N/A	N/A	95°F	N/A	Continuous [1]	Record
Carbonaceous Biochemical Oxygen Demand (5-day)	1102	14	2727	34	41	3/week	Composite
Chemical Oxygen Demand	9000	200	16000	300	333	3/week	Composite
Total Suspended Solids	3110	40	6476	80	115	3/week	Composite
Ammonia as Nitrogen	243	3	405	5	9	3/week	Composite
Hexavalent Chromium	3.7	Report	7.3	Report	0.10	3/week	Composite
Total Chromium	3.7	Report	7.3	Report	0.14	3/week	Composite
Total Copper	1.47	Report	3.11	Report	0.05	3/week	Composite
Total Lead	6.5	Report	16.0	Report	0.24	3/week	Composite
Total Mercury	0.03	Report	0.06	Report	0.01	3/week	Composite
Oil and Grease	222	N/A	332	15	15	2/week	Grab
Total Organic Carbon	5939	N/A	8484	N/A	333	2/week	Composite
Total Zinc	2.8	Report	5.5	Report	0.10	2/week	Composite
Benzene	1.05	Report	3.85	Report	0.04	2/week	Composite [2]
1,2-Dichloroethane	1.92	Report	5.97	Report	0.07	2/week	Composite [2]
Phenol	0.42	Report	0.74	Report	0.02	2/week	Composite
Toluene	0.74	Report	2.26	Report	0.03	2/week	Composite [2]
Trichloroethylene	0.59	Report	1.53	Report	0.02	2/week	Composite [2]
Vinyl Chloride	2.94	Report	7.58	Report	0.11	2/week	Composite [2]
Dissolved Oxygen	N/A	2.0 min	N/A	Report	2.0 min	2/week	Grab
Fecal Coliform (CFU or MPN/100 mls) [3]	N/A	(140)	N/A	N/A	N/A	1/week	Grab
Enterococci (CFU or MPN/100 mls) [4]	N/A	(Report)	N/A	N/A	N/A	1/quarter	Grab
Enterococci (CFU or MPN/100 mls) [5]	N/A	(14)	N/A	N/A	N/A	1/week	Grab

1. Continued.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
2,3,7,8-TCDD Equivalents [4]	352µg/day	9.57 ppq	744 µg/day	20.2 ppq	28.7 ppq	1/quarter	Composite
2,3,7,8-TCDD Equivalents [5]	80.5µg/day	2.19 ppq	170 µg/day	4.63 ppq	10 ppq	1/quarter	Composite
Whole Effluent Toxicity (WET) limit 10% [6]							
Mysidopsis bahia (7-day NOEC) [7]	10%		10%		N/A	1/quarter	24-hr Composite
Menidia beryllina (7-day NOEC) [7]	10%		10%		N/A	1/quarter	24-hr Composite
Whole Effluent Toxicity (WET) Limit >100% [8]							
Mysidopsis bahia (24-hour LC50) [9]	≥100% [9]		≥100% [9]		N/A	1/6 months	24-hr Composite

[1] See Other Requirements No. 10.
[2] See Other Requirements No. 18.
[3] Effective beginning upon date of permit issuance and lasting for a period of three (3) years.
[4] Effective beginning upon date of permit issuance and lasting for a period of three (3) years. See Other Requirements No. 24.
[5] Effective beginning three (3) years after permit issuance and lasting through date of permit expiration.
[6] The WET limit No Observed Effect Concentration (NOEC) of not less than 10% is effective at the permit issue date.
[7] The NOEC is defined as the greatest effluent dilution at which no significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between a specified effluent dilution and the control.
[8] The WET limit Lethal Concentration (LC) 50 of greater than 100% is effective at the permit issue date.
[9] The LC50 is defined as the effluent dilution at which 50% of the organisms survive.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded. See Other Requirements No. 9.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, where effluent from Outfalls 101 and 201 commingle with remediated groundwater, at the TZT-07 mixing well. *Enterococci* shall be monitored at the exit of the sanitary treatment system.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge treated process wastewater, equipment/facility washdown, storm water, firewater, and utility wastewaters (including pretreated sanitary wastewaters[1]) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 4.4 million gallons per day (MGD). The daily maximum flow shall not exceed 6.0 MGD.

Effluent Characteristics	**Discharge Limitations**					**Minimum Self-Monitoring Requirements**	
	Daily Average		**Daily Maximum**		**Single Grab**	**Report Daily Average and Daily Maximum**	
	lbs/day	**mg/l**	**lbs/day**	**mg/l**	**mg/l**	**Measurement Frequency**	**Sample Type**
Flow	4.4 MGD		6.0 MGD		N/A	Continuous	Record
Biochemical Oxygen Demand	731	Report	1959	Report	90	2/week	Composite
Total Suspended Solids	1149	Report	3735	Report	160	2/week	Composite
Chemical Oxygen Demand	6676	Report	10,014	Report	350	2/week	Composite
Benzene	Report	Report	Report	Report	0.174	2/week	Composite [1]
Carbon Tetrachloride	Report	N/A	Report	N/A	0.049	2/week	Composite [1]
Chlorobenzene	Report	N/A	Report	N/A	0.036	2/week	Composite [1]
Chloroform	Report	N/A	Report	N/A	0.059	2/week	Composite [1]
1,1-Dichloroethane	Report	N/A	Report	N/A	0.076	2/week	Composite [1]
1,2-Dichloroethane	Report	Report	Report	Report	0.271	2/week	Composite [1]
Methyl Chloride	Report	N/A	Report	N/A	0.244	2/week	Composite [1]
Methylene Chloride	Report	N/A	Report	N/A	0.114	2/week	Composite [1]
Phenol	Report	Report	Report	Report	0.033	2/week	Composite
Tetrachloroethylene	Report	N/A	Report	N/A	0.072	2/week	Composite [1]
1,1,1-Trichloroethane	Report	N/A	Report	N/A	0.069	2/week	Composite [1]
Acenaphthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acenaphthylene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acrylonitrile	Report	N/A	Report	N/A	0.310	1/quarter	Composite [1]
Anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)pyrene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
3,4-Benzofluoranthene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
Benzo(k)fluoranthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Bis(2-ethylhexyl) phthalate	Report	N/A	Report	N/A	0.358	1/quarter	Composite

1. Continued.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Chloroethane	Report	N/A	Report	N/A	0.344	1/quarter	Composite [1]
2-Chlorophenol	Report	N/A	Report	N/A	0.126	1/quarter	Composite
Chrysene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
1,2-Dichlorobenzene	Report	N/A	Report	N/A	0.209	1/quarter	Composite
1,3-Dichlorobenzene	Report	N/A	Report	N/A	0.056	1/quarter	Composite
1,4-Dichlorobenzene	Report	N/A	Report	N/A	0.036	1/quarter	Composite
1,1-Dichloroethylene	Report	N/A	Report	N/A	0.032	1/quarter	Composite [1]
1,2-trans-Dichloroethylene	Report	N/A	Report	N/A	0.069	1/quarter	Composite [1]
2,4-Dichlorophenol	Report	N/A	Report	N/A	0.144	1/quarter	Composite
1,2-Dichloropropane	Report	N/A	Report	N/A	0.295	1/quarter	Composite [1]
1,3-Dichloropropylene	Report	N/A	Report	N/A	0.056	1/quarter	Composite [1]
Diethyl phthalate	Report	N/A	Report	N/A	0.260	1/quarter	Composite
2,4-Dimethylphenol	Report	N/A	Report	N/A	0.046	1/quarter	Composite
Dimethyl phthalate	Report	N/A	Report	N/A	0.060	1/quarter	Composite
Di-n-butyl phthalate	Report	N/A	Report	N/A	0.073	1/quarter	Composite
4,6-Dinitro-o-cresol	Report	N/A	Report	N/A	0.355	1/quarter	Composite
2,4-Dinitrophenol	Report	N/A	Report	N/A	0.158	1/quarter	Composite
2,4-Dinitrotoluene	Report	N/A	Report	N/A	0.366	1/quarter	Composite
2,6-Dinitrotoluene	Report	N/A	Report	N/A	0.822	1/quarter	Composite
Ethylbenzene	Report	N/A	Report	N/A	0.139	1/quarter	Composite [1]
Fluoranthene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
Fluorene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Hexachlorobenzene	Report	N/A	Report	N/A	0.010	1/quarter	Composite
Hexachlorobutadiene	Report	N/A	Report	N/A	0.063	1/quarter	Composite
Hexachloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite
Naphthalene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Nitrobenzene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
2-Nitrophenol	Report	N/A	Report	N/A	0.089	1/quarter	Composite
4-Nitrophenol	Report	N/A	Report	N/A	0.159	1/quarter	Composite
Phenanthrene	Report	N/A	Report	N/A	0.076	1/quarter	Composite

1. Continued.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Pyrene	Report	N/A	Report	N/A	0.086	1/quarter	Composite
1,2,4-Trichlorobenzene	Report	N/A	Report	N/A	0.180	1/quarter	Composite
1,1,2-Trichloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite [1]
Toluene	Report	N/A	Report	N/A	0.103	1/year	Composite [1]
Trichloroethylene	Report	N/A	Report	N/A	0.069	1/year	Composite [1]
Vinyl Chloride	Report	N/A	Report	N/A	0.150	1/year	Composite [1]

[1] See Other Requirements No. 27.
[2] See Other Requirements No. 18.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded (See Other Requirements No. 9).

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 101, at the exit of the final treatment unit of the Combined Waste Treatment Plant - Biological Treatment unit, prior to commingling with any other wastewaters.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters (including pretreated sanitary wastewaters[1]), equipment/facility washdown, storm water, fire water, and water treatment wastewaters on a continuous and flow variable bases subject to the following effluent limitations:

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)		Report (MGD)		N/A	Continuous	Record
Biochemical Oxygen Demand	237	Report	474	Report	N/A	2/week	Composite
Chemical Oxygen Demand	Report	Report	Report	Report	N/A	2/week	Composite
Total Suspended Solids	1729	Report	3006	Report	N/A	2/week	Composite
Total Copper	Report	Report	Report	Report	N/A	2/week	Composite
Total Lead	6.5	Report	16.0	Report	N/A	2/week	Composite
Total Nickel	6.89	Report	14.60	Report	N/A	2/week	Composite
Total Titanium	Report	Report	Report	Report	N/A	2/week	Composite
Total Residual Chlorine	26.3	Report	44.33	Report	N/A	2/week	Grab
Benzene	Report	Report	Report	Report	0.174	2/week	Composite [1]
Carbon Tetrachloride	Report	N/A	Report	N/A	0.049	2/week	Composite [1]
Chlorobenzene	Report	N/A	Report	N/A	0.036	2/week	Composite [1]
Chloroform	Report	N/A	Report	N/A	0.059	2/week	Composite [1]
1,1-Dichloroethane	Report	N/A	Report	N/A	0.076	2/week	Composite [1]
1,2-Dichloroethane	Report	Report	Report	Report	0.271	2/week	Composite [1]
Methyl Chloride	Report	N/A	Report	N/A	0.244	2/week	Composite [1]
Methylene Chloride	Report	N/A	Report	N/A	0.114	2/week	Composite [1]
Phenol	Report	Report	Report	Report	0.033	2/week	Composite
Tetrachloroethylene	Report	N/A	Report	N/A	0.072	2/week	Composite [1]
1,1,1-Trichloroethane	Report	N/A	Report	N/A	0.069	2/week	Composite [1]
Acenaphthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acenaphthylene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acrylonitrile	Report	N/A	Report	N/A	0.310	1/quarter	Composite [1]
Anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite

1. Continued.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Benzo(a)pyrene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
3,4-Benzofluoranthene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
Benzo(k)fluoranthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Bis(2-ethylhexyl) phthalate	Report	N/A	Report	N/A	0.358	1/quarter	Composite
Chloroethane	Report	N/A	Report	N/A	0.344	1/quarter	Composite [1]
2-Chlorophenol	Report	N/A	Report	N/A	0.126	1/quarter	Composite
Chrysene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
1,2-Dichlorobenzene	Report	N/A	Report	N/A	0.209	1/quarter	Composite
1,3-Dichlorobenzene	Report	N/A	Report	N/A	0.056	1/quarter	Composite
1,4-Dichlorobenzene	Report	N/A	Report	N/A	0.036	1/quarter	Composite
1,1-Dichloroethylene	Report	N/A	Report	N/A	0.032	1/quarter	Composite [1]
1,2-trans-Dichloroethylene	Report	N/A	Report	N/A	0.069	1/quarter	Composite [1]
2,4-Dichlorophenol	Report	N/A	Report	N/A	0.144	1/quarter	Composite
1,2-Dichloropropane	Report	N/A	Report	N/A	0.295	1/quarter	Composite [1]
1,3-Dichloropropylene	Report	N/A	Report	N/A	0.056	1/quarter	Composite [1]
Diethyl phthalate	Report	N/A	Report	N/A	0.260	1/quarter	Composite
2,4-Dimethylphenol	Report	N/A	Report	N/A	0.046	1/quarter	Composite
Dimethyl phthalate	Report	N/A	Report	N/A	0.060	1/quarter	Composite
Di-n-butyl phthalate	Report	N/A	Report	N/A	0.073	1/quarter	Composite
4,6-Dinitro-o-cresol	Report	N/A	Report	N/A	0.355	1/quarter	Composite
2,4-Dinitrophenol	Report	N/A	Report	N/A	0.158	1/quarter	Composite
2,4-Dinitrotoluene	Report	N/A	Report	N/A	0.366	1/quarter	Composite
2,6-Dinitrotoluene	Report	N/A	Report	N/A	0.822	1/quarter	Composite
Ethylbenzene	Report	N/A	Report	N/A	0.139	1/quarter	Composite [1]
Fluoranthene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
Fluorene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Hexachlorobenzene	Report	N/A	Report	N/A	0.010	1/quarter	Composite
Hexachlorobutadiene	Report	N/A	Report	N/A	0.063	1/quarter	Composite
Hexachloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite
Naphthalene	Report	N/A	Report	N/A	0.076	1/quarter	Composite

1. Continued.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Nitrobenzene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
2-Nitrophenol	Report	N/A	Report	N/A	0.089	1/quarter	Composite
4-Nitrophenol	Report	N/A	Report	N/A	0.159	1/quarter	Composite
Phenanthrene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Pyrene	Report	N/A	Report	N/A	0.086	1/quarter	Composite
1,2,4-Trichlorobenzene	Report	N/A	Report	N/A	0.180	1/quarter	Composite
1,1,2-Trichloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite [1]
Toluene	Report	N/A	Report	N/A	0.103	1/year	Composite [1]
Trichloroethylene	Report	N/A	Report	N/A	0.069	1/year	Composite [1]
Vinyl Chloride	Report	N/A	Report	N/A	0.150	1/year	Composite [1]

[1] See Other Requirements No. 27.
[2] See Other Requirements No. 18.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 2/week, by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 201, where authorized wastewaters commingle at the exit of their respective final treatment units of the Combined Waste Treatment Plant - Physical Treatment units, prior to commingling with any other wastewaters.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge previously monitored wastewaters from Outfalls 101 and 201 subject to the following effluent limitations:

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/l	Measurement Frequency	Sample Type
Benzene	0.97	3.55	N/A	2/week	Summation [1]
Carbon Tetrachloride	0.47	0.99	N/A	2/week	Summation [1]
Chlorobenzene	0.39	0.73	N/A	2/week	Summation [1]
Chloroform	1.89	4.99	N/A	2/week	Summation [1]
1,1-Dichloroethane	0.57	1.54	N/A	2/week	Summation [1]
1,2-Dichloroethane	1.78	5.51	N/A	2/week	Summation [1]
Methyl Chloride	2.25	4.96	N/A	2/week	Summation [1]
Methylene Chloride	1.04	2.32	N/A	2/week	Summation [1]
Phenol	0.39	0.68	N/A	2/week	Summation [1]
Tetrachloroethylene	0.57	1.46	N/A	2/week	Summation [1]
1,1,1-Trichloroethane	0.55	1.41	N/A	2/week	Summation [1]
Acenaphthene	0.57	1.54	N/A	1/quarter	Summation [1]
Acenaphthylene	0.57	1.54	N/A	1/quarter	Summation [1]
Acrylonitrile	2.51	6.32	N/A	1/quarter	Summation [1]
Anthracene	0.57	1.54	N/A	1/quarter	Summation [1]
Benzo(a)anthracene	0.57	1.54	N/A	1/quarter	Summation [1]
Benzo(a)pyrene	0.60	1.59	N/A	1/quarter	Summation [1]
3,4-Benzofluoranthene	0.60	1.59	N/A	1/quarter	Summation [1]
Benzo(k)fluoranthene	0.57	1.54	N/A	1/quarter	Summation [1]
Bis(2-ethylhexyl) phthalate	2.69	7.29	N/A	1/quarter	Summation [1]
Chloroethane	2.72	7.00	N/A	1/quarter	Summation [1]
2-Chlorophenol	0.81	2.56	N/A	1/quarter	Summation [1]
Chrysene	0.57	1.54	N/A	1/quarter	Summation [1]
1,2-Dichlorobenzene	2.01	4.26	N/A	1/quarter	Summation [1]
1,3-Dichlorobenzene	0.81	1.15	N/A	1/quarter	Summation [1]
1,4-Dichlorobenzene	0.39	0.73	N/A	1/quarter	Summation [1]
1,1-Dichloroethylene	0.42	0.65	N/A	1/quarter	Summation [1]
1,2-trans-Dichloroethylene	0.55	1.41	N/A	1/quarter	Summation [1]
2,4-Dichlorophenol	1.02	2.93	N/A	1/quarter	Summation [1]

1. Continued.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/l	Measurement Frequency	Sample Type
1,2-Dichloropropane	4.00	6.01	N/A	1/quarter	Summation [1]
1,3-Dichloropropylene	0.75	1.15	N/A	1/quarter	Summation [1]
Diethyl phthalate	2.12	5.30	N/A	1/quarter	Summation [1]
2,4-Dimethylphenol	0.47	0.94	N/A	1/quarter	Summation [1]
Dimethyl phthalate	0.50	1.23	N/A	1/quarter	Summation [1]
Di-n-butyl phthalate	0.71	1.49	N/A	1/quarter	Summation [1]
4,6-Dinitro-o-cresol	2.04	7.24	N/A	1/quarter	Summation [1]
2,4-Dinitrophenol	1.85	3.21	N/A	1/quarter	Summation [1]
2,4-Dinitrotoluene	2.95	7.44	N/A	1/quarter	Summation [1]
2,6-Dinitrotoluene	6.66	16.74	N/A	1/quarter	Summation [1]
Ethylbenzene	0.84	2.82	N/A	1/quarter	Summation [1]
Fluoranthene	0.65	1.78	N/A	1/quarter	Summation [1]
Fluorene	0.57	1.54	N/A	1/quarter	Summation [1]
Hexachlorobenzene	0.010	0.021	N/A	1/quarter	Summation [1]
Hexachlorobutadiene	0.52	1.28	N/A	1/quarter	Summation [1]
Hexachloroethane	0.55	1.41	N/A	1/quarter	Summation [1]
Naphthalene	0.57	1.54	N/A	1/quarter	Summation [1]
Nitrobenzene	0.71	1.78	N/A	1/quarter	Summation [1]
2-Nitrophenol	1.07	1.80	N/A	1/quarter	Summation [1]
4-Nitrophenol	1.88	3.24	N/A	1/quarter	Summation [1]
Phenanthrene	0.53	1.12	N/A	1/quarter	Summation [1]
Pyrene	0.65	1.75	N/A	1/quarter	Summation [1]
1,2,4-Trichlorobenzene	1.78	3.66	N/A	1/quarter	Summation [1]
1,1,2-Trichloroethane	0.55	1.41	N/A	1/quarter	Summation [1]
Toluene	0.68	2.09	N/A	1/year	Summation [1]
Trichloroethylene	0.55	1.41	N/A	1/year	Summation [1]
Vinyl Chloride	1.67	3.33	N/A	1/year	Summation [1]

[1] Summation of samples taken at Outfalls 101 and 201 as required on Pages 2b, 2c, 2d, 2e, 2f, and 2g of the permit.

2. Effluent monitoring samples shall be taken at the following locations: at Outfalls 101 and 201 as required on Pages 2b, 2c, 2d, 2e, 2f, and 2g of the permit. The resulting loadings determined for each outfall shall be added together with the resulting summation value reported for this outfall for compliance purposes.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge cooling tower blowdown subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day[1]	Estimate
Total Dissolved Solids	N/A	Report	N/A	1/month[1]	Grab

[1] When routing cooling tower blowdown to the ALCOA mud pits for dust suppression.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day[1], by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following locations: at Outfall 901, prior to routing to the ALCOA mud pits for dust suppression.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab
1,2-Dichloroethane	N/A	0.4	0.4	1/day [1]	Grab
Total Purgeable Hydrocarbons	Report	Report	N/A	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day[1], by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following locations:

   At Outfall 002: On the south side of the plant near State Highway 35 and Vinyl Chloride Monomer (VCM) sphere.
   At Outfall 003: On the south side of the plant near utilities block.
   At Outfall 004: On the south side of the plant near State Highway 35 and the wastewater treatment plant.
   At Outfall 005: On the south side of the plant near State Highway 35 and the drying beds.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day[1], by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following locations.

   At Outfall 006: Approximately 200 feet north of State Highway 35 prior to entering Cox Creek.
   At Outfall 007: Approximately 1,500 feet north of State Highway 35 prior to entering Cox Creek.
   At Outfall 008: Approximately 3,000 feet north of State Highway 35, prior to entering Cox Creek.
   At Outfall 009: Approximately 1.2 miles north of State Highway 35, prior to entering Cox Creek.
   At Outfall 010: At the southern boundary of the Marine Tank Farm, approximately 2,300 feet south of the intersection of State Highway 35 and Farm-to-Market Road 1593.
   At Outfall 011: At the boundary of the southeast corner of the Dock Tank Farm located 2.2 miles south of the intersection of State Highway 35 and Farm-to-Market Road 1593.
   At Outfall 012: At the northeast corner of the plant property at Huisache Creek, approximately 6,250 feet north of State Highway 35.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	**Discharge Limitations**			**Minimum Self-Monitoring Requirements**	
	Daily Average	**Daily Maximum**	**Single Grab**	**Report Daily Average and Daily Maximum**	
	mg/l	**mg/l**	**mg/l**	**Measurement Frequency**	**Sample Type**
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day[1], by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following locations.

   At Outfall 013: At the southeast corner of the CFB Plantsite.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Texas Water Code §26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

   a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder, and limited to major domestic wastewater discharge facilities with a one million gallons per day or greater permitted flow.

   b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

   c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

   d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

   e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.

   f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

   a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

      i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

      ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

   b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

   c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

   d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge” is calculated as the average measurement of the pollutant over the sampling day.

      The “daily discharge” determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the “daily discharge” determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

e. Bacteria concentration (Fecal coliform, E. coli, or Enterococci) – the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements of made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).

g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

3. Sample Type

a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9 (b).

b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes .

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge that is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act; TCW Chapters 26, 27, and 28; and THSC Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.

b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR §264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time, and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

a. In accordance with 30 TAC §305.125(9) any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

i. Unauthorized discharges as defined in Permit Condition 2(g).
ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

c. In addition to the above, any effluent violation that deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

8. In accordance with the procedures described in 30 TAC §§35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

   All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

   a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      i. One hundred micrograms per liter (100 µg/L);
      ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. The level established by the TCEQ.

   b. That any activity has occurred or will occur that would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      i. Five hundred micrograms per liter (500 µg/L);
      ii. One milligram per liter (1 mg/L) for antimony;
      iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. The level established by the TCEQ.

10. Signatories to Reports

    All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:

    a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA §301 or §306 if it were directly discharging those pollutants;

    b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

    c. For the purpose of this paragraph, adequate notice shall include information on:

       i. The quality and quantity of effluent introduced into the POTW; and
       ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

   a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

   b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

      i. Violation of any terms or conditions of this permit;
      ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending, or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.

e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§305.62 and 305.66 and TWC §7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

h. In accordance with 30 TAC §305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility that does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.

i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA §402, or any requirement imposed in a pretreatment program approved under the CWA §§402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC Chapter 361.

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC §7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC §305.534 (relating to New Sources and New Dischargers); or

ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

d. Prior to accepting or generating wastes that are not described in the permit application or that would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

e. In accordance with the TWC §26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA §307(a) for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA §307(a)for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

b. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to Texas Water Code Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

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

10. Relationship to Permit Application

    The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy.

    a. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

        i. the permittee;
        ii. an entity (as that term is defined in 11 USC, §101(15)) controlling the permittee or listing the permit or permittee as property of the estate; or
        iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.

    b. This notification must indicate:
        i. the name of the permittee;
        ii. the permit number(s);
        iii. the bankruptcy court in which the petition for bankruptcy was filed; and
        iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

    a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

    b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §7.302(b)(6).

7. Documentation

    For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

    a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility that reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

    If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

    b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission,and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

    c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.

11. Facilities that generate industrial solid waste as defined in 30 TAC §335.1 shall comply with these provisions:

    a. Any solid waste, as defined in 30 TAC §335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

    b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

    c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC §335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

    d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.

    e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

   i. Volume of waste and date(s) generated from treatment process;
   ii. Volume of waste disposed of on-site or shipped off-site;
   iii. Date(s) of disposal;
   iv. Identity of hauler or transporter;
   v. Location of disposal site; and
   vi. Method of final disposal.

   The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

TCEQ Revision 08/2008

OTHER REQUIREMENTS

1. The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office (GLO) and has determined that the action is consistent with the applicable CMP goals and policies.

2. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 14, within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five working days to TCEQ Region 14 and the Enforcement Division (MC 224):

Chromium (Hexavalent)	Tetrachloroethylene	Bis(2-Ethylhexyl) Phthalate
Chromium (Total)	Toluene	Chrysene
Copper (Total)	1,2-trans-Dichloroethylene	1,2-Dichlorobenzene
Lead (Total)	1,1,1-Trichloroethane	1,3-Dichlorobenzene
Mercury (Total)	1,1,2-Trichloroethane	1,4-Dichlorobenzene
Nickel (Total)	Trichloroethylene	Diethyl Phthalate
Zinc (Total)	Vinyl Chloride	Dimethyl Phthalate
2,3,7,8-TCDD Equivalents	2-Chlorophenol	Di-n-Butyl Phthalate
Acrylonitrile	2,4-Dichlorophenol	2,4-Dinitrotoluene
Benzene	2,4-Dimethylphenol	2,6-Dinitrotoluene
Carbon Tetrachloride	4,6-Dinitro-o-Cresol	Fluoranthene
Chlorobenzene	2,4-Dinitrophenol	Fluorene
Chloroethane	2-Nitrophenol	Hexachlorobenzene
Chloroform	4-Nitrophenol	Hexachlorobutadiene
1,1-Dichloroethane	Phenol	Hexachloroethane
1,2-Dichloroethane	Acenaphthene	Naphthalene
1,1-Dichloroethylene	Acenaphthylene	Nitrobenzene
1,2-Dichloropropane	Anthracene	Phenanthrene
1,3-Dichloropropylene	Benzo(a)anthracene	Pyrene
Ethylbenzene	Benzo(a)pyrene	1,2,4-Trichlorobenzene
Methyl Chloride	3,4-Benzofluoranthene	
Methylene Chloride	Benzo(k)fluoranthene	

Test methods utilized shall be sensitive enough to demonstrate compliance with the permit effluent limitations. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit with consideration given to the minimum analytical level (MAL) for the parameters specified below.

POLLUTANT	MAL (mg/L)
Biochemical Oxygen Demand (5-day)	5.0
Oil & Grease	5.0
Total Residual Chlorine	0.5

2. Continued.

METALS	MAL (mg/L)
Chromium (Hexavalent)	0.010
Chromium (Total)	0.010
Copper (Total)	0.010
Lead (Total)	0.005
Mercury (Total)	0.0002
Nickel (Total)	0.010
Titanium (Total)	0.030
Zinc (Total)	0.005

DIOXINS/FURANS	MAL (picograms/L)
2,3,7,8-TCDD	10

VOLATILE COMPOUNDS	MAL (mg/L)
Acrylonitrile	0.050
Benzene	0.010
Carbon Tetrachloride	0.010
Chlorobenzene	0.010
Chloroethane	0.010
Chloroform	0.010
1,1-Dichloroethane	0.010
1,2-Dichloroethane	0.010
1,1-Dichloroethylene	0.010
1,2-Dichloropropane	0.010
1,3-Dichloropropylene	0.010
Ethylbenzene	0.010
Methyl Chloride	0.020
Methylene Chloride	0.020
Tetrachloroethylene	0.010
Toluene	0.010
1,2-trans-Dichloroethylene	0.010
1,1,1-Trichloroethane	0.010
1,1,2-Trichloroethane	0.010
Trichloroethylene	0.010
Vinyl Chloride	0.010

ACID COMPOUNDS	MAL (mg/L)
2-Chlorophenol	0.010
2,4-Dichlorophenol	0.010
2,4-Dimethylphenol	0.010
4,6-Dinitro-o-Cresol	0.050
2,4-Dinitrophenol	0.050
2-Nitrophenol	0.020
4-Nitrophenol	0.050
Phenol	0.010

2. Continued.

BASE/NEUTRAL COMPOUNDS	MAL (mg/L)
Acenaphthene	0.010
Acenaphthylene	0.010
Anthracene	0.010
Benzo(a)anthracene	0.010
Benzo(a)pyrene	0.010
3,4-Benzofluoranthene	0.010
Benzo(k)fluoranthene	0.010
Bis(2-Ethylhexyl) Phthalate	0.010
Chrysene	0.010
1,2-Dichlorobenzene	0.010
1,3-Dichlorobenzene	0.010
1,4-Dichlorobenzene	0.010
Diethyl Phthalate	0.010
Dimethyl Phthalate	0.010
Di-n-Butyl Phthalate	0.010
2,4-Dinitrotoluene	0.010
2,6-Dinitrotoluene	0.010
Fluoranthene	0.010
Fluorene	0.010
Hexachlorobenzene	0.010
Hexachlorobutadiene	0.010
Hexachloroethane	0.020
Naphthalene	0.010
Nitrobenzene	0.010
Phenanthrene	0.010
Pyrene	0.010
1,2,4-Trichlorobenzene	0.010

When an analysis of an effluent sample for any of the parameters listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero (0) shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero (0) based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form.

> "The reported value(s) of zero (0) for [list parameter(s)] on the self-reporting form for [monitoring period date range] is based on the following conditions: 1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit, and 2) the analytical results contained no detectable levels above the specified MAL."

When an analysis of an effluent sample for a parameter indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that parameter, the level of detection achieved shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. A zero (0) may not be used.

3. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone for Outfall 001 is defined as a volume within a radius of 200 feet from the point of discharge.

4. All wastewater retention ponds shall be operated in such a manner as to maintain a minimum freeboard of two feet.

5. All process wastewater ponds shall be lined in compliance with one of the following requirements:

   A. Soil Liner: The soil liner shall contain at least 3 feet of clay-rich (liquid limit greater than or equal to 30 and plasticity index greater than or equal to 15) soil material along the sides and bottom of the pond compacted in lifts of no more than 9 inches, to 95% standard proctor density at the optimum moisture content to achieve a permeability equal to or less than 1 x 10-7 cm/sec.

   B. Plastic/Rubber Liner: The liner shall be either a plastic or rubber membrane liner at least 30 mils in thickness which completely covers the sides and the bottom of the pond and which is not subject to degradation due to reaction with wastewater with which it will come into contact. If this lining material is vulnerable to ozone or ultraviolet deterioration it should be covered with a protective layer of soil of at least 6 inches. A leak detection system is also required.

   C. Alternate Liner: The permittee shall submit plans for any other pond lining method. Pond liner plans must be approved in writing by the Executive Director of the Texas Commission on Environmental Quality prior to pond construction.

   The permittee shall notify the Texas Commission on Environmental Quality Regional Office upon completion of construction of the pond and at least a week prior to its use. Certification of the lining specifications shall be provided by a Texas licensed professional engineer and shall be available for inspection by TCEQ personnel upon request. For new construction, the certification and the test results of soils forming the bottom and sides of the pond shall be submitted to the TCEQ, Wastewater Permitting Section (MC-148) and Regional Office for review prior to discharging any wastewaters into the ponds. Permeability tests shall be made with material typical of the expected use.

6. The permittee shall monitor liquid levels in the leak detection systems for all operating surface impoundments monthly and sample quarterly. The permittee shall use the EPA approved method 624 to analyze for purgeable organics. Results of the analyses shall be recorded and reported quarterly to the TCEQ Wastewater Permitting Section (MC-148) Water Quality Division and to the TCEQ Region 14 Office.

7. If the permittee determines that any pond containing process wastewaters is leaking, the permittee shall remove the pond from service, inform the TCEQ Region 14 Office, and submit to the Region Office a plan for necessary remedial actions. After liner repairs are completed, the permittee shall describe in a report the specific location of the leak and what repairs were made and notify the Region Office at least ten days prior to putting the pond back into service.

8. The existing sixteen monitoring wells located adjacent to the VCM sphere, the EDC storage tanks, and the wastewater treatment system shall be monitored at least twice per year. For each well, the permittee shall measure the water level and obtain a sample for analysis. The water shall be analyzed for purgeable organics using EPA approved method 8260, for pH and for total organic carbon. The permittee shall record the sampling date, the water level, and the analytical data. The records shall be submitted to the TCEQ Office of Compliance and Enforcement (MC-224) and the TCEQ Region 14 Office during the month of September each year.

   As an alternative to the requirement above, the permittee may submit a copy of reports developed based on a more comprehensive groundwater monitoring program performed in conjunction with another TCEQ or EPA regulated activity, provided that the monitoring program is inclusive of the requirements listed above.

9. The permittee shall maintain the pH within the range specified on Pages 2a and 2d (for Outfalls 001 and 101) of this permit. Excursions from the range are permitted. An excursion is an unintentioned and temporary incident in which the pH value of the wastewater exceeds the range set forth on Pages 2a and 2d. A pH excursion is not a violation and a non-compliance report is not required for pH excursions provided:

   A. the excursion does not exceed the range of 5-11 standard pH units; and
   B. the individual excursion does not exceed 60 minutes; and
   C. the sum of all excursions does not exceed 7 hours and 26 minutes in any 31 day period.

10. For continuous temperature measurements taken in accordance with Page 2 of this permit, the reporting requirements in MONITORING AND REPORTING REQUIREMENT, Item 7 may be omitted if the continuously recorded temperature does not exceed the Daily Maximum temperature for more than 30 minutes for any single exceedance and not more than a total of 7 hours and 26 minutes in any 31 days period.

11. The wastewater treatment plant(s) shall be:

   A. located above the 100-year frequency flood level per Flood Insurance Rate Map, Calhoun County, prepared by the U.S. Department of Housing and Urban Development; or
   B. be protected (by berms or other appropriately designed flood control structures) against inundation that may occur during a 100–year flood event (i.e., the 100-year frequency flood level per Flood Insurance Rate Map, Calhoun County, prepared by the U.S. Department of Housing and Urban Development).

12. The permittee may process raw water clarifier sludge at this facility from the AMPTOPP Corporation plant located in Lolita, Texas. The sludge shall be processed via the solids treatment/belt and press system.

13. At times when the natural depth of the Upper Lavaca Bay at Channel Marker 22 is less than one foot deep, the permittee shall cease discharge until the water level at the Channel Marker 22 exceeds one foot in depth. The determination of the natural depth of the Upper Lavaca Bay at Channel Marker shall be made according to the continued implementation of the Standard Operating Procedure (SOP) approved by the TCEQ by correspondence dated June 12, 2008, for the measurement of water depth in the vicinity of Channel Marker 22 of Upper Lavaca Bay under the terms of the this permit.

14. The permittee shall continue to implement the Receiving Water Monitoring Program as described in Appendix A and previously approved by the TCEQ.

15. Monitoring results shall be provided at the intervals specified in the permit. The following reporting schedule applies to the monitoring frequencies specified on Pages 2 – 2n of this permit. For pollutants which are monitored annually, effluent reports shall be submitted in the August Discharge Monitoring Reports (DMR) of each year. For pollutants which are monitored four times per year the permittee shall continue existing submittal time periods, i.e. the effluent reports shall be submitted at three month intervals, with the February, May, August, and November DMRs.

Report	Months Included	Submitted With	Due Date	Pollutant
1st Quarter	December, January and February	February DMR	March 20th	Dioxin and Priority
2nd Quarter	March, April and May	May DMR	June 20th	Dioxin and Priority
3rd Quarter	June, July and August	August DMR	September 20th	Dioxin and Priority
4th Quarter	September, October and November	November DMR	December 20th	Dioxin and Priority
Annual	September - August	August DMR	September 20th	Priority

16. The sludge from the treatment process shall be digested, dewatered, and disposed of in accordance with all the applicable rules of the TCEQ. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the state. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:

A. Volume (dry weight basis) of sludge disposed
B. Date of disposal
C. Identity and registration number of hauler
D. Location and registration or permit number of disposal site
E. Method of final disposal.

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Texas Commission on Environmental Quality for at least five years.

17. The permittee shall maintain the diffuser installed at the Outfall 001 located in Lavaca Bay in order to enhance dilution at the point of discharge.

18. The following composite sampling techniques apply to volatile organic compounds. The permittee shall manually collect a minimum of four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. These aliquots must be combined in the laboratory to represent the composite sample of the discharge. One of the following alternative methods shall be used to composite these aliquots.

A. Each aliquot is poured into a syringe. The plunger is added, and the volume in the syringe is adjusted to 1-1/4 ml. Each aliquot (1-1/4 ml) is injected into the purging chamber of the purge and trap system. After four (4) injections (total 5 ml), the chamber is purged. Only one analysis or run is required since the aliquots are combined prior to analysis.

B. Chill the four (4) aliquots to 0-6° Centigrade. These aliquots must be of equal volume. Carefully pour the contents of each of the four aliquots into a 250-500 ml. flask which is chilled in a wet ice bath. Stir the mixture gently with a clean glass rod while in the ice bath. Carefully fill two (2) or more clean 40 ml. zero head-space vials from the flask and dispose of the remainder of the mixture. Analyze one of the aliquots to determine the concentration of the composite sample. The remaining aliquot(s) are replicate composite samples that can be analyzed if desired or necessary.

C. Alternative sample compositing methods may be used following written approval by this Office.

The individual samples resulting from the application of these compositing methods shall be analyzed following the procedures specified for the selected test method. The resulting analysis shall be reported as the daily composite concentration.

As an option to the above compositing methods, the permittee may manually collect a minimum of four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. A separate analysis shall be conducted for each discrete grab sample following the approved test methods. The determination of daily composite concentration shall be the arithmetic average (weighted by flow) of all grab samples collected during the 24-hour sampling period.

19. RECYCLE AND REUSE OF WASTEWATER

The recycling and reuse of wastewater is acknowledged in, but not limited to, the following:

A. Contact stormwater (including, but not limited to, contact storm water from the Olefins-I, Olefins-II, and Polyolefins plants) and non-contact stormwater may be reused for cooling tower make-up water.

B. Cooling tower blowdown may be diverted via Outfall 901 to the adjacent ALCOA mud pit area for the purpose of dust suppression. This permit does not authorize nor prohibit the land application of cooling tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression. This permit provides the permittee authorization to provide cooling tower blowdown to a 3rd party for the purpose of dust suppression of an off-site plot of land. Should authorization under TCEQ rules to land apply cooling tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression be required by the permittee or other 3rd party, it is the obligation of the permittee or other 3rd party to obtain such authorization from the appropriate regulatory authority.

C. Process wastewaters (including, but not limited to, process wastewater from the air separation plant, the polyolefins extruder plant, and the HDPE 1 plant) may be reused as cooling tower make-up water provided the final wastewater is discharged via either internal Outfall 101 or 201.

20. Non-process area storm water within the dikes of the Inland (Outfalls 006, 007 and 008) and Marine (Outfalls 010 and 011) Traffic Areas may be discharged via Outfalls 006, 007, 008, 010 and 011, provided the water is first tested for total organic carbon, oil and grease, 1,2-Dichloroethane (inland diked areas containing DT-403 and DT-404 and marine area FT-D10), and pH, and visually examined for floating solids, foam, and oil, and provided test results indicate total organic carbon is ≤55 mg/l, oil and grease is ≤15 mg/l, 1,2-Dichloroethane is ≤0.4 mg/l, pH is between 6.0-9.0 S.U., and there is no visible floating solids, foam, or oil. The permittee shall maintain records detailing monitoring performed, results, and where the sampled water was routed for discharge.

21. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Commission on Environmental Quality after the completion of any new intensive water quality survey on Segment Nos. 2453 and 2454 of the Bays and Estuaries River Basin and any subsequent updating of the water quality model for Segment Nos. 2453 and 2454, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Sections 305.62, as a result of such review.

22. DIOXIN EFFLUENT MONITORING REQUIREMENTS

The method of analysis of the final effluent for 2,3,7,8-tetrachloro-dibenzo-p-dioxin (2378-TCDD) and 2378-TCDD equivalents (TEQ) shall be in accordance with the analytical protocol in U.S. Environmental Protection Agency Method 1613: Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution, July 1989, or most recent update thereof. The following MALs for 2378 congeners shall be achieved. The minimum analytical level (MAL) is defined as the level at which the entire analytical system shall give recognizable mass spectra and acceptable calibration points.

POLLUTANT	**CASRN***	**MAL (ppq**)**	**Suggested Method**
Dioxins/Furans (TCDD Equivalents)			1613
2,3,7,8-TCDD	1746-01-6	10^{-5} or 10 ppq	
1,2,3,7,8-PeCDD	40321-76-4	50	
2,3,7,8-HxCDDs			
1,2,3,4,7,8-HxCDD	39227-28-6	50	
1,2,3,6,7,8-HxCDD	57653-85-7	50	
1,2,3,7,8,9-HxCDD	19408-74-3	50	
2,3,7,8-TCDF	51207-31-9	10	
1,2,3,7,8-PeCDF	57117-41-6	50	
2,3,4,7,8-PeCDF	57117-31-4	50	
2,3,7,8-HxCDFs			
1,2,3,4,7,8-HxCDF	70648-26-9	50	
1,2,3,6,7,8-HxCDF	57117-44-9	50	
1,2,3,7,8,9-HxCDF	72918-21-9	50	
2,3,4,6,7,8-HxCDF	60851-34-5	50	

* Chemical Abstracts Service Registry Number

** Part per quadrillion, ppq (i.e., 10^{-5}); 1 ppq = 1 pg/l (picograms/liter)

Dioxins/Furans limits are calculated as Toxicity Equivalent Concentrations as shown below:

Compound	Equivalent Factors	Concentration [1] (ppq)	Equivalents [2] (ppq)
2,3,7,8-TCDD	1		
2,3,7,8-PeCDD	0.5		
2,3,7,8-HxCDDs	0.1		
2,3,7,8-TCDF	0.1		
1,2,3,7,8-PeCDF	0.05		
2,3,4,7,8-PeCDF	0.5		
2,3,7,8-HxCDFs	0.1		

[1] Report the concentrations of the congeners in parts per quadrillion (ppq) for wastewater. The analyses should be made using EPA method 1613 or an equivalent method approved by the TCEQ.

[2] Equivalents (ppq) = Equivalent Factor × Concentration (ppq)

23. The permittee shall use an approved sampling method for the collection of grab and/or composite samples as approved in any of the following sources:

A. 40 CFR Part 136; or
B. As specified in this permit.

24. SCHEDULE OF COMPLIANCE FOR WATER QUALITY BASED EFFLUENT LIMITS

The permittee shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for 2,3,7,8-TCDD Equivalents and *Enterococci* bacteria at Outfall 001 (at the monitoring location specified on Page 2a for the respective parameter):

A. Determine exceedance cause(s);
B. Develop control options;
C. Evaluate and select control mechanisms;
D. Implement corrective action; and
E. Attain final effluent limitations no later than three years from the date of permit issuance.

The permittee shall submit quarterly progress reports in accordance with the following schedule. The requirement to submit quarterly progress reports shall expire three years from the date of permit issuance.

PROGRESS REPORT DATE
January 1
April 1
July 1
October 1

The quarterly progress reports shall include a discussion of the interim requirements that have been completed at the time of the report and shall address the progress towards attaining the water quality-based final effluent limitations for 2,3,7,8-TCDD Equivalents and *Entercocci* bacteria at Outfall 001 (at the monitoring location specified on Page 2a for the respective parameter) no later than three years from the date of permit issuance.

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

All reports shall be submitted to the Region 14 Office and to the Enforcement Division (MC 224), of the TCEQ.

25. DISCHARGE OF 3RD PARTY WASTES

This permit does not provide authorization for the permittee to accept wastewater from third party sources, neither does it prohibit acceptance of such wastewaters. This permit only provides the authorization to discharge these wastes. Should authorization to accept third party waste be required, it is the obligation of the permittee to obtain such authorization from the appropriate regulatory authority.

26. Self-reporting procedures specified in this permit may be superseded by updated procedures (including but not limited to NetDMR) that have been approved by the EPA and TCEQ for the TPDES permitting program.

27. Sanitary Wastewater

Sanitary wastewater generated at the facility shall be handled in one of the following methods:

A. routing to an approved on-site septic tank and drainfield system;
B. routing to an authorized third party for treatment and disposal; or
C. pretreated by an on-site package plant prior to re-use as cooling tower make-up water.

RECEIVING WATER MONITORING PROGRAM

1. Program Objectives:

The receiving water monitoring program objectives:

a. To establish baseline background conditions in Lavaca Bay in the area that will receive the Outfall 001 discharge.

b. To monitor the health and structure of the biological community in the vicinity of the Outfall 001 discharge.

c. To monitor the water and sediment quality in vicinity of the Outfall 001 discharge.

d. To evaluate compliance with the Texas Surface Water Quality Standards (TAC Chapter 307).

e. To monitor fish and shellfish tissue constituent concentrations for organisms in the vicinity of the Outfall 001 discharge to assess any potential human health risks.

2. Within 30 days of the effective permit date, the permittee shall submit a current Scope-of-Work document that includes specific technical details of the receiving water monitoring program to the TCEQ Executive Director for approval. At the same time, the permittee shall provide a copy of the current scope of work to the Texas Department of Health, Texas Parks and Wildlife Department, and the other parties to the evidentiary hearing, and make the scope of work available to the local citizens by filing it in the local library. The permittee shall initiate the monitoring program during the calendar quarter immediately following the Executive Director's approval of the Scope-of-Work. Subparagraphs a through k detail the minimum monitoring activities that shall be included in the Scope-of-Work.

a. Water Chemistry

The Scope-of-Work should specify that water chemistry laboratory analyses will include total suspended solids, total metals, dissolved metals, total dissolved solids, chlorides, turbidity, salinity, ammonia, nitrate, nitrite, total phosphate, orthophosphate, and total organic carbon. Priority pollutant chemical analysis shall also be conducted to include the metals, volatile organics, base neutral organics, pesticides, and PCBs. When any system component is sampled (i.e., water, sediment, tissue, biota), the sample collection shall be accompanied by water column field physiochemical measurements that include pH, conductivity or salinity, dissolved oxygen, and temperature. The Scope-of-Work shall identify the specific analytical method employed and defined minimum analytical level and method detection level for each analytical procedure utilized.

b. Data Management

The Scope-of-Work shall specify maintenance of a field logbook for sample collection. Sample identification number, data and time, location number, location description, water depth, tide stage and height, current speed and direction, field personnel, and general weather conditions should be recorded with each sampling event.

For tissue collections, species, sex, width of carapace or total length, weight, evidence of pathogens, parasites, or abnormalities shall be recorded. For all tissue collection and biological sampling, the sampling methodology, sampling equipment, compositing techniques, a description of the habitat(s) sampled, and volume, area, and duration of sampling should be recorded in the field logbook. Examples of field data forms to be used in a permanent field logbook shall be included with the Scope-of-Work.

c. Data Interpretation

The Scope-of-Work should specify statistical procedures for data analysis. These may include trend analysis, analysis of variance, cluster analysis, and regression analysis that will be employed. Data should be interpreted using a statistical approach to enable comparisons of the discharge area with background and/or reference control areas. Biological indices such as diversity, evenness, percent dominance, and percent similarity shall be calculated and used to evaluate the biological community data. The Scope-of-Work shall establish protocol to address constituent concentrations below detection levels.

d. Tissue Sampling and Analyses

The Scope-of-Work shall specify fish and shellfish tissue collection of both flesh and organ tissues such as liver and gonads. Tissue concentrations will be monitored to assess any accumulations that pose a risk to humans that consume organisms that may have been exposed to the discharge, and to evaluate the ecological affect of any bioaccumulation. Tissue sampling should include red drum, *Sciaenops ocellata* (14-20 total inches), Atlantic croaker, *Micropogon undulatus* (8-12 total inches), and hardhead catfish, *Arius felis* (at least 10 inches), as target finfish species. The Scope-of-Work shall specify collection of blue crab and oysters for tissue analysis. Tissue sample collection and preparation shall be in accordance with the guidelines set forth in Appendix 18 of the document titled Texas Water Commission Water Quality Monitoring Procedures Manual (October 1991). The Scope-of-Work shall detail the sample collection techniques, sample locations, sampling schedules, tissue handling and preparation methodology, anatomical part, sample size, and methods for chemical analyses. Constituent analyses shall be consistent with the test parameters specified for water and sediment. The Scope-of-Work shall specify that most metal concentrations be determined using Instrumental Neutron Activation Analysis.

e. Toxicity Testing

The Scope-of-Work shall specify the routine collection of ambient water for performance of chronic toxicity tests using the sheepshead minnow, the mysid shrimp, and red algae. Toxicity tests shall also be performed on bulk (solid-phase) sediment and on the sediment pore water. Test organisms selected for the bulk sediment toxicity tests shall demonstrate a broad salinity tolerance. The same tests species utilized for ambient water toxicity testing should be utilized for the pore water tests. The Scope-of-Work shall clearly define the sample collection and processing protocol, and the toxicity testing methodology, test organisms, protocol, and accompanying statistical analyses that will be employed for all toxicity testing.

f. Sediment Sampling and Analysis

In addition to toxicity testing, pore water and sediment samples shall be routinely collected and analyzed for grain size, organic content, iron, aluminum, total organic carbon, and priority pollutants to include heavy metals, volatile organics, base neutral organics, pesticides, and PCBs. The Scope-of-Work shall define a methodology for pore water sample collection and preparation as well as bulk sediment sample collection. The sediment sampling effort shall be performed during periods of quiescence within the bay system.

g. Sample Locations

The sample locations shall be clearly defined in the Scope-of-Work. The latitude and longitude should be determined for each routine sample location. The initial Scope-of-Work shall include a map defining routine and reference sampling locations, and the diffuser location. The Scope-of-Work shall also identify reference stations to be established somewhere in the Lavaca Bay system. The reference stations shall be located in areas unaffected by the discharge from Outfall 001. Sample locations shall be selected that will best characterize the receiving water area. Multiple sampling within a sample grid location for all water, sediment, tissue, and biota sampling should be defined. Water circulation patterns and plume mapping should be determined an considered prior to establishing of any monitoring locations.

h. Biological Assessment

The Scope-of-Work shall specify collection and characterization of benthic infaunal communities, nekton, ichthyoplankton including larval, postlarval, and early juvenile stages of finfish, shrimp, and crabs. The Scope-of-Work shall specify the collection methodology and equipment that will be utilized for all biota collections.

i. Quality Assurance/Quality Control

The Scope-of-Work shall include a quality assurance and quality control plan to ensure collection of reliable data. Provisions for field sample blanks and duplicates, sample preservative blanks, internal laboratory quality control checks such as laboratory blanks, spikes, and duplicates, field calibration procedures, and a mechanism to identify and treat outliers shall be included. The Scope-of-Work shall clearly define the sample collection, sample preservation, sample processing, chain-of-custody, sample storage, and sample analysis protocols and procedures. The Scope-of-Work shall also detail a procedure that ensures that 10% of all water chemistry, sediment, and tissue samples are submitted in duplicate to the analytical laboratories selected by the permittee, as well as to an independent laboratory for independent analyses and verification of the constituent concentrations in the various sample media. The results of the analyses determined at the independent laboratories shall be included with the annual report described in item 3.

j. Data Submittal

Data generated during this monitoring program shall be provided in a form that can be readily entered into the TCEQ Statewide Monitoring Network Database or other similar agency database. Station locations should be identified by latitude and longitude.

k. Frequency

The sampling frequency defined in the Scope-of-Work shall ensure that most system components (i.e., water, tissue, biota) are sampled minimally on a quarterly frequency. After submittal of the initial Scope-of-Work, the sampling frequency may be increased or decreased in accordance with items 4, 6, and 7. Reference stations should be established and monitored at some frequency during the life of the permit monitoring program.

3. The permittee shall submit a written annual report each year for the life of the permit. The annual report shall be submitted to the TCEQ Region 14 Office and the Standards and Assessment Section (MC-150) OF THE TCEQ each year on or before the anniversary date of the permit issue date. The annual report shall summarize the monitoring program data, summarize the analytical and biological methodology, discuss the significant findings, graphically display the data collected, and provide a hard copy of all data. The data shall also be provided in an easily retrievable personal computer database format.

   As an appendix to the written annual report, the permittee shall submit copies of the completed field logbooks as described in 2.b. As an additional appendix to the written annual report, the permittee shall submit copies of the raw data sheets for all water chemistry analyses, sediment analyses, tissue analyses, and toxicity tests.

4. Upon evaluation of each annual report, the permittee may request a modification of the monitoring program in accordance with Item 6 below. The Executive Director may request a modification of the monitoring program at any time.

5. During annual report review periods, there shall be no interruption of data collection. The permittee shall continue the monitoring program throughout the life of the permit in accordance with the most current Scope-of-Work that has been approved by the TCEQ.

6. Any request for revision of the receiving water monitoring program must be submitted to the TCEQ for review and approval. At the same time, the permittee shall provide a copy of the scope of work to the Texas Department of Health, Texas Parks and Wildlife Department, and the other parties to the evidentiary hearing, and make the scope of work available to the local citizens by filing it in the local library.

7. As a result of the findings of the receiving water monitoring program, the Executive Director may initiate the permit amendment process to require additional and/or modified effluent limits, to require additional effluent monitoring, and/or to require significant modifications to the receiving water monitoring program.

CHRONIC BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival or growth of the test organisms.

b. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition" (EPA-821-R-02-014), or its most recent update:

1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*) (Method 1007.0 or its most recent update). A minimum of eight replicates with five organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0 or its most recent update). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 4%, 6%, 8%, 10%, and 13% effluent. The critical dilution, defined as 10% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

d. This permit may be amended to require a WET limit, a Chemical-Specific (CS) limit, a Best Management Practice (BMP), or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.

e. Testing Frequency Reduction

1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until the permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until the permit is reissued.

e. The lethal No Observed Effect Concentration (NOEC) effluent limitation for survival of not less than 10% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) is effective at the permit issue date for both test species.

f. If a test fails to meet the lethal NOEC of 10%, the testing frequency for that species increases to monthly until compliance is demonstrated for three consecutive months, at which time the permittee may resume a quarterly testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:

1) a control mean survival of 80% or greater;

2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;

3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.

4) a control Coefficient of Variation percent (CV%) between replicates of 40 or less in the in the growth and survival tests.

5) a critical dilution CV% of 40 or less in the growth and survival endpoints for either growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test.

6) a Percent Minimum Significant Difference of 37 or less for mysid shrimp growth;

7) a Percent Minimum Significant Difference of 28 or less for inland silverside growth.

b. Statistical Interpretation

1) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the methods described in the manual referenced above, or its most recent update.

2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The EPA manual, AMethod Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004), provides guidance on determining the validity of test results.

3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).

5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2 above.

6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The above-referenced guidance manual will be used when making a determination of test acceptability.

c. Dilution Water

1) Dilution water used in the toxicity tests shall be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;

b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

3) Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum numbers of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced above, or its most recent update, for every valid and invalid toxicity test initiated whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the form.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12 month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the mysid shrimp, Parameter TLP3E, enter a “1” if the NOEC for survival is less than the critical dilution; otherwise, enter a “0.”

2) For the mysid shrimp, Parameter TOP3E, report the NOEC for survival.

3) For the mysid shrimp, Parameter TXP3E, report the LOEC for survival.

4) For the mysid shrimp, Parameter TWP3E, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

5) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.

6) For the mysid shrimp, Parameter TYP3E, report the LOEC for growth.

7) For the inland silverside, Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the inland silverside, Parameter TOP6B, report the NOEC for survival.

9) For the inland silverside, Parameter TXP6B, report the LOEC for survival.

10) For the inland silverside, Parameter TWP6B, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the inland silverside, Parameter TPP6B, report the NOEC for growth.

12) For the inland silverside, Parameter TYP6B, report the LOEC for growth.

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

e. The permittee shall report the Whole Effluent Lethality values for the 30-day Average Minimum and the 7-day Minimum under Parameter No. 22414 for the appropriate reporting period. If more than one valid test was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the Daily Average Minimum NOEC for that reporting period. The data submitted should reflect the lowest survival results during the reporting period.

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant sublethal (but not lethal) effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival or growth) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control. Significant sublethality is defined as a statistically significant difference in growth at the critical dilution when compared to the growth of the test organism in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant sublethal (but not lethal) effect at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion.

b. If neither retest demonstrates significant lethality, the permittee shall resume testing at the quarterly frequency.

c. No more than one retest per month is required for a test species.

5. Toxicity Reduction Evaluation

a. Within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a General Outline for initiating a Toxicity Reduction Evaluation (TRE). The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and/or an appropriate control measure.

g. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify CS limits.

TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

		Date Time	Date Time
Dates and Times Composites Collected	No. 1	FROM: _____	TO: _____
	No. 2	FROM: _____	TO: _____
	No. 3	FROM: _____	TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic dilution water

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%*
	A	B	C	D	E	F	G	H	24h	48h	7 day	
0%												
4%												
6%												
8%												
10%												
13%												

* Coefficient of Variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	4%	6%	8%	10%	13%
A						
B						
C						
D						
E						

TABLE 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	4%	6%	8%	10%	13%
F						
G						
H						
Mean Dry Weight (mg)						
CV%*						
PMSD						

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (10%): _____ YES _____ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

   CRITICAL DILUTION (10%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

		Date Time		Date Time
Dates and Times Composites Collected	No. 1	FROM: _____	TO:	_____
	No. 2	FROM: _____	TO:	_____
	No. 3	FROM: _____	TO:	_____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
4%									
6%									
8%									
10%									
13%									

* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
4%							
6%							
8%							
10%							
13%							
PMSD							

Weights are for: ___ preserved larvae, or ___ unpreserved larvae

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (10%): _____ YES _____ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

   CRITICAL DILUTION (10%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or its most recent update:

1) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

2) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.

d. This permit may be amended to require a WET limit, a Chemical-Specific (CS) limit, a Best Management Practice (BMP), or other appropriate actions to address toxicity to the inland silverside. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.

e. The Lethal Concentration (LC) 50 effluent limitation of greater than 100% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) for the mysid shrimp is effective at the permit issue date.

f. If a mysid shrimp test fails to meet an LC50 of greater than 100%, the testing frequency increases to monthly until compliance is demonstrated for three consecutive months, at which time the permittee may resume a quarterly testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 001.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced above, or its most recent update, for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the form.

1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.

2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the mysid shrimp, Parameter TIE3E, enter a “0” if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”

2) For the inland silverside, Parameter TIE6B, enter a “0” if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”

d. Enter the following codes for inland silverside retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

e. The permittee shall report the Whole Effluent Lethality values for the 30-day Average Minimum and the 7-day Minimum under Parameter No. 22414 for the mysid shrimp for the appropriate reporting period. If more than one valid test was performed during the reporting period, the test LC50s will be averaged arithmetically and reported as the 30-day Average Minimum for that reporting period. The 7-day Minimum should reflect the lowest LC50 during the reporting period.

4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, and only for the inland silverside, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a Toxicity Reduction Evaluation (TRE). The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and/or an appropriate control measure.

g. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. This exemption was previously granted in a letter dated September 28, 2007, and allows the permit to use an approved ion-adjustment protocol with the mysid shrimp.

i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.

TABLE 2 (SHEET 1 OF 2)

MYSID SHRIMP SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

INLAND SILVERSIDE SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

ATTACHMENT D

TCEQ INTRA-AGENCY TRANSMITTAL MEMO

DATE: 08.17.2015

TO: FINAL DOCUMENTS TEAM LEADER
OFFICE OF THE CHIEF CLERK

BUILDING F, MC-105

FROM: KATHY J. HUMPHREYS
ENVIRONMENTAL LAW DIVISION
BUILDING A, MC-173

Attached: Executive Director's Response to Comments

Application Information
Program Area (Air, Water or Waste): Water
Permit No. WQ0002436000 Name: Formosa Utility Venture LTD and Formosa Plastics Corporation

OCC Action Required *(check applicable boxes)*
Date stamp and return copy to above-noted ELD Staff Attorney and:

FOR ALL PROGRAM AREAS: *(required only when changes needed to official agency mailing list)*
Update the mailing list in your file with the attached contact names and addresses

FOR WASTE & WATER:
X Send Response to Comments Letter which solicits hearing requests and requests for reconsideration to the mailing list in your files
For Waste and Water this would occur in all circumstances when comments have been received for 801 applications
Or
Send Response to Comments Letter and Motion to Overturn Letter which solicits motions to overturn to the mailing list in your files
For Waste and Water this may occur when all comments have been withdrawn for 801 applications or when comments are received for applications that will not be set for agenda.

TPDES PERMIT NO. WQ0002436000

APPLICATION BY FORMOSA UTILITY VENTURE, LTD AND FORMOSA PLASTICS CORPORATION, TEXAS	§ § § §	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ) files this Response to Public Comment (Response) on the application for a major amendment with renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002436000 by Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas (Formosa) and the ED's preliminary decision. Pursuant to 30 Texas Administrative Code (TAC) Section (§) 55.156, before an application is approved and a permit is issued, the ED prepares a response to all timely, relevant and material, or significant comments. The Office of the Chief Clerk received timely comment letters from: Diane Wilson on behalf of Texas Injured Workers (Injured Workers); Diane Wilson on behalf of San Antonio Bay Water Keeper (Water Keeper); Amy R. Johnson and Enrique Valdivia on behalf of Mauricio Blanco, Hurtado Francisco, Jose Luis Cruz, and the Union of Commercial Oysterman of Texas (collectively Union); Sylvia Balentine and Patrick Brzozowski, P.E of the Lavaca-Navidad River Authority (collectively LNRA). This response addresses all timely filed public comments received, whether or not withdrawn.

For more information about this permit application or the wastewater permitting process, please call the TCEQ Public Education Program, toll free, at 1-800-687-4040.

General information about the TCEQ can be found on our website at www.tceq.texas.gov.

BACKGROUND

Facility Description

Formosa, which operates the Point Comfort Plant, a plastics and organic and inorganic chemicals manufacturing facility, has applied for a major amendment with renewal to TPDES Permit No. WQ0002436000 to establish minimum analytical levels for oil & grease, biochemical oxygen demand (5-day), free available chlorine, and titanium; reduce Lavaca Bay monitoring from quarterly each year to quarterly triennially based on 15 years of no impacts; increase the temperature limit at Outfall 001 from 95 degrees Fahrenheit (°F) to 100 °F; authorize the discharge of non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water on an intermittent and flow variable basis via Outfall 013; increase the effluent limitations for total copper at Outfall 001; increase the effluent limitations for chloroform at Outfall 101 (proposed Outfall SUM); authorize the discharge of fire water via Outfalls 001, 101, and 201; create a summation outfall (designated as Outfall SUM) to regulate the effluents monitored via internal Outfalls 101 and 201; and authorize the discharge of fire water, potable water, and air conditioner unit condensate via Outfalls 001, 101, 201, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 012.

The existing permit authorizes the discharge of remediated groundwater and treated previously monitored effluents (via Outfalls 101 and 201) at a daily average flow

not to exceed 9,700,000 gallons per day via Outfall 001; treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters at a daily average flow not to exceed 4,400,000 gallons per day via Outfall 101; treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters, equipment/facility washdown, stormwater, and water treatment wastewaters on a continuous and flow variable basis via Outfall 201; non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 002, 003, 004, and 005; and non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water on an intermittent and flow variable basis via Outfalls 006, 007, 008, 009, 010, 011, and 012.

The facility is located at 201 Formosa Drive, one-mile north of the intersection of State Highway 35 and Farm-to-Market Road 1593, northeast of the City of Point Comfort, Calhoun County, Texas 77978. The effluent is discharged via Outfall 001, through a pipeline to Lavaca Bay/Chocolate Bay; via Outfall 011 from the Dock Tank Farm to a ditch, thence to a drainage pipe directing the flow to Point Comfort turning basin, thence to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay, in Segment No. 2454 of the Bays and Estuaries. The unclassified receiving waters have no significant aquatic life use for the unnamed ditches and high aquatic life use for Cox Lake. The designated uses for Segments 2453

and 2454 are exceptional aquatic life use, contact recreation, and oyster waters.

In accordance with 30 TAC § 307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards (TSWQS), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Cox Lake, which has been identified as having high aquatic life use, or in Cox Bay or Lavaca Bay/Chocolate Bay, which have been identified as having exceptional aquatic life use. The current TSWQS should be used to determine copper limits for this facility. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The ED has reviewed this action for consistency with the Texas Coastal Management Program (CMP) goals and policies in accordance with the regulations of the General Land Office, and has determined that the action is consistent with the applicable CMP goals and policies.

Procedural Background

TCEQ received the application on February 2, 2010 and declared it administratively complete on April 7, 2010. The ED completed the technical review of the application on September 27, 2010 and prepared a draft permit. The draft permit was originally filed with the TCEQ Office of the Chief Clerk on June 9, 2011; it was

remanded back to the Executive Director on August 31, 2011 for further technical review. The draft permit was re-filed with the TCEQ Office of the Chief Clerk on May 9, 2013. The Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI) was published on April 28, 2010 in English in the *Port Lavaca Wave*, and on May 5, 2010 in Spanish in the *Revista de Victoria*. The Notice of Application and Preliminary Decision (NAPD) was published on June 12, 2013 in English in the *Port Lavaca Wave,* and on July 3, 2013 in Spanish in the *Revista de Victoria*. The public comment period ended on August 2, 2013. If the NAPD is mailed more than two years after the NORI is mailed, the applicant must submit an updated landowner map and list.[1] The ED was unable to verify whether Formosa submitted the updated information before the NORI was mailed in June 2013; therefore, the ED required Formosa to submit a new landowner map and list prior to completing the Response. On June 10, 2015, the ED mailed the NORI to the landowners that are on the list Formosa submitted in 2015 that were not on the original landowner list. The ED did not receive any additional comments.

Since this application was administratively complete after September 1, 1999, it is subject to House Bill 801 (76th Legislature, 1999).

Access to Rules, Laws, and Records

Please consult the following websites to access the rules and regulations applicable to this permit:

- to access the Secretary of State website: http://www.sos.state.tx.us/;

[1] 30 TAC § 39.551.

- for TCEQ rules in Title 30 of the Texas Administrative Code:

  www.sos.state.tx.us/tac/ (select "TAC Viewer" on the right, then "Title 30 Environmental Quality");

- for Texas statutes: http://www.statutes.legis.state.tx.us/;

- to access the TCEQ website: www.tceq.texas.gov (for downloadable rules in Adobe PDF formats, select "Rules" then "Current TCEQ Rules", then "Download TCEQ Rules");

- for Federal rules in Title 40 of the Code of Federal Regulations: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl; and

- for Federal environmental laws: http://www2.epa.gov/laws-regulations.

Commission records on the application are available for viewing and copying at the TCEQ main office, 12100 Park 35 Circle, Austin, Texas 78753, on the 1st floor of Building F (Office of the Chief Clerk), for the current application until final action is taken. The application for this facility has been available for viewing and copying at the Calhoun County Branch Library, 1 Lamar Street, Point Comfort, Texas 77978 and the Jackson County Public Library, 411 North Wells Street, Edna, Texas 77957 since publication of the NORI. The draft permit, statements of basis and technical summary, and the ED's preliminary decision have been available for viewing and copying at the same locations since publication of the NAPD.

For more information about this permit application or the wastewater permitting process, please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found on our website at www.tceq.texas.gov.

COMMENTS AND RESPONSES

COMMENT 1:

Injured Workers and Water Keeper expressed concern that Formosa discharges floating debris and suspended solids and provided several examples of floating debris and suspended solids including: 1) polyethylene pellets (solids) floating throughout Lavaca Bay and along the adjacent shoreline (discovered by the U.S. Environmental Protection Agency (EPA)); 2) significant PVC dust littering the workplace, process area, and drainage ditches leading to outfalls to the bay (discovered by the EPA); 3) PVC pellets found near the boat launching area and adjacent shores at Cox Creek (behind Formosa); and 4) a deposit of PVC pellets found by a visitor at the Formosa guest house.

RESPONSE 1:

The draft permit does not authorize Formosa to discharge floating debris and suspended solids via the permitted outfalls. The draft permit states "[T]here shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil."[2] This provision does not apply to areas within the internal boundaries of the plant such as the process areas, work areas, and internal drainage ditches that convey wastewaters prior to discharge via the designated outfalls. The compliance history for Formosa does not indicate any violations for the types of incidents described in the comment.

COMMENT 2:

Union stated that polyethylene pellets have been found in Lavaca Bay, coming

[2]Formosa Draft Permit – WQ0002436000, Provision No. 3, Pages 2a, 2d, 2g, 2k, 2l, 2m, and 2n.

from the Formosa facility. According to Union, the permit should clarify that polyethylene pellets are "solids" under the permit and they are specifically prohibited from discharge. Further, it should be clarified that if these pellets are in the discharge, it is a violation of 30 TAC § 307.4(b)(2 - 4).

RESPONSE 2:

The draft permit prohibits Formosa from discharging any kind of floating solids.[3] The Executive Director has determined that it is not necessary to specify that polyethylene pellets are a solid, or to specify that if Formosa discharges polyethylene pellets it would be a violation of 30 TAC § 307.4(b)(2 - 4). The draft permit provides:

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.[4]

These provisions require Formosa to comply with all applicable rules, including 30 TAC § 307.4(b).

Additionally, the Executive Director conducts routine inspections of facilities to ensure the facility complies with all applicable authorizations and that all required authorizations have been obtained.

If anyone observes the discharge of any solid, including polyethylene pellets, they

[3] Formosa Draft Permit – WQ0002436000, Provision No. 3, Pages 2a, 2d, 2g, 2k, 2l, 2m, and 2n.
[4] Formosa Proposed Permit – WQ0002436000, Page 7, Permit Conditions, Item 2.

should contact the TCEQ Region 14 Office in Corpus Christi at 361-825-3100, or by using the statewide toll-free number at 1-888-777-3186. Citizen complaints may also be filed on-line at http://www2.tceq.texas.gov/oce/complaints/index.cfm.

If the Executive Director finds that Formosa is out of compliance with the terms or conditions of its permit, or with TCEQ regulations, it may be subject to enforcement.

COMMENT 3:

Union stated that Formosa should be required to immediately remove any polyethylene pellets in its discharge and Formosa should report, to TCEQ, the details of the discharge and whatever steps it has taken to clean the pellets within 24 hours of such a discharge.

RESPONSE 3:

Formosa must notify the TCEQ within 24 hours of any noncompliance, including the discharge of polyethylene pellets. As part of the notification, Formosa must include steps it has taken or plans to take to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects. Specifically, the draft permit requires Formosa to report any noncompliance that may endanger human health or safety, or the environment to the TCEQ within 24 hours of becoming aware of the noncompliance. Additionally, Formosa must provide a written submission of such information within five working days of becoming aware of the noncompliance.

The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been

corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.[5]

COMMENT 4:

Injured Workers and Water Keeper expressed concern over the phthalates in Lavaca Bay. According to Injured Workers and Water Keeper, the presence of phthalates in an area of active commercial shrimping and fishing is disturbing because phthalates are known to bioconcentrate in shrimp, oysters, and some fish, increasing the likelihood of human exposure.

RESPONSE 4:

A review of surface water quality monitoring data for Lavaca Bay indicates no detectable levels of the phthalate compounds in data collected from the nearby monitoring station during the last ten years (2004-present). This data was accessed from data collected by the TCEQ's Surface Water Quality Monitoring (SWQM) Program, which monitors and evaluates physical, chemical, and biological characteristics of aquatic systems as a basis for effective policy.

The regulatory requirements in the draft permit for the phthalate compounds will help ensure that the effluent from Formosa does not contribute to phthalates in Lavaca Bay that would cause exceedances of the applicable TSWQS. The draft permit regulates four phthalate compounds [Bis (2-ethylhexyl) phthalate, Diethyl phthalate, Dimethyl phthalate, and Di-n-butyl phthalate] at internal Outfalls 101 and 201, and at summation

[5] Formosa Draft Permit – WQ0002436000, Provision No. 7.a, Page 5; 30 TAC § 305.125(9).

Outfall SUM. TCEQ is required to include effluent limits for these phthalate compounds in TPDES permits for facilities, such as Formosa, that manufacture organic chemicals, plastics or synthetic fibers.[6]

The internal outfalls (101 and 201) are separate contributing sources that are monitored on a quarterly frequency by composite sampling. The summation outfall (SUM) is the mathematical summation of the loading determinations at the internal sources (Outfalls 101 & 201). Daily average and daily maximum reporting requirements for mass loadings and single grab concentration limitations are imposed at the internal sources (Outfalls 101 and 201). Daily average and daily maximum mass limitations are imposed at the summation of both sources (Outfall SUM).

Outfall	Parameter	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L
101	Bis (2-ethylhexyl) phthalate	Report	Report	0.358
	Diethyl phthalate	Report	Report	0.260
	Dimethyl phthalate	Report	Report	0.060
	Di-n-butyl phthalate	Report	Report	0.073

[6] 40 CFR § 414.91.

Outfall	Parameter	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L
201	Bis (2-ethylhexyl) phthalate	Report	Report	0.358
	Diethyl phthalate	Report	Report	0.260
	Dimethyl phthalate	Report	Report	0.060
	Di-n-butyl phthalate	Report	Report	0.073
SUM	Bis (2-ethylhexyl) phthalate	2.69	7.29	N/A
	Diethyl phthalate	2.12	5.30	N/A
	Dimethyl phthalate	0.50	1.23	N/A
	Di-n-butyl phthalate	0.71	1.49	N/A

The following table documents that the draft effluent limitations continued from the existing permit are more stringent than both the required technology-based effluent limitations to comply with the requirements of 40 CFR § 414.91, and the calculated water quality-based effluent limitations that would be required to be protective of the criteria for human-health protection in the receiving waters.

Compound	Proposed Daily Average Outfall SUM (lbs/day)	Technology Based Limit (lbs/day)	Water Quality Based Limit (lbs/day)
Bis (2-ethylhexyl) phthalate	2.69	3.48	90.7
Diethyl phthalate	2.12	2.73	N/A
Dimethyl phthalate	0.50	0.64	N/A
Di-n-butyl phthalate	0.71	0.91	6662

Finally, the self-reporting data indicates no detectable levels of bis(2-ethylhexyl) phthalate, diethyl phthalate, dimethyl phthalate, or di-n-butylphthalate in the effluent at Outfall 101.[7]

COMMENT 5:

Injured Workers and Water Keeper asked whether the effect of the plasticizers in Formosa's discharge have been evaluated on humans.

RESPONSE 5:

The Executive Director has not reviewed any evaluations related to the effects of plasticizers in Formosa's discharge on humans and is not aware if any evaluations have been performed.

The quality of the effluent discharged via Formosa's permitted outfalls has been screened against the calculated water quality-based effluent limitations necessary for the protection of the Texas Surface Water Quality Standards (30 TAC Chapter 307)

[7] *See*, Fact Sheet and Executive Director's Preliminary Decision, Section VI, for the quantitative description of the discharge as described in the Monthly Effluent Report data for the period of January 2005 through June 2010.

criteria for aquatic life and human health protection. The draft permit includes appropriate effluent limitations required for aquatic life and human health protection. The draft permit includes effluent limitations for bis(2-ethylhexyl)phthalate and di-n-butylphthalate, which are two known plasticizers. The effluent limitations for these pollutants in the draft permit are significantly more stringent than the limitations required for human-health protection (consumption of marine fish tissue).[8]

COMMENT 6:

Injured Workers and Water Keeper asked how the increased copper limit at Outfall 001 can be justified since the limit is based on the state water quality standard. Injured Workers and Water Keeper also asked how an increase in copper loadings through Outfall 001 is justified.

Similarly, Union stated that backsliding on effluent limitations in TPDES permits is prohibited. 40 CFR § 122.44(l)(i)(2). According to Union, the backsliding prohibition means the quality of the effluent may not be worse in a reissued permit than it was in the previous permit. Union noted that the copper limit at Outfall 001 in the existing permit is 1.37 lb/day. In the draft permit, the copper limit is 1.47 lb/day. Thus, according to Union, the proposed less stringent limits violate the anti-backsliding regulation.

RESPONSE 6:

EPA's anti-backsliding regulations allow for effluent limitations to be increased (i.e., made less stringent) when "[M]aterial and substantial alterations or additions to

[8] *See,* Response 5, above.

the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation."[9]

In its application Formosa stated that past and pending process changes include new and modified manufacturing processes that affect the copper content of the wastewater discharged via Outfall 001. Even though Formosa has historically maintained compliance with the mass effluent limitations in its existing permit, recent process changes have increased (and are projected to continue increasing) actual copper discharge quantities. Recent trends in copper measurements indicate that it will soon be infeasible for Formosa to meet the mass effluent limitations for copper in the existing permit on a consistent basis. The effluent limitations for total copper in the draft permit are based on and comply with the applicable water quality criteria for copper in 30 TAC Chapter 307 and do not violate EPA's anti-backsliding regulations.

COMMENT 7:

Injured Workers and Water Keeper commented that Formosa should not be allowed to discharge copper into the bay.

RESPONSE 7:

The TCEQ does not have jurisdiction to prohibit Formosa from discharging copper into the bay if Formosa is able to meet the required effluent limits. The draft permit includes water quality based effluent limits for copper.

The effluent limits in TPDES permits are either technology-based effluent limits that reflect the best controls available or water quality-based effluent limits, depending

[9] 40 CFR § 122.44(l)(2)(i)(A).

on which limit is the most protective. Technology-based limits are used, unless they will not protect water quality or the designated uses. In that case, additional water quality-based effluent limitations and/or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

Effluent limitations for total copper are required to be included in the draft permit based on EPA categorical guidelines in 40 CFR § 414.91. Technology-based effluent limitations were calculated based on the building-block approach which provides for appropriate allocations for pollutants from the multiple sources (process wastewaters, utility wastewaters, etc.) contributing to the combined discharge. Although allocations for non-process wastewaters are appropriate for technology-based effluent limitations for total copper at Outfall 001, only the allocations required for the applicable categorical guidelines for process wastewaters (40 CFR 414.91) will be referenced in the remainder of this response for discussion and comparison purposes. The required daily average and daily maximum technology-based effluent limitations (process wastewater allocations only) for Outfall 001 are 4.72 lbs/day and 11.01 lbs/day, respectively. The calculated daily average and daily maximum water quality-based effluent limitations (all Outfall 001 combined wastewaters) for Outfall 001 are 1.47 lbs/day and 3.11 lbs/day, respectively. The limits in the draft permit are based on the calculated water quality-based effluent limitations, which are more stringent than the required technology-based effluent limitations.

The designated uses for Segments 2453 and 2454 are exceptional aquatic life use, contact recreation, and oyster waters. The effluent limits in Formosa's draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses.

COMMENT 8:

Injured Workers and Water Keeper asked if since the water quality standard for copper is concentration-based, the draft permit should also include concentration-based effluent limits as well as mass limits.

RESPONSE 8:

The Executive Director has determined that there is not a statutory or regulatory basis to require concentration limitations in addition to the statutory required mass effluent limitations. According to 40 CFR § 122.45(f):

> All pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass except: (i) For pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass; (ii) When applicable standards and limitations are expressed in terms of other units of measurement; or (iii) If in establishing permit limitations on a case-by-case basis under §125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.

Effluent limitations for total copper must be included in the proposed permit based on 40 CFR § 414.91(a), which specifies:

> Any point source subject to this subpart must achieve discharges not exceeding the quantity (mass) determined by multiplying the process

wastewater flow subject to this subpart times the concentrations in the following table.

The calculated "mass" water quality-based effluent limitations were compared to the required technology-based effluent limitations, determined to be more stringent, and included in the draft permit. Although there are some parameters that continue existing mass and concentration limitations from the current permit, there is no statutory basis to require new concentration limitations in addition to the statutory required mass effluent limitations for other parameters.

COMMENT 9:

Injured Workers and Water Keeper asked that given the synergistic effect of copper with mercury from Alcoa's nearby mercury Superfund site, would an increase in copper loadings trigger an unforeseen synergistic effect on the marine life and ecosystem in Lavaca Bay.

RESPONSE 9:

Few studies exist on the effects that multiple metal cocktails have on fish and aquatic food chains, but those that do show complex chemical interactions and reactions. Such mixtures, combined with site-specific water chemistries and species diversity, make comparisons among sites extremely difficult. Despite the difficulty of assessing synergistic effects, existing water quality criteria potentially can address synergistic effects in the development process of numerical water quality criteria.

First, safety factors (also called uncertainty factors) are applied when calculating criteria for both the protection of aquatic life and human health. These factors result in

more stringent criteria to account for unknown variables such as synergistic effects. All numeric criteria are developed under EPA guidance and must be approved by the EPA prior to implementation in TPDES permitting.

Second, to determine the potential synergistic effect of an increase in copper loadings on the marine life and ecosystem in Lavaca Bay, biomonitoring is used to measure potential toxicity. Biomonitoring incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. To assess potential toxicity the draft permit requires Formosa to perform both chronic and 24-hour acute biomonitoring at Outfall 001. If there is persistent significant toxicity (multiple failures in a prescribed time), then Formosa will be required to perform a toxicity reduction evaluation (TRE). At the end of the TRE, the ED will either add a Whole Effluent Toxicity (WET) or chemical-specific limit to the permit that will be protective of aquatic life. If, at the time of permit renewal, there were several random failures that never triggered a TRE, reasonable potential would result in a WET limit being added to the permit.

COMMENT 10:

Injured Workers and Water Keeper expressed concern that the five-degree increase in temperature will negatively affect the oysters.

RESPONSE 10:

Formosa withdrew its request to increase the effluent limitation for temperature at Outfall 001. The existing effluent limit for temperature of 95 degrees Fahrenheit is continued in the draft permit.

COMMENT 11:

Injured Workers and Water Keeper expressed concern that very little has been mentioned in the draft permit regarding the effects of Formosa's toxic discharge on the oyster reefs in Lavaca Bay and surrounding area. According to Injured Workers and Water Keeper, given the significant economics played by the commercial oyster industry in Calhoun County and the businesses and families associated, it is critical that the impacts of the discharge onto this industry and to the oyster reefs be fully evaluated.

RESPONSE 11:

The designated uses for Segments 2453 and 2454 are exceptional aquatic life use, contact recreation, and oyster waters. The Texas Surface Water Quality Standards found at 30 TAC Chapter 307 state that "surface waters must not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life."[10] The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

Effluent limitations and conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality

[10] 30 TAC §307.4(d).

management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses.

COMMENT 12:

Injured Workers and Water Keeper asked how the increase in the amount of effluent that Formosa would be authorized to discharge will affect the oyster reefs in Lavaca Bay.

RESPONSE 12:

The draft permit does not authorize an increase in the volume of effluent Formosa would be authorized to discharge to Lavaca Bay. In both the current permit and in the draft permit, Formosa is authorized to discharge 9.7 MGD (daily average) and 15.1 MGD (daily maximum) via Outfall 001. Formosa may also discharge via Outfalls 002-012, which consist of predominant stormwater contributing sources, on an intermittent and flow variable basis. Additionally, except for total copper at Outfall 001 and chloroform at Outfall SUM (101 and 201), there are no increases in the pollutant loadings authorized in the draft permit. The effluent limits for total copper at Outfall 001 were increased to levels that comply with calculated water quality-based effluent limitations at Outfall 001. The effluent limits for chloroform at Outfall SUM were increased to levels that are significantly less than the calculated water quality-based effluent limitations at Outfall 001. All increases are within the allowable levels for water quality protection.

Because the draft permit does not authorize an increase in the volume of effluent or the pollutant loading of the effluent (except for copper and chloroform), if the draft

permit is issued, the ED does not anticipate an adverse effect on the oyster reefs in Lavaca Bay.

COMMENT 13:

Injured Workers and Water Keeper asked what the effect of Formosa's permit requirement that flow/concentrations be adjusted to low and high tides in Lavaca Bay has been. According to Injured Workers and Water Keeper, a Corpus Christi biologist informed them that repeated boat trips by TCEQ to Lavaca Bay to monitor discharge flow during high and low tides appeared to show discrepancies in Formosa's reporting. Injured Workers and Water Keeper asked whether the truth and/or validity of the biologist's statement can be investigated.

RESPONSE 13:

Neither the existing nor the proposed TPDES permits have a requirement that Formosa adjust the flow or concentration limits to low and high tides in Lavaca Bay. The validity of the statement by the Corpus Christi biologist cannot be verified with the information provided.

COMMENT 14:

Injured Workers and Water Keeper stated that the TCEQ should perform a five-year study of Formosa's wastewater exceedances, enforcement actions, administrative orders, and violations to determine whether Formosa deserves authorization to increase its flows and loading of toxins into Lavaca Bay, and to decrease its monitoring requirements.

Similarly, Union stated that according to Texas Water Code § 26.0281, the ED

must consider Formosa's compliance history when reviewing its TPDES permit. According to Union, Commissioners deserve to know the full extent of Formosa's disregard for the law and the failure to protect the surrounding environment. Specifically, Union requests that TCEQ fully document Formosa's compliance problems with all laws over the past 20 years.

Additionally, according to Union, Formosa should not be allowed a $1.7 billion expansion in Texas until it can show a track record of environmental compliance. At a minimum, permit terms should be explicit and reporting more frequent so that Formosa will be required to comply with its discharge permit. Formosa has demonstrated a disregard even for a settlement with the government. No permit should be granted that allows additional discharges, but if TCEQ does grant the permit, any permit should make specific terms requiring Formosa's compliance.

RESPONSE 14:

The ED considered Formosa's compliance history during the technical review of Formosa's application. A compliance history review is conducted on the owner/operator (customer) and the regulated entity (site) based on the criteria in 30 TAC Chapter 60. The compliance history is reviewed for the five-year period prior to the date the permit application was received by the ED, and includes multimedia compliance-related components about the site under review.[11] The components of the compliance history include: enforcement orders; consent decrees; court judgments; criminal convictions; chronic excessive emissions events; investigations; notices of violations; audits and

[11] 30 TAC § 60.1.

violations disclosed under the Audit Act; environmental management systems; voluntary on-site compliance assessments; voluntary pollution reduction programs; and early compliance. The compliance history is limited, however, to rules that TCEQ has jurisdiction over. TCEQ does not have jurisdiction over rules promulgated by other entities, such as the Occupational Health and Safety Administration (OSHA); therefore, only violations of TCEQ's rules are considered in the ED's compliance history review.

Formosa's application was received on February 2, 2010; therefore, the company and site were rated and classified pursuant to 30 TAC § 60.12.13. According to the rules, a company and site may have one of the following classifications and ratings:

(1) a high performer classification, has a rating of fewer than 0.10 points and is considered to have an above-satisfactory compliance record;

(2) a satisfactory performer classification, has a rating between 0.10 points to 55 points and is considered to generally comply with environmental regulations; or

(3) an unsatisfactory performer classification, has a rating above 55 points and is considered to perform below minimal acceptable performance standards established by the commission.

Because the regulated site has two customer entities, two separate compliance histories were generated and reviewed for the site. The compliance history for the customer entity of Formosa Plastics Corporation, Texas yields a company rating of 7.39

[12] Note that the CH rules have recently changed, but this application was evaluated using the rules in effect at the time the application was received.

and site rating of 7.65; both classifications are Satisfactory. The compliance history for the customer entity of Formosa Utility Venture, Ltd. yields a company rating of 7.10 and site rating of 7.10; both classifications are Satisfactory. The company rating and classification is the average of the ratings for all sites the company owns. Based on these ratings and classifications, the ED has determined that Formosa is operating in compliance with the applicable rules and regulations.

COMMENT 15:

Injured Workers and Water Keeper stated that a 2007 study of the Lavaca Bay oysters by Texas A&M researcher, Wes Bissett, evaluated the health of the marine ecosystem in Lavaca Bay. Results indicated that proximity to industrial facilities increased the risk of genotoxicity in this species. Injured Workers and Water Keeper asked how the oyster resource that is so critical for the economic survival of the commercial oystermen, and the businesses and families associated with them, will not be injured by the proposed discharge.

Union commented that Formosa's increased discharge of pollutants into Segments 2453 and 2454 will cause unreasonable degradation of the water quality of those waters. According to Union, the designated uses for segments 2454 and 2453 require the highest protection for exceptional aquatic life use, contact recreation and oyster waters and the additional discharges may threaten the existing uses for segments 2453 and 2454.

RESPONSE 15:

To ensure that the existing water quality uses will be maintained, the ED performed an antidegradation review.[14] The Tier 1 antidegradation review preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. The Tier 2 review preliminarily determined that no significant degradation of water quality is expected in Cox Lake, which has been identified as having high aquatic life use, or in Cox Bay or Lavaca Bay/Chocolate Bay, which have been identified as having exceptional aquatic life use. Existing uses will be maintained and protected.

Texas Surface Water Standards (TSWQS) state that "surface waters must not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

Additionally, TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect

[14] 30 TAC §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards.

water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. Effluent limitations for the following parameters in the draft permit are based on water quality-protection: whole effluent toxicity (7-day chronic), whole effluent toxicity (24-hour acute), total copper, hexavalent chromium, total chromium, total lead, total zinc, carbonaceous biochemical oxygen demand (5-day), ammonia (as nitrogen), dissolved oxygen, total mercury, benzene, 1,2-dichloroethane, phenol, toluene, trichloroethylene, vinyl chloride, *Enterococci*, and 2,3,7,8-TCDD Equivalents at Outfall 001; phenanthrene at Outfall 101; total nickel at Outfall 201; and hexachlorobenzene at Outfall SUM. All other effluent limitations in the draft permit are technology-based.

The draft permit was developed in accordance with the TSWQS. These standards are designed to maintain the quality of water in the state and to be protective of human health and the environment. The designated uses for Segment 2453 and 2454, Lavaca Bay/Chocolate Bay and Cox Bay, are contact recreation, oyster waters, and exceptional aquatic life use. The requirements in the draft permit were established to maintain and protect these uses as long as Formosa operates and maintains the facility according to TCEQ rules and the requirements in the draft permit.

COMMENT 16:

Injured Workers and Water Keeper commented that all requests for reducing

Formosa's monitoring should be disapproved. According to Injured Workers and Water Keeper, the reduction in Formosa's monitoring should not be approved because of Lavaca Bay's shallow waters, the significant part that Lavaca Bay plays in the health of the Matagorda Bay estuary, and Formosa's own admission that they will not meet limits on a consistent basis. According to Injured Workers and Water Keeper, more monitoring is warranted, not less.

Union stated that Formosa's duty to monitor Lavaca Bay should not be reduced from quarterly each year to such a requirement every three years because the Bay is of high quality and Formosa has a history of noncompliance with its permits and illegal discharges. According to Union, monitoring to protect oysters, abundant wildlife and recreation is necessary.

Similarly, LNRA stated that it would prefer the annual monitoring of Lavaca Bay be continued.

RESPONSE 16:

The request to reduce Lavaca Bay monitoring frequency from quarterly each year to quarterly triennially was withdrawn by Formosa. No reductions were made to the monitoring frequencies for Lavaca Bay from those specified in the current permit. Review of the historical self-monitoring data indicates that there is no demonstration of a pattern of non-compliance that warrants an increase in the required monitoring frequencies in the draft permit. No changes were made to any of the monitoring frequencies in the draft permit.

COMMENT 17:

Injured Workers and Water Keeper commented that Formosa should not be authorized to discharge any wastewater. According to Injured Workers and Water Keeper, in 1997, Formosa Plastics signed an agreement with her, EPA, Texas Natural Resource Conservation Commission (a predecessor agency to the TCEQ), and Jim Blackburn to reduce its discharge of wastewater to zero. Also, according to Injured Workers and Water Keeper, 33 percent of Formosa's original waste stream was recycled with hundreds of thousands of gallons of fresh water saved daily. In addition, the following year, Calhoun County Commissioners signed a resolution supporting zero discharge of industrial wastewaters in the area.

RESPONSE 17:

The Texas Water Code provides that the TCEQ may authorize discharges into water in the state.[15] The ED does not have the authority to mandate a different discharge location or different type of wastewater treatment plant. The ED evaluates applications for wastewater treatment plants based on the information provided in the application.

COMMENT 18:

Union stated that Formosa's permit must be demonstrably consistent with the Coastal Management Program (CMP) for the Bays and water system; and according to Union, it is not clear from the draft permit that the program is consistent with the CMP.

RESPONSE 18:

The ED reviewed Formosa's application for consistency with the goals and

[15] TWC § 26.027.

policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office (GLO) and has determined that the action is consistent with the applicable CMP goals and policies.

The rules for both TCEQ and the GLO specify which types of agency actions may be referred to the GLO for review for consistency with the CMP goals and policies.[16] Referrals to the GLO for applications for individual industrial wastewater permits are limited to "(i) to discharge effluent subject to categorical limits that increase mass loading of pollutants into priority segments (Appendix B); or (ii) to change the point of discharge from outside into a priority segment (Appendix B)."[17] Neither of the receiving water segments (Segment No. 2453 or 2454) are priority segments as listed in Appendix B of 30 TAC Chapter 281. Therefore, the ED's action on the Formosa application may not be referred to the GLO for review for consistency with the CMP goals and policies.

COMMENT 19:

Union commented that New Source Performance Standards (NSPS), found at 40 CFR § 122.2, apply to Formosa. According to Union, this means that in order to comply with the law, the permit must include appropriate effluent limitation guidelines, monitoring requirements, limitations, and permit conditions, all from the new source performance standards. Union stated that TCEQ has not applied all the NSPS standards to this permit, and the entire permit must be made consistent with those NSPS standards. Union stated that one example on noncompliance involves the technology at

[16] See, 30 TAC § 281.46 and 31 TAC § 505.26.
[17] 30 TAC § 281.46(2)(D).

Outfall 101. Outfall 101 contains process waste streams, regulated by the Organic Chemicals Plastics and Synthetic Fibers (OCPSF) effluent limitations, 40 CFR Chapter 414. The OCPSF requires monitoring effluent before it is mixed, which is not a permit condition in the draft permit.[18] Union stated that a thorough review of the NSPS standards with the permit will review multiple deficiencies in the permit.

RESPONSE 19:

The ED has determined that NSPS are not applicable to this facility; however, if they were, there would be no changes in the effluent limitations because the NSPS criteria are identical to the best practicable control technology currently available (BPT) criteria for the respective guidelines that were applied in the draft permit.

The discharge of process wastewater via Outfall 101 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 414. A new source determination was performed and the discharge of process wastewaters subject to the 40 CFR Part 414 categorical guidelines is not a new source as defined at 40 CFR §122.2; therefore, new source performance standards (NSPS) are not required for this discharge. The NSPS were proposed on March 21, 1983 and adopted on November 5, 1987.[19] Construction commenced on the Vinyl Chloride Monomer plant in 1982, which predates the proposal of the 40 CFR Chapter 414 categorical guidelines and classifies the site as an existing source (i.e., not a new source). The addition of new production facility at the site is defined as a "new discharger" and not as a "new source" based on the definitions.

[18] 40 CFR § 122.41(j).
[19] 52 Fed. Reg. 42568 (Nov. 5, 1987).

According to EPA a new source:

> means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: (a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.[20]

Also, according to EPA a new discharger:

> means any building, structure, facility, or installation: (a) From which there is or may be a "discharge of pollutants;" (b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979; (c) Which is not a "new source;" and (d) Which has never received a finally effective NDPES permit for discharges at that "site."[21]

The criteria for NSPS are identical to the respective best practical technology (BPT) criteria in the applicable guidelines (40 CFR Part 414, Subparts D and F).

COMMENT 20:

Union commented that the draft permit allows Formosa to discharge water at a temperature as high as 100 degrees F, which is not protective of the water quality uses of Segments 2453 and 2454. According to Union, the TWQS list the appropriate temperature for segments 2453 and 2453 as 95 degrees Fahrenheit.

Additionally, according to Union, the requirement to monitor temperature seems to eliminate any temperature reporting if the exceedance of the temperature standard does not last for more than 30 minutes and there are not 7 hours and 26 minutes of temperature exceedances in any 31-day period. Union does not believe that standard is

[20] 40 CFR § 122.2.
[11] 40 CFR § 122.2 21.

sufficiently protective. Acute, extreme temperatures can injure aquatic life.

RESPONSE 20:

The daily increase in the maximum effluent limitation for temperature that Formosa requested in its application was not included in the draft permit because Formosa did not provide sufficient justification in accordance with EPA's anti-backsliding regulations.[22] Formosa did not exceed the existing temperature effluent limit of 95 degrees Fahrenheit during the current permit term, nor did Formosa propose modifications to the facility that would be classified as material and substantial alterations to the permitted facility that would require an increase in the limitation for temperature.

Other Requirement Provision No. 10 in the draft permit is continued from the existing permit and allows for minor fluctuations above the specified effluent limitation provided those fluctuations do not exceed the effluent limitation for 1) more than 7 hours and 26 minutes in any calendar month; and 2) more than 60 minutes in any individual excursion. This standard provision is typically included in TPDES permits that include temperature limitation(s) with a continuous monitoring requirement since the "daily maximum" limitation applies to the highest observed "daily discharge" value. The "daily discharge" value is the measured value during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The total time of allowed exemption (7 hours and 26 minutes in any calendar month) is equal to approximately 1% of the reporting period time frame and is considered within the

[22] 40 CFR § 122.44(l).

statistical limits of acceptable variability. This provision is adapted from, and consistent with, federal regulations regarding acceptable excursions from pH limitations when continuous monitoring is specified in a permit.[23]

COMMENT 21:

Union commented that the draft permit allows "backsliding" on the effluent limitations for chloroform in violation of 40 CFR §122.44(l)(i)(2). Union noted that the permit states that Formosa's testing shows higher levels of chloroform than previously anticipated, and thus it must be allowed to discharge more.

According to Union, Formosa should be required to show why it cannot limit the amount of chloroform it discharges instead of being given carte blanche to pollute the Bays and backslide on conditions in its existing permit.

RESPONSE 21:

Formosa requested that the calculated technology-based effluent limitations for chloroform include allocations from the practice of using chlorine as a bacteria inhibitor in the cooling tower. Chloroform is formed as a by-product of this practice.

The draft permit does not violate EPA's anti-backsliding regulations. EPA's anti-backsliding regulations allow for backsliding to occur under certain justifiable situations. The chloroform effluent limitations were increased in accordance with EPA anti-backsliding regulations, which allow an exception to the backsliding regulations when "[I]nformation is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have

[23] 40 CFR § 401.17.

justified the application of a less stringent effluent limitation at the time of permit issuance."[24]

Formosa conducted analyses of the 40 CFR Part 414 Subpart I constituents on the contributing discharges from Outfalls 101 and 201. A review of the analytical results demonstrated that the cooling tower blowdown wastestream is a contributing source for chloroform that was not been previously recognized and was not considered when existing effluent limitations were established. The additional source of chloroform is new information not previously available for review and consideration; therefore the increase in effluent limits for chloroform is not considered backsliding.

Union commented that the permit states that Formosa's testing shows higher levels of chloroform than previously anticipated. As a point of clarification, there is no discussion in the draft permit that Formosa's testing indicates higher levels of chloroform than previously anticipated. The only references to chloroform in the draft permit are the effluent limitations, monitoring frequencies, and sample types specified on pages 2b, 2e, and 2h; and the minimum analytical level (MAL) listed on Page No. 13 of the draft permit. The Fact Sheet provides the following justification for the increase in limitations of chloroform:

> Increase the effluent limitations for chloroform at Outfall SUM (formerly applied at internal Outfall 101). The effluent limitations were increased in accordance with EPA anti-backsliding regulations [40 CFR Part 122.44(l)]. Recent testing performed demonstrates that the cooling tower blowdown wastestream is a contributing source for chloroform that has not been

[24] 40 CFR §122.44(l)(2)(i)(B)(1).

previously recognised and not considered when existing effluent limitations were established. The submittal of this information is new information not previously available for review and consideration.[25]

COMMENT 22:

Union expressed concern that the draft permit allows Formosa three years to comply with dioxin and furan limits. According to Union, the law requires "compliance as soon as possible." 40 CFR § 122.47(1)(1). Union stated that three years is not as soon as possible, nor is it protective of the Bay. Union recommended that Formosa's discharges of dioxin and furan should comply with the law upon issuance of the permit.

RESPONSE 22:

The dioxin and furan limits in Formosa's draft permit comply with all applicable rules and regulations. Both TCEQ's and EPA's rules allow for a compliance period. TCEQ's rules provide that the commission may allow a permittee up to three years to comply with new effluent limits if necessary.[26] This time period allows permittees the time necessary to determine how they are going to meet the new effluent limits and, if necessary, install new treatment equipment. The Clean Water Act (CWA) provides a similar option by providing that states, such as Texas, may incorporate a compliance schedule in TPDES permits. Under the CWA, compliance schedules must require compliance as soon as possible.[27]

In accordance with TCEQ's and EPA's rules, the draft permit includes a three-year compliance period for Formosa to meet the final effluent limitations for 2,3,7,8-

[25] Formosa Fact Sheet, Section IX.A.3.
[26] 30 TAC § 307.2(f)
[27] 40 CFR § 122.47(a).

TCDD equivalents (i.e., dioxins and furans) at Outfall 001. New Other Requirements Provision No. 24 was included in the draft permit as a result of these new effluent limitations and includes a three-year compliance period.

To determine the best way to meet the final effluent limits, Formosa will need to perform an extensive evaluation of the wastewaters generated at its facility and of the treatment system. Formosa will need to evaluate potential source control options and wastewater treatment options to meet the final effluent limits for 2,3,7,8-TCDD equivalents. After Formosa has selected the best methods to meet the final effluent limits for 2,3,7,8-TCDD equivalents, the selected methods will have to be implemented into Formosa's operations.

The ED has determined that a three-year compliance period is appropriate because of the complexity of determining the best method for Formosa to meet the more stringent effluent limits for 2,3,7,8-TCDD equivalents.

COMMENT 23:

Union expressed concern that a number of endangered species could be taken, and a number of threatened species could be harmed, as a result of Formosa's discharges. Those species include seasonal or occasional visitors to the Lavaca-Matagorda Bay coastal ecosystem. The reddish egret (*Egretta rufescens*), white-faced ibis (*Plegadus chichi*), wood stork (*Mycteria americana*), whooping crane (*Grus americana*), Arctic peregrine falcon (Falco peregines tundrius), piper plover (*Charadrius melodus*), Eskimo curlew (*Numenius borealis*), green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempi*), loggerhead sea turtle (*Caretta*

caretta), Texas tortoise (*Gopherus berlandieri*), scarlet snake (*Cemorphora coccinea*), and South Texas siren (Siren Sp. 1) have been documented in Calhoun County.

According to Union, Formosa must consult with U.S. Fish and Wildlife Service regarding the effects of its discharges on these species.

RESPONSE 23:

The Executive Director considered the impacts of the Formosa discharge on endangered and threatened species during the review of the application. The impact of discharges on endangered and threatened species is considered in accordance with the memorandum of agreement (MOA) between the TCEQ and the EPA and with the biological opinion from the U.S. Fish and Wildlife Service (USFWS).

The ED reviews permit applications to determine whether discharges could potentially have any adverse effect on an aquatic or aquatic-dependent federally endangered or threatened species, including proposed species. The ED may also consider potential adverse effects to state-listed species and coordinate with Texas Parks and Wildlife Department (TPWD) as needed. Information that is considered during the review includes the following:

- the MOA between the TCEQ and the EPA concerning the TPDES program, available on the agency's Web site (www.tceq.texas.gov);
- the USFWS biological opinion (dated September 14, 1998) associated with assumption of the TPDES program by the State of Texas; and
- an update to that biological opinion (dated October 21, 1998).

The USFWS biological opinion includes a list of the United States Geological

Survey (USGS) hydrological unit codes (HUCs) that cover the watersheds that must be considered in determining whether a listed species could be affected. These HUCs have been matched to both the counties and the classified segments into which the watersheds drain. Subsequent information from the USFWS has identified some specific water bodies where species of critical concern are known to occur. USFWS is informally notified, by way of a supplemental permit information form (SPIF), of all permit applications declared administratively complete.

Staff conducted an endangered species review on Formosa's application. A priority watershed of critical concern has been identified in Calhoun County. The whooping crane, *Grus americana* (Linnaeus), an endangered aquatic-dependent species, has been determined to occur in the watershed of Calhoun County. To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The presence of the endangered Whooping Crane requires EPA review and, if appropriate, consultation with USFWS.

The piping plover, *Charadrius melodus* Ord, can also occur in Calhoun County, but the county is north of Copano Bay and not a watershed of high priority per Appendix A of the biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of the piping plover, *Charardrius*

melodus Ord or any other endangered or threatened species.

TCEQ has coordinated with all state and federal agencies as required by law in the development of the regulatory requirements included in the draft permit. No further consultation with any other state for federal agency is necessary.

COMMENT 24:

Union commented Formosa must be required to adequately treat its human waste to protect the Bay from bacteria. According to Union, Segments 2453 and 2454 have impairment problems due to bacteria and Formosa discharges human waste under this permit. Union stated that it is unclear from the permit what kind of treatment Formosa is required to undertake on its human wastewater to protect the Bay from bacteria.

RESPONSE 24:

Union is correct that Segments 2453 and 2454 are currently listed on the State's inventory of impaired and threatened waters (the 2010 Clean Water Act Section 303(d) list); however, the issuance of this permit is not anticipated to cause any additional adverse impact to the receiving waters with respect to the listed impairments.

Formosa is only authorized to discharge domestic wastewater (human wastewater) via Outfall 001 after it has been pretreated by the on-site treatment system, reused as make-up water for the cooling towers and thence commingled with other wastewaters prior to discharge via either internal Outfalls 101 or 201.

Formosa disposes of human waste in one of two ways. First, the domestic wastewater generated at on-site office buildings is sent to the City of Point Comfort for

treatment. Second, the domestic wastewater generated at the production plant is treated using an on-site package plant; after treatment it is sent to the cooling tower for reuse as cooling water.

The existing permit has a daily average effluent limitation for fecal coliform bacteria at Outfall 001, which is replaced in the draft permit with a daily average effluent limitation of 14 colony forming units or most probable number for enterococci bacteria. The effluent limit for enterococci has a three-year compliance period and is based on current segment criteria. The historical monitoring data for fecal coliform bacteria confirms only minimal levels (well below the segment standards and effluent limits) of fecal coliform bacteria in the effluent.

COMMENT 25:

Union stated that it appears that Outfall 901 seems to "have discharge from the Alcoa mud flats. It is unclear why there are no discharges at this outfall and how clean the Alcoa mud flats are."

RESPONSE 25:

The draft permit authorizes Formosa to route discharge cooling tower blowdown via Outfall 901 to the Alcoa mud flats to be used for dust suppression.

The draft permit provides:

> Cooling tower blowdown may be diverted via Outfall 901 to the adjacent ALCOA mud pit area for the purpose of dust suppression. This permit does not authorize nor prohibit the land application of cooling tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression. The permit provides the permittee authorization to provide cooling tower blowdown to a 3rd party for the purpose of dust suppression of an off-site plot of land. Should authorization under TCEQ rules to land-apply cooling

> tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression be required by the permittee or other 3rd party, it is the obligation of the permittee or other 3rd party to obtain such authorization from the appropriate regulatory authority.[28]

The ED does not consider the condition of the land where cooling tower blowdown is used for dust suppression in the review of an application for a TPDES permit. For information regarding the condition of the Alcoa mud flats, please contact Alcoa.

COMMENT 26:

Union stated that the monitoring in Formosa's permit must comply with 40 CFR Part 136, and testing of pollutants must comply with 40 CFR § 122.41(j)(4). According to Union, testing of pollutants in compliance with 30 TAC § 319.11-12 will not achieve compliance with 40 CFR § 122.41(j)(40).

RESPONSE 26:

The monitoring requirements in Formosa's permit comply with all applicable statutory and regulatory requirements. According to TCEQ's rules Formosa must analyze its effluent according to the test methods "specified in 40 CFR Part 136 or more recent editions of Standard Methods for the Examination of Water and Wastewater than those cited in Part 136."[29]

The rule requires that test methods approved in 40 CFR Part 136 must be used; the additional statement ". . . or more recent editions of Standard Methods for the

[28] Formosa Utility Venture, Ltd. and Formosa Plastics Corp., TX, TPDES Permit No. WQ0002136000, Other Requirement No. 19.B., page 18.
[29] 30 TAC §319.11(c).

Examination of Water and Wastewater than those cited in Part 136" acknowledges that updated editions of Standard Methods for the Examination of Water and Wastewater are acceptable, provided the earlier editions are approved and cited in 40 CFR Part 136. This provision complies with 40 CFR § 122.41(j)(4), which states "Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O."

COMMENT 27:

Union commented that not all of TCEQ's MALs (minimum analytical levels) are consistent with EPA's MQL (maximum quantitation level). According to Union, a number of TCEQ's MALs are less sensitive than the MQLs. Union stated that MQLs should be the testing method in the permit.

RESPONSE 27:

The minimum analytical levels (MALs) in Formosa's draft permit serve the same function in TPDES permits as the minimum quantitation levels (MQLs) do for NPDES permits. The MALs, which are included in Appendix C, Table 8 of the *Procedures to Implement the Texas Surface Water Quality Standards,* have been approved by EPA. The minimum analytical level (MAL) is defined as the lowest concentration that a particular substance can be quantitatively measured with a defined accuracy and precision level using approved analytical methods. EPA Region 6 defines the minimum quantification level (MQL) as the lowest concentration at which a particular substance can be quantitatively measured. The MQL value is typically equivalent to 3.3 times the minimum detection level (MDL). As a point of clarification, MQLs are not testing

methods.

The MAL is not the same as the published MDL. A MDL for an EPA approved analytical method is based on laboratory analysis of the substance in reagent (distilled) water. The MAL analytical level is based on analyses of the analyte (e.g., copper) in the matrix of concern (e.g., wastewater effluent). The Commission establishes general minimum analytical levels that are applicable when information on matrix-specific minimum analytical levels is unavailable.

The MALs were developed by the TCEQ to establish a benchmark for analytical procedures for measuring the toxic pollutants regulated by 30 TAC §307.6. One of the goals of establishing the MALs has been to provide consistent analytical data for industrial and domestic wastewater permit applicants and compliance monitoring of their discharges. The MALs serve as a measure of the analytical sensitivity of each laboratory procedure performed on standard laboratory equipment by qualified personnel.

COMMENT 28:

Union commented that with an extensive history of non-compliance, it is important that Formosa's duties are clear in the permit and that Formosa quickly report non-compliance in such an unusual situation, with ongoing, repeated permit violations and members of the community dependent on the waters for their livelihood.

Similarly, Union stated that excursions from effluent levels that reach a certain magnitude should be reported with 24 hours to TCEQ, and Formosa should be required to monitor the bay to determine whether their excursions have killed or hurt aquatic life.

Union also stated that leaks in sufficient quantity or concentration with the potential to negatively affect groundwater or the Bay should be cleaned immediately and reported within 24 hours.

Union also commented the detection of lead should be reported with 24 hours to TCEQ.

RESPONSE 28:

The draft permit includes specific provisions that address Formosa's responsibilities with respect to reporting non-compliances.

According to the draft permit, Formosa must report any noncompliance that may endanger human health or safety, or the environment to the TCEQ within 24 hours of becoming aware of the noncompliance.[30] Specifically, Formosa must report: unauthorized discharges as defined in Permit Condition 2(g); any unanticipated bypass that exceeds any effluent limitation in the permit; and any violation of a permitted maximum daily discharge limit for pollutants listed in the Other Requirements section of the permit. Additionally, Formosa is required to report, within five working days of becoming aware of the noncompliance, any effluent violation that deviates from the permitted effluent limitation by more than 40%. Toxic pollutants, including lead, are listed in the Other Requirements section of the draft permit.[31] There is no basis to require Formosa to report the detection of lead, or any other pollutant, in its effluent, unless the pollutant exceeds the daily maximum effluent limit in the draft permit,

[30] *See*, 30 TAC § 305.125(9) and Formosa draft permit, Monitoring and Reporting Requirements, Provision 7, page 5. For a complete list of pollutants, please see the Formosa draft permit, Other Requirement, Provision 2, page 12.
[31] Formosa Draft Permit, Page 15, Other Requirement 2.

because the specified level of detection is below the current effluent limitations that are continued in the draft permit.

Moreover, the draft permit requires Formosa to report violations of daily maximum limitations for certain pollutants within 24 hours from the time it becomes aware of the violation.[32]

COMMENT 29:

Union stated that Formosa should be required to send notices to those who request it whenever there is noncompliance with a permit condition. Additionally, according to Union, information regarding the noncompliance should be available at the Calhoun County Branch Library in Point Comfort.

RESPONSE 29:

The TCEQ does not have authority to require Formosa to send notices of noncompliance; however, information regarding any entity regulated by the TCEQ is publically available through TCEQ's website. For information specific to water quality violations at this facility go to the TCEQ website http://www.tceq.texas.gov/ then:

- in the lower left corner choose "Search By: Facility/Site (regulated entity)"
- under Option 2 type WQ0002436000 in the program ID box. This brings up all of the TCEQ authorizations for this facility
- to see specific information regarding water quality violations – in the filter programs box scroll to wastewater and choose "go"

[32] For a complete list of pollutants, please see the Formosa draft permit, Other Requirement, Provision 2, page 12. 40 CFR §122.41(1)(6)(ii)(C).

- click onWQ0002436000 in the ID Number box
- under "Related Information" click "Notice of Violations"

COMMENT 30:

Union commented that the permit should state clearly which kinds of situations must be reported as endangering the health of persons or aquatic life.

RESPONSE 30:

The draft permit requires Formosa to report violations of the daily maximum effluent limit of toxic pollutants to TCEQ Region 14, within 24 hours from the time Formosa becomes aware of the violation.[33] This requirement is included in Provision No. 2 on Page No. 12 of the draft permit.

COMMENT 31:

Union commented that the pH limit in the draft permit will threaten aquatic life. Union also stated that excessively acid discharges should not be allowed. According to Union, the permit allows "excursions" from pH standards, which are unintentional, temporary variances from the permitted pH level in the effluent. The excursion can last an hour, and in any 31-day period there can be seven hours, 26 minutes of excursions.

Additionally, Union stated that it is difficult to understand the directive that the excursion cannot "exceed the range of 5 - 11 standard pH units," when the water quality standards set pH levels at 6.5 - 9.

Union stated that the pH excursion language should be clarified because she is not sure if the pH excursion can be 11 units higher than the permitted range, or if the

[33] 40 CFR § 122.41(l)(6) and Formosa draft permit, Provision 2, page 12.

highest pH allowed in an excursion is 11 pH.

RESPONSE 31:

The pH limits in the draft permit are continued from the existing permit and are based on EPA categorical guidelines (40 CFR Part 414) for categorical wastestreams and best professional judgement for non-categorical wastestreams. Other Requirement Provision No. 9 in the draft permit has been continued from the existing permit and does not represent any change in the how TCEQ regulates the pH quality of the permitted discharges from the facility.

The language in the permit regarding allowed excursions from pH standards is based on federal requirements in 40 CFR §401.17 (pH Effluent limitations under continuous monitoring). An excursion is defined as "an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines."[34] This provision allows an excursion from the limitations established on Pages 2a and 2d (for Outfalls 001 and 101) of this permit to occur under certain restrictions. In other words, excursions outside of the pH range of 6.0-9.0 standard units (s.u.) are not permit violations if the total time during which the pH values are outside the required range of pH values do not exceed 7 hours and 26 minutes in any calendar month, and the duration of individual excursions do not exceed 60 minutes. The Formosa draft permit provides that excursions cannot be outside of the pH range of 5.0-11.0 s.u.; the federal rule does not specify any pH limitations during the "excursion" periods; therefore, the provision in the draft permit is more stringent than

[34] 40 CFR § 401.17(c).

the federal requirements.

Additionally, surface water monitoring conducted by the TCEQ's Surface Water Quality Monitoring (SWQM) program during the past 10 years (2004 - present) for Segments 2453 and 2454 indicate that the pH consistently has been within the pH criteria for the respective segments. The historical data from Segments 2453 and 2454 indicate that the continuation of the existing pH limitations (6.0 standard units (minimum); and 9.0 standard units (maximum)) are anticipated to maintain the receiving waters within the current water quality standard range of 6.5 – 9.0 standard units.

COMMENT 32:

Union commented that the most recent enforcement action was instigated because Formosa failed to install the leak prevention equipment it was required to install. Therefore, according to the Union, Formosa's permit should include "tightly worded protections."

RESPONSE 32:

The draft permit includes several provisions that are more stringent than what are typically required in TPDES permits. Specifically, the draft permit requires Formosa to monitor the liquid levels in the leak detection systems for all operating surface impoundments monthly and sample the liquid quarterly.[35] Additionally, if Formosa determines that any pond containing process wastewaters is leaking, Formosa must remove the pond from service, inform the TCEQ Region 14 Office, and submit to the

[35] Formosa Draft Permit, Page 15, Other Requirement 6.

Region Office a plan for necessary remedial actions.[36] After liner repairs are completed, Formosa must describe, in a report, the specific location of the leak and what repairs were made.[37] Formosa must also notify the Region Office at least ten days prior to putting the pond back into service.[38]

COMMENT 33:

According to Union, the permit requires removing holding ponds from the discharge system if lead is detected in the water (and presumably the sediment). According to Union, it is unclear what happens to this lead-contaminated water, and that should be made clear.

RESPONSE 33:

The draft permit does not include any specific provisions regarding removal of ponds that have detectable levels of lead. There are no monitoring requirements for lead in the ponds, nor are there any action requirements if lead is determined to be present in treatment or holding ponds. There is a reasonable potential for lead to be present in the wastewater at the facility, which is why lead is limited at final Outfall 001. The mere presence of lead in the wastewater is not alarming since the effluent limitations are in accordance with the applicable Texas Surface Water Quality Standards found in 30 TAC Chapter 307. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit,

[36] Formosa Draft Permit, Page 15, Other Requirement 7.
[37] Formosa Draft Permit, Page 15, Other Requirement 7.
[38] Formosa Draft Permit, Page 15, Other Requirement 7.

is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335. Formosa shall provide written notification, pursuant to the requirements of 30 TAC §335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

COMMENT 34:

Union commented that it appears that the draft permit does not limit the discharge of certain waste streams. Of particular concern to Union is the ability for Formosa to discharge an unlimited quantity of remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters. Union indicated that there should be some limitation on these discharges or, at least, additional monitoring and sampling of these additional discharges required. Additionally, according to Union, some analysis of the effects of these unlimited discharges should be done to show that the receiving waters would still be able to support abundant wildlife and their other designated uses. Finally, before allowing the discharge of the new potentially contaminated sources such as: non-process area stormwater; hydrostatic test water; fire water; non-contact steam condensate; non-contact wash water; potable water; air conditioner unit condensate; and ash truck wash water, sampling of each type of water should be done to confirm that these waters will not degrade the receiving water.

RESPONSE 34:

The discharge of remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters is limited in both the current and draft permits. As limited in the current permit, the draft permit continues the respective daily average and daily maximum flow limitations of 9.7 MGD and 15.1 MGD at Outfall 001.

The current permit already authorizes the discharge of non-process area stormwater, hydrostatic test water, fire water, non-contact steam condensate, and non-contact wash water via Outfalls 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, and 012 on and intermittent and flow-variable basis. There are no limitations on flow due to the highly variable flow associated with the predominant stormwater-contributing sources. The additional waste streams of potable water and air conditioner unit condensate via these outfalls are not anticipated to cause any adverse impact to the quality, nor any significant additional hydraulic loading to the discharges via those outfalls.

The draft permit continues all of the effluent limits from the existing permit with the exceptions of total copper at Outfall 001 and chloroform at Outfall SUM (formerly applied at internal Outfall 101). The limitations for total copper at Outfall 001 and chloroform at Outfall SUM were increased in compliance with all applicable State and Federal regulations.

COMMENT 35:

Union commented that it is particularly concerned with lead or other toxins in

the remediated groundwater, previously monitored effluent, treated process wastewater, equipment/facility washdown, stormwater, and utility wastewaters that the draft permit authorizes Formosa to discharge.

RESPONSE 35:

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. All of the effluent limitations for toxic pollutants (including lead) and other non-toxic pollutants are in compliance with all applicable State and Federal regulations.

COMMENT 36:

Union recommended that the TCEQ consult with USFWS and TPWD regarding various issues in the permit. Specifically, Union suggested consultation regarding: what temperature can cause harm and should be reported; the magnitude of excursions that should be reported within 24 hours; pH excursions and which standards harm aquatic life.

RESPONSE 36:

The TCEQ is not required to consult with USFWS or the TPWD during the permitting process. The legislature provided that "the commission is the agency of the state given primary responsibility for implementing the constitution and laws of this

state relating to the conservation of natural resources and the protection of the environment."[39] Additionally, the legislature provided that the commission has general jurisdiction over "the state's water quality program including issuance of permits, enforcement of water quality rules, standards, orders, and permits, and water quality planning."[40] Finally the legislature stated that "it is the policy of the state. . . to maintain the quality of water in the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life . . .."[41] To meet its legislative mandate, the TCEQ has adopted rules that ensure that water quality is protected. During the rulemaking process, the public, and state and federal agencies are encouraged to submit comments. The TCEQ considers all comments it receives before promulgating a final rule.

Additionally, the EPA, USFWS, and TPWD are mailed the NORI and NAPD. In the event that one of these entities has a comment or concern over any of the draft permit terms, the ED will work with the agency to resolve the concern. The EPA commented on the draft permit and fact sheet; however, no changes were required to either document. Neither USFWS nor TPWD commented.

COMMENT 37:

Union commented that the permit requires Formosa to monitor receiving waters. Because of Formosa's repeated failure to comply with its permit conditions, members of the public intend to monitor Formosa's compliance with the law. Consequently, the

[39] TWC § 5.012.
[40] TWC § 5.013.
[41] TWC § 26.003.

Union requests that TCEQ require Formosa have a mailing list (which could be by email or hard copy) that interested parties can join. Formosa should be required to send notices of reports of monitoring data to that mailing list. The data should be made available on-line.

RESPONSE 37:

TCEQ does not have authority to require Formosa to notify individuals of monitoring data. The ED encourages the commenter to work with Formosa to develop open communication. As discussed in Response 29, the monitoring data is available on TCEQ's website.

COMMENT 38:

Union commented that the trigger for reducing the frequency effluent testing of testing should be clearly explained. According to Union, the permit requires whole effluent testing to determine harm to invertebrates and invertebrates. Union stated that the permit allows testing to be less frequent, if none of the four WET tests reveal "significant toxicity." This significance statement may refer to "Persistent Toxicity," but it is not clear.

RESPONSE 38:

The draft permit provides:

> If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.[42]

[42] Formosa Draft Permit, Provision 1. e. 1), page 26.

Although it is not explicitly stated in the draft permit, it is generally understood that significant toxicity includes demonstrations of either significant sublethal effects or significant lethality.

The draft permit defines significant sublethal effect as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival or growth) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. [43] Significant lethality (i.e., significant toxicity) is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control.[44]

COMMENT 39:

Union stated that a Toxicity Reduction Evaluation (TRE) should be required after two toxic events within two months, or, depending on the severity of the toxic event, TCEQ should require TRE after one event. According to Union, the permit requirement that a TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. The Union recommended that the TCEQ require a TRE in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event.

[43] Formosa Draft Permit, Chronic Biomonitoring Requirements: Marine, Item 4, page 30.
[44] Formosa Draft Permit, Chronic Biomonitoring Requirements: Marine, Item 4, page 30.

RESPONSE 39:

The ED has determined that requiring Formosa to perform a TRE after one or two events will not provide greater protection of human health or the environment. Formosa's effluent has indicated persistent significant lethality, the normal trigger for requiring a TRE as outlined in the Implementation Procedures (RG-194). There is no specific requirement in the IPs for a sublethal TRE trigger.

A TRE is used by a permittee to determine the cause and source of toxicity in its effluent. A whole effluent toxicity (WET) limit is added to TPDES permits if the permittee is unable to identify the toxicant or toxicants. The draft permit for Formosa already includes lethal (WET) limits for both test species (mysid shrimp and inland silverside). Since the effluent from the Formosa facility has not demonstrated significant toxicity in any chronic test for at least the past nine years, the ED has determined that the WET limit provides ensures a the aquatic life of the bay is protected.

In the case of a "severe toxic event," Formosa would be in violation of its WET limits and may be subject to enforcement.

COMMENT 40:

LNRA expressed concerned about Formosa's request to eliminate sending an annual report to TCEQ on the 16 groundwater wells in the area around the vinyl plant. According to LNRA, this request was made by Formosa because the wells are currently monitored quarterly under RCRA (EPA 3008 h order) for pH and VOAs. LNRA stated that it is not clear if Formosa must perform two rounds of sampling (one for EPA and one for TCEQ) or if they simply send one report to two entities.

RESPONSE 40:

The draft permit requires that Formosa monitor the 16 existing monitoring wells located adjacent to the vinyl chloride monomer (VCM) sphere, the ethylene dichloride (EDC) storage tanks, and the wastewater treatment system at least twice per year.[45]

COMMENT 41:

LNRA commented that the proposed release of fresh water is not the best management practice. Similarly, Injured Workers and Water Keeper asked whether the oyster reefs will be indirectly affected by of lack of freshwater flow. According to Injured Workers and Water Keeper, the oyster reefs need freshwater to meet their nutritional needs.

LNRA commented that a better drought contingency strategy would be for Formosa to be allowed to divert a portion of its permitted treated process effluent via pipeline to the point of intended use for drought contingency purposes.

Injured Workers and Water Keeper commented that Texas Parks and Wildlife, using BP funds, is proposing to establish oyster reefs in Lavaca/Matagorda Bay and asked if the oyster reefs would be impacted by Formosa's increased needs for fresh water and increased toxic loading.

LNRA stated that it does not endorse the use or the reuse of Formosa's treated effluent to support the water needs of other industrial users in the area. Formosa has been a water customer of the LNRA since 1980. The company has contracted with LNRA to receive up to 30,800 acre-feet of water annually from Lake Texana. More recently,

[45] Formosa draft permit, Other Requirement No. 8, page 16.

based on their current demands and projected growth, the company notified LNRA of additional water needs totaling 10,000 acre-feet beginning as early as year 2015. The request to amend Formosa's permit to allow for the release of fresh water derived from Lake Texana to another surface water body as a drought contingency measure should not be permitted, and the application to amend the permit should be altered.

RESPONSE 41:

Potential impacts of Formosa's withdrawal of water from Lake Texana for industrial use are not within the scope of this application. The TPDES wastewater permitting program does not have regulatory authority to limit Formosa's ability to withdraw water from Lake Texana; therefore, no evaluations have been performed, during the technical review of this permit action, regarding potential impacts resulting from the lack of freshwater flow and subsequent lack of nutritional needs on the oyster reefs.

Changes Made to the Draft Permit in Response to Comments:

During the review of the submitted public comments the following changes were made to the draft permit:

1. The draft permit was re-evaluated using the 2010 TSWQS, which resulted in the proposed final effluent limitations for 2,3,7,8-TCDD Equivalents at Outfall 001 to become more stringent than in the original draft permit. The proposed final effluent limitations in the revised draft permit for 2,3,7,8-TCDD Equivalents at Outfall 001 are 80.5µg/day and 2.19 ppq for the daily average limitation, and 170 µg/day and 4.63 ppq for the daily maximum limitation.

2. The proposed expiration date was revised to January 1, 2019. The original proposed expiration date of January 1, 2017 would result in a permit term that would be less than the three (3) year compliance period included in the draft permit for 2,3,7,8-TCDD Equivalents at Outfall 001.
3. The description of "utility wastewaters" at Outfalls 101 and 201 was revised to "utility wastewaters (including pretreated sanitary wastewaters)."
4. Other Requirement Provision No. 27 was added to the draft permit to clarify the approved methods of handling of sanitary wastewater at the facility.

Respectfully submitted,

Texas Commission on Environmental Quality

Richard A. Hyde, P.E.
Executive Director

Robert Martinez, Director
Environmental Law Division

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REPRESENTING THE
EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

CERTIFICATE OF SERVICE

I hereby certify that on August 17, 2015, the original of the "Executive Director's Response to Comments" on Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas' application for TPDES Permit No. WQ0002436000 was filed with the Texas Commission on Environmental Quality's Office of the Chief Clerk.

Kathy Humphreys, Staff Attorney
Environmental Law Division
Texas Commission on Environmental Quality

ATTACHMENT E

The TCEQ is committed to accessibility.
To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

Compliance History Report

PUBLISHED Compliance History Report for CN602650954, RN100218973, Rating Year 2010 which includes Compliance History (CH) components from September 1, 2005, through August 31, 2010.

Customer, Respondent, or Owner/Operator:	CN602650954, Formosa Utility Venture, Ltd.	**Classification:** SATISFACTORY	**Rating:** 5.95
Regulated Entity:	RN100218973, FORMOSA POINT COMFORT PLANT	**Classification:** SATISFACTORY	**Rating:** 5.95
Complexity Points:	0	**Repeat Violator:** NO	
CH Group:	05 - Chemical Manufacturing		
Location:	201 FORMOSA DR POINT COMFORT, TX 77978, CALHOUN COUNTY		
TCEQ Region:	REGION 14 - CORPUS CHRISTI		

ID Number(s):

AIR OPERATING PERMITS ACCOUNT NUMBER CB0038Q
AIR OPERATING PERMITS PERMIT 1951
AIR OPERATING PERMITS PERMIT 1954
AIR OPERATING PERMITS PERMIT 1956
AIR OPERATING PERMITS PERMIT 1958
AIR OPERATING PERMITS PERMIT 3421

POLLUTION PREVENTION PLANNING ID NUMBER P08990
AIR NEW SOURCE PERMITS PERMIT 7699
AIR NEW SOURCE PERMITS PERMIT 19166
AIR NEW SOURCE PERMITS PERMIT 19168
AIR NEW SOURCE PERMITS PERMIT 19199
AIR NEW SOURCE PERMITS PERMIT 19201
AIR NEW SOURCE PERMITS PERMIT 20203
AIR NEW SOURCE PERMITS REGISTRATION 31130
AIR NEW SOURCE PERMITS REGISTRATION 26270
AIR NEW SOURCE PERMITS REGISTRATION 26523
AIR NEW SOURCE PERMITS REGISTRATION 35292
AIR NEW SOURCE PERMITS PERMIT 40157
AIR NEW SOURCE PERMITS REGISTRATION 41145
AIR NEW SOURCE PERMITS REGISTRATION 44847
AIR NEW SOURCE PERMITS ACCOUNT NUMBER CB0038Q
AIR NEW SOURCE PERMITS REGISTRATION 52259
AIR NEW SOURCE PERMITS REGISTRATION 75974
AIR NEW SOURCE PERMITS REGISTRATION 132277
AIR NEW SOURCE PERMITS PERMIT 107520
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX699
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX760M4
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX760M6
AIR NEW SOURCE PERMITS REGISTRATION 79826
AIR NEW SOURCE PERMITS REGISTRATION 81109
AIR NEW SOURCE PERMITS EPA PERMIT HAP7
AIR NEW SOURCE PERMITS REGISTRATION 83608
AIR NEW SOURCE PERMITS REGISTRATION 86398
AIR NEW SOURCE PERMITS REGISTRATION 84589
AIR NEW SOURCE PERMITS REGISTRATION 84788
AIR NEW SOURCE PERMITS REGISTRATION 84730
AIR NEW SOURCE PERMITS REGISTRATION 91047
AIR NEW SOURCE PERMITS REGISTRATION 88447
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1222
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1232
AIR OPERATING PERMITS PERMIT 1484
AIR OPERATING PERMITS PERMIT 1953
AIR OPERATING PERMITS PERMIT 1955
AIR OPERATING PERMITS PERMIT 1957
AIR OPERATING PERMITS PERMIT 3409
POLLUTION PREVENTION PLANNING ID NUMBER P00254
AIR NEW SOURCE PERMITS AFS NUM 4805700015

AIR NEW SOURCE PERMITS PERMIT 17030
AIR NEW SOURCE PERMITS PERMIT 19167
AIR NEW SOURCE PERMITS PERMIT 19198
AIR NEW SOURCE PERMITS PERMIT 19200
AIR NEW SOURCE PERMITS PERMIT 19871
AIR NEW SOURCE PERMITS REGISTRATION 29765
AIR NEW SOURCE PERMITS REGISTRATION 26267
AIR NEW SOURCE PERMITS REGISTRATION 26351
AIR NEW SOURCE PERMITS REGISTRATION 26266
AIR NEW SOURCE PERMITS REGISTRATION 37070
AIR NEW SOURCE PERMITS REGISTRATION 40293
AIR NEW SOURCE PERMITS REGISTRATION 43265
AIR NEW SOURCE PERMITS REGISTRATION 44933
AIR NEW SOURCE PERMITS REGISTRATION 52859
AIR NEW SOURCE PERMITS EPA PERMIT HAP10
AIR NEW SOURCE PERMITS PERMIT 76305
AIR NEW SOURCE PERMITS PERMIT 76044
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1053
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX760M3
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1058
AIR NEW SOURCE PERMITS REGISTRATION 78769
AIR NEW SOURCE PERMITS REGISTRATION 80198
AIR NEW SOURCE PERMITS EPA PERMIT HAP2
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX760M8
AIR NEW SOURCE PERMITS PERMIT 83763
AIR NEW SOURCE PERMITS REGISTRATION 83990
AIR NEW SOURCE PERMITS REGISTRATION 83489
AIR NEW SOURCE PERMITS PERMIT 87363
AIR NEW SOURCE PERMITS REGISTRATION 85081
AIR NEW SOURCE PERMITS REGISTRATION 85100
AIR NEW SOURCE PERMITS PERMIT 91780
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1230
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1224

AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1226
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1234
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1236
AIR NEW SOURCE PERMITS REGISTRATION 96408
AIR NEW SOURCE PERMITS REGISTRATION 102123
AIR NEW SOURCE PERMITS REGISTRATION 132128
AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX48
AIR NEW SOURCE PERMITS REGISTRATION 134477
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1383
AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX47
AIR NEW SOURCE PERMITS REGISTRATION 115795
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1384
AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX46
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX760M9

INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 31945
INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 82613
INDUSTRIAL AND HAZARDOUS WASTE PERMIT PCO31945
WASTEWATER EPA ID TX0085570
UNDERGROUND INJECTION CONTROL PERMIT WDW403

STORMWATER PERMIT TXR15WP20
STORMWATER PERMIT TXR150015113
STORMWATER PERMIT TXR150015009
STORMWATER PERMIT TXR150020507
AIR EMISSIONS INVENTORY ACCOUNT NUMBER CB0038Q

AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1240
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1238
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1237
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX226M7
AIR NEW SOURCE PERMITS PERMIT 107518
AIR NEW SOURCE PERMITS REGISTRATION 119133
AIR NEW SOURCE PERMITS REGISTRATION 132905
AIR NEW SOURCE PERMITS PERMIT 127838
AIR NEW SOURCE PERMITS REGISTRATION 131445
AIR NEW SOURCE PERMITS REGISTRATION 129793
AIR NEW SOURCE PERMITS REGISTRATION 116253
AIR NEW SOURCE PERMITS PERMIT 128752
AIR NEW SOURCE PERMITS REGISTRATION 128431
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TXT490011293
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TX0000888164
INDUSTRIAL AND HAZARDOUS WASTE PERMIT 50348

WASTEWATER PERMIT WQ0002436000

UNDERGROUND INJECTION CONTROL PERMIT WDW402
IHW CORRECTIVE ACTION SOLID WASTE REGISTRATION # (SWR) 31945
STORMWATER PERMIT TXR15VP68
STORMWATER PERMIT TXR15ZE72
STORMWATER PERMIT TXR150018054
STORMWATER PERMIT TXR150017867
PUBLIC WATER SYSTEM/SUPPLY REGISTRATION 0290074

Compliance History Period: September 01, 2005 to August 31, 2010 **Rating Year:** 2010 **Rating Date:** 09/01/2010

Date Compliance History Report Prepared: December 10, 2015

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: February 02, 2005 to February 02, 2010

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: TCEQ Staff Member **Phone:** (512) 239-1000

Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO
3) If **YES** for #2, who is the current owner/operator? N/A
4) If **YES** for #2, who was/were the prior owner(s)/operator(s)? N/A
5) If **YES**, when did the change(s) in owner or operator occur? N/A

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

1 Effective Date: 02/10/2005 ADMINORDER 2004-0781-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 113, SubChapter C 113.100
30 TAC Chapter 116, SubChapter B 116.115(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT A 61.12(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.6(e)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Failed to maintain and operate the Vinyl Plant in a manner consistent with good air pollution practice for minimizing emissions by allowing extended storage/installation of the vinyl chloride monomer (VCM) process area overhead condensers.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: General Cond. F & Special Condition 1 PERMIT

Description: Failed to maintain an emission rate below the allowable emission limit for VCM of 1.6 pounds per hour (lbs/hr) from the VCM process area cooling tower (EPN VW-C11) overhead condensers (FIN VE-504D and E).

2 Effective Date: 12/30/2005 ADMINORDER 2005-0125-AIR-E (Findings Order-Agreed Order Without Denial)

Classification: Moderate

Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(4)(A)(ii)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: Special Condition No. 1 PERMIT
Special Condition No. 12 PERMIT

Description: Failure prevent unauthorized emissions from EPNs 1018 and 1067. Formosa failed to satisfy all demonstrations criteria as listed under 30 TAC 101.222(b) and gain regulatory authority for the emissions released from two emissions events, Incident Nos. 25241and 25275, that occurred on July 15, 2003.
Classification: Moderate

Citation: 30 TAC Chapter 111, SubChapter A 111.111(a)(4)(A)(ii)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Special Condtion 12 PERMIT

Description: Failure to prevent unauthorized emissions from EPN 1018. Formosa failed to satisfy all demonstration criteria in 30 TAC §101.222(b) and gain an affirmative defense for unauthorized emissions that were released from the Olefins 1 facility during an emissions event which occurred on or about June 30, 2004.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: 7699 / PSD-TX-226M6 PA

Description: Failure to prevent unauthorized emissions from EPN 999. Formosa failed to obtain regulatory authority or meet the demonstration requirements of 30 TAC 101.222 for vinyl chloride emissions involving Cooling Tower VW-CO1 during an emissions event which began on August 14, 2004.
Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(g)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Failure to electronically provide rule required information in the rule required format. Specifically, the reportable emissions event was not reported via STEERS within 24 hours of discovery.

3 Effective Date: 06/26/2006 ADMINORDER 2005-0938-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: Special Conditin 1 PERMIT

Description: Failure to maintain hydrogen chloride (HCl) emissions at or below the 0.14 lb/hr permitted limits. Specifically, emission test results of the Ethylene Dichloride Incinerator C (EPN 6002C), conducted on December 16, 2004, reported HCl emissions of 2.183 lb/hr.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failure to meet the demonstration requirements of 30 Texas Admin. Code §101.222(b), specifically (b)(1), and gain an affirmative defense for emissions released during two emissions events, TCEQ Incidents 52272 and 54851, which were discovered on December 3, 2004, and December 6, 2005, respectively.
Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
5C THC Chapter 382, SubChapter A 382.085(b)

Description: Failure to notify the TCEQ Corpus Christi Region Office within 24 hours after the discovery of an emissions event. Specifically, two planned start-up activities, TCEQ Incidents 49733 and 49731, which both occurred on November 20, 2004, became emissions events on December 3, 2004, and December 6, 2005, respectively.

4 Effective Date: 02/08/2008 ADMINORDER 2007-0771-AIR-E (Findings Order-Agreed Order Without Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 113, SubChapter C 113.100
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter A 382.085(b)
Rqmt Prov: TCEQ Air Permit Number 7699 PSD-TX-226M6 OP
Description: Failure to satisfy all demonstrations criteria as listed under 30 TAC §101.222 for the emissions released from the emissions event, Incident Number 81836, that occurred on or about September 26, 2006.

5 Effective Date: 03/08/2008 ADMINORDER 2007-1227-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: 19168 OP
Description: failed to comply with the MAERT for particulate matter

6 Effective Date: 11/17/2008 ADMINORDER 2006-0429-AIR-E (Findings Order-Agreed Order Without Denial)
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: MAERT PERMIT
Description: Formosa has failed to demonstrate compliance with applicable permit limits.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: SC 1 PA
Description: Formosa has failed to prevent unauthorized emissions during emissions events that occurred on September 26, 2005, September 28, 2005, November 2, 2005, November 11, 2005, and April 24, 2006. This violation includes violation tracking Nos 228481, 228556, and 231755.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
5C THSC Chapter 382 382.085(b)
Description: Formosa has failed to submit an accurate final record of an emissions event no later than two weeks after the end of the event.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Permit No. 19168, SC 1 PERMIT
PSD-TX-760M7 PERMIT
Description: Formosa has failed to prevent the unauthorized release of air contaminants into the atmosphere.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(2)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 113, SubChapter C 113.100
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT A 61.12(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.6(e)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: Permit No. 7699, SC No. 1 PERMIT
Description: Formosa has failed to maintain and operate the Vinyl Plant in a manner consistent with good air pollution control practices for minimizing emissions.

7 Effective Date: 02/22/2009 ADMINORDER 2008-0973-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.211(a)
5C THSC Chapter 382 382.085(b)

Description: Failed to notify the TCEQ prior to conducting a reportable maintenance activity.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: NSR 7699 - SC 1 PA
Description: Failure to gain an affirmative defense against penalties for unauthorized reportable emissions that were released from the PVC Plant during a reportable maintenance activity which was conducted on January 15, 2008. By failing to notify the commission office according to rule requirements Formosa Plastics Corporation - Texas did not satisfy the applicable criteria in 30 TAC § 101.222 (c)(1).

8 Effective Date: 03/23/2009 ADMINORDER 2008-1412-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition No. 1 PA
Special Condition No. 7 PA
Description: Failure to route displaced vapors from marine loading of ethylene dichloride (EDC) to the Dock Incinerator/Scrubber [EPN: 8F-D02] as required by Special Condition No. 7 of TCEQ Air Permit No. 19871.

9 Effective Date: 10/04/2009 ADMINORDER 2009-0216-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter D 382.085(b)
Rqmt Prov: Special Condition No. 1 PERMIT
Description: Failure to maintain PM emission rate at permitted limit of 0.98 lb/hr.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
40 CFR Chapter 61, SubChapter C, PT 61, SubPT F 61.67(a)
5C THSC Chapter 382 382.085(b)
Description: Failed to conduct an initial performance test of PVC Dryer I within 90 days after start-up. Specifically, PVC Dryer I was initially put into service on April 25, 2003, however the initial performance test was not conducted until December 20, 2006.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition No. 1 PERMIT
Description: Failed to prevent unauthorized emissions during Incident No. 109611.
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: 19168 / Special Condition No. 1 PA
Description: Failure to prevent unauthorized emissions to the atmosphere during an emissions event which occurred on December 3, 2008, TCEQ Incident No. 117332. Specifically, on December 3, 2008, the Company released 118.07 lbs. volatile organic compounds (VOC), 83.63 lbs. carbon monoxide (CO), and 11.56 lbs. nitrogen oxides (NOx).
Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: 19168 / Special Condition No. 1 PA
Description: Failure to prevent unauthorized emissions to the atmosphere during an emissions event which occurred on December 4, 2008, TCEQ Incident No. 117340. Specifically, the Company released 333.54 lbs. volatile organic compounds (VOC), 113.05 lbs. carbon monoxide (CO), and 15.65 lbs. nitrogen oxides (NOx).

B. Criminal convictions:
N/A

C. Chronic excessive emissions events:
N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	February 10, 2005	(346929)
Item 2	February 22, 2005	(386883)
Item 3	March 22, 2005	(386884)
Item 4	April 11, 2005	(376939)
Item 5	May 03, 2005	(378050)
Item 6	May 23, 2005	(424699)
Item 7	June 21, 2005	(424700)
Item 8	July 22, 2005	(445391)
Item 9	August 02, 2005	(401946)
Item 10	August 22, 2005	(398698)
Item 11	August 29, 2005	(406996)
Item 12	September 16, 2005	(431883)
Item 13	September 21, 2005	(432632)
Item 14	September 23, 2005	(445393)
Item 15	October 08, 2005	(433294)
Item 16	October 24, 2005	(445394)
Item 17	December 20, 2005	(476822)
Item 18	December 30, 2005	(450540)
Item 19	January 23, 2006	(476823)
Item 20	January 30, 2006	(439909)
Item 21	February 22, 2006	(476819)
Item 22	March 22, 2006	(476820)
Item 23	March 27, 2006	(459161)
Item 24	April 24, 2006	(503676)
Item 25	April 28, 2006	(435129)
Item 26	May 05, 2006	(464365)
Item 27	May 22, 2006	(503677)
Item 28	June 02, 2006	(461335)
Item 29	June 07, 2006	(465772)
Item 30	June 14, 2006	(480076)
Item 31	July 07, 2006	(485310)
Item 32	August 03, 2006	(489597)
Item 33	August 21, 2006	(526033)
Item 34	August 30, 2006	(510729)
Item 35	September 01, 2006	(510775)
Item 36	September 25, 2006	(526034)
Item 37	September 26, 2006	(462238)
Item 38	October 09, 2006	(513839)
Item 39	October 12, 2006	(514515)
Item 40	October 19, 2006	(513945)
Item 41	October 23, 2006	(550418)
Item 42	October 26, 2006	(513991)
Item 43	November 15, 2006	(519298)
Item 44	November 17, 2006	(519684)
Item 45	November 20, 2006	(550419)
Item 46	November 21, 2006	(516781)
Item 47	January 16, 2007	(532907)
Item 48	January 17, 2007	(550421)
Item 49	January 24, 2007	(511068)
Item 50	February 01, 2007	(538682)
Item 51	February 08, 2007	(538669)
Item 52	February 16, 2007	(540711)
Item 53	March 09, 2007	(538214)
Item 54	March 13, 2007	(538231)
Item 55	March 19, 2007	(586494)
Item 56	April 20, 2007	(586495)
Item 57	April 26, 2007	(557916)
Item 58	May 01, 2007	(554893)

Item 59	May 04, 2007	(558947)
Item 60	May 08, 2007	(543566)
Item 61	May 17, 2007	(586496)
Item 62	May 21, 2007	(539094)
Item 63	June 05, 2007	(561710)
Item 64	June 06, 2007	(561326)
Item 65	June 20, 2007	(586497)
Item 66	June 22, 2007	(564553)
Item 67	July 02, 2007	(562183)
Item 68	July 03, 2007	(564356)
Item 69	July 09, 2007	(565028)
Item 70	July 18, 2007	(567987)
Item 71	July 19, 2007	(586498)
Item 72	August 06, 2007	(570182)
Item 73	August 09, 2007	(571103)
Item 74	August 10, 2007	(571081)
Item 75	August 17, 2007	(572727)
Item 76	August 20, 2007	(608547)
Item 77	August 23, 2007	(570607)
Item 78	August 28, 2007	(573161)
Item 79	August 29, 2007	(573863)
Item 80	August 30, 2007	(573910)
Item 81	September 14, 2007	(593716)
Item 82	September 17, 2007	(594445)
Item 83	September 18, 2007	(608548)
Item 84	September 25, 2007	(594531)
Item 85	September 26, 2007	(594361)
Item 86	October 15, 2007	(597270)
Item 87	October 17, 2007	(596207)
Item 88	October 19, 2007	(597799)
Item 89	November 01, 2007	(598892)
Item 90	November 14, 2007	(600715)
Item 91	November 19, 2007	(624434)
Item 92	December 19, 2007	(624435)
Item 93	January 03, 2008	(612135)
Item 94	January 11, 2008	(594104)
Item 95	January 22, 2008	(615309)
Item 96	February 01, 2008	(616854)
Item 97	February 19, 2008	(675333)
Item 98	February 21, 2008	(636162)
Item 99	February 22, 2008	(636289)
Item 100	March 19, 2008	(675334)
Item 101	March 20, 2008	(638519)
Item 102	March 25, 2008	(638608)
Item 103	March 31, 2008	(639844)
Item 104	April 01, 2008	(639933)
Item 105	April 10, 2008	(641485)
Item 106	April 15, 2008	(646242)
Item 107	April 17, 2008	(640632)
Item 108	April 21, 2008	(641076)
Item 109	April 25, 2008	(636833)
Item 110	April 29, 2008	(646542)
Item 111	May 20, 2008	(693652)
Item 112	May 21, 2008	(671435)
Item 113	May 30, 2008	(681375)
Item 114	June 17, 2008	(683115)
Item 115	June 24, 2008	(683946)
Item 116	July 10, 2008	(685472)
Item 117	July 16, 2008	(684475)
Item 118	July 18, 2008	(693654)

Item 119	July 29, 2008	(686965)
Item 120	July 30, 2008	(543170)
Item 121	August 01, 2008	(688047)
Item 122	August 07, 2008	(685243)
Item 123	August 19, 2008	(714957)
Item 124	August 28, 2008	(688501)
Item 125	September 08, 2008	(701955)
Item 126	September 24, 2008	(703543)
Item 127	September 30, 2008	(703642)
Item 128	October 20, 2008	(714959)
Item 129	October 28, 2008	(705449)
Item 130	October 29, 2008	(704638)
Item 131	October 30, 2008	(706772)
Item 132	October 31, 2008	(706883)
Item 133	November 17, 2008	(730834)
Item 134	November 20, 2008	(708310)
Item 135	December 03, 2008	(707686)
Item 136	December 15, 2008	(721035)
Item 137	December 17, 2008	(754075)
Item 138	December 18, 2008	(721349)
Item 139	January 15, 2009	(723397)
Item 140	January 19, 2009	(730835)
Item 141	January 28, 2009	(723514)
Item 142	February 02, 2009	(722062)
Item 143	February 18, 2009	(725700)
Item 144	February 27, 2009	(736493)
Item 145	March 16, 2009	(738488)
Item 146	March 17, 2009	(754073)
Item 147	March 26, 2009	(738363)
Item 148	April 08, 2009	(741563)
Item 149	April 17, 2009	(754074)
Item 150	April 30, 2009	(742541)
Item 151	May 18, 2009	(745899)
Item 152	June 12, 2009	(771402)
Item 153	July 09, 2009	(759868)
Item 154	July 16, 2009	(814204)
Item 155	July 19, 2009	(745485)
Item 156	August 02, 2009	(763795)
Item 157	August 07, 2009	(749512)
Item 158	August 15, 2009	(760067)
Item 159	August 18, 2009	(814205)
Item 160	August 24, 2009	(765476)
Item 161	August 28, 2009	(764529)
Item 162	August 29, 2009	(767772)
Item 163	August 31, 2009	(767753)
Item 164	September 18, 2009	(814206)
Item 165	October 07, 2009	(777204)
Item 166	October 13, 2009	(777538)
Item 167	October 19, 2009	(814207)
Item 168	November 12, 2009	(782076)
Item 169	November 18, 2009	(814208)
Item 170	December 01, 2009	(783923)
Item 171	December 18, 2009	(814209)
Item 172	January 12, 2010	(787826)
Item 173	January 20, 2010	(814210)
Item 174	January 22, 2010	(789008)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

1 Date: 03/31/2005 (424698) CN602650954
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

2 Date: 04/14/2005 (373413)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
Description: Failed to demonstrate compliance with emission limits for Hydrogen Chloride (HCl). Specifically, testing of Etheyene Dichloride Incinerator B (EPN 6002B), conducted on June 21 and 22, 2004 indicated emssions of HCl of 4.956 lb/hr, exceeding the permitted allowable of 0.14 lb/hr.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
Description: Failed to demonstrate compliance with emission limits for Hydrogen Chloride (HCl). Specifically, testing of Etheyene Dichloride Incinerator (EPN 6002C), conducted on June 21 and 22, 2004 indicated emssions of HCl of 3.813 lb/hr, exceeding the permitted allowable of 0.14 lb/hr.

3 Date: 07/21/2005 (400202) CN602650954
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TPDES Permit No. WQ0002436-000 PERMIT
Description: Failure to maintain the effluent quality within the permitted limits.

4 Date: 07/31/2005 (445392) CN602650954
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

5 Date: 08/19/2005 (401926)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)
Description: Failure to include all instances of deviations in the two Deviation Reports (DR) submitted in the April 19, 2004 through April 18, 2005 time period.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.146(5)(D)
Description: Failure to include or reference in the annual permit compliance certification (PCC) the identification of all other terms and conditions of the permit for which compliance was not achieved.

6 Date: 10/31/2005 (476821) CN602650954
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

7 Date: 05/31/2006 (503678) CN602650954
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

8 Date: 08/30/2006 (509837)
Self Report? NO Classification: Moderate
Citation: 19200, Special Condition 9A PERMIT
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
FOP O-01956, Special Condition No. 13 OP
Description: Failure to maintain required records of monitoring data.

9 Date: 08/30/2006 (497562)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
SC 20 PA

Spec. Terms & Conditions (STC) No. 13 OP
Description: Failure to operate two incinerators according to the excess oxygen (O2) and carbon monoxide (CO) limits defined by the HDPE I Plant air permit special condition.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
SC 7 PA
STC No. 13 OP
Description: Failure to demonstrate that monthly monitoring for VOC associated with cooling tower water had been conducted in January and February 2005.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 122, SubChapter B 122.143(4)
STC No. 1 OP
Description: Failure to equip two open-ended lines (OELs) with a cap, blind flange, plug or a second valve.

10 Date: 11/06/2006 (514634)
Self Report? NO Classification: Moderate
Citation: Special Condition No. 1 PERMIT
Description: Failure to meet the demonstration requirements of 30 TAC §101.222 and gain an affirmative defense for emissions released during an emissions event (Incident No. 47973) which was discovered on October 17, 2004.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
Special Condition No. 1 PERMIT
Description: Failure to meet the demonstration requirements of 30 TAC §101.222 and gain an affirmative defense for thirty-one (31) non-reportable emissions events at the PVC Unit and at the VCM Unit.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
Special Condition No. 1 PERMIT
Description: Failure to meet the demonstration requirements of 30 TAC §101.222 and gain an affirmative defense for thirty-eight (38) reportable quantity (RQ) releases of vinyl chloride from the VCM Unit, and eleven (11) RQ releases of vinyl chloride from the PVC Unit.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
Special Condition No. 1 PERMIT
Description: Failure to meet the demonstration requirements of 30 TAC §101.222 and gain an affirmative defense for seven (7) non-reportable emissions events released between January 1 and December 31, 2004 at the EDC Unit.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)
Description: Complete failure to submit notification of reportable emissions events for the VCM and PVC Units.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)
Description: Failure to maintain complete non-reportable emissions event final records for the EDC, PVC, and VCM Units.

11 Date: 11/30/2006 (550420) CN602650954
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

12 Date: 12/18/2006 (517230) CN602650954
Self Report? NO Classification: Moderate
Citation: TPDES Permit No. WQ0002436-008 PERMIT
TWC Chapter 26 26.121(a)(1)
Description: Failure to prevent an unpermitted discharge of cooling tower blow down water via outfall 008.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TPDES Permit No. WQ0002436-008 PERMIT

Description: Failure to meet daily maximum discharge loading limit for total zinc at outfall 001.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TPDES Permit No. WQ0002436-001 PERMIT
Description: Failure to meet effluent limitation for pH maximum and duration at outfall 001.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TPDES Permit No. WQ0002436-010 PERMIT
Description: Failure to meet effluent limitation for pH maximum at outfall 010.

13 Date: 08/31/2007 (571235)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)
TCEQ Air Permit 7699/PSD-TX-226M6 PERMIT
Description: Formosa failed to comply with the TCEQ Air Permit Numbers 7699 and PSD-TX-226M6, Special Conditions 1 and 2 and failed to prevent release of unauthorized emissions.

14 Date: 08/31/2007 (573913)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
Permit No. 7699/PSD TX 226M, SC 8 PERMIT
Description: Failure to demonstrate compliance for daily visible emissions inspections following method 22 for baghouses covered under TCEQ Air Permit No. 7699 and PSD TX 226M6.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)
Description: Failure to submit all instances of deviations, the probable cause of the deviations, and any corrective actions or preventative measures taken for each emission unit addressed in the permit for the reporting period of August 9, 2004 through February 9, 2005.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
Permit No. 7699/PSD-TX226, SC12 PERMIT
Description: Failure to maintain scrubber solution pH and scrubber solution flow at or above levels established during the last stack test, 7.95 pH and 45 gallons per minute (gpm), respectively. Specifically, VH-801A, 006A and VH-801B, 006B did not maintain scrubber solution pH and scrubber solution flows at or above the established levels and no cause was identified for their failures.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 113, SubChapter C 113.130
30 TAC Chapter 116, SubChapter B 116.115(c)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.174(a)
7699/PSD-TX-226, SC 9 PERMIT
Description: Failure to monitor components associated with the VR-401G System that had been added to the unit as a result of an upgrade in metallurgy, equipment and piping.

15 Date: 03/31/2008 (675335) CN602650954
Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)
Description: Failure to meet the limit for one or more permit parameter

16 Date: 05/31/2008 (693653) CN602650954
Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)
Description: Failure to meet the limit for one or more permit parameter

17 Date: 08/28/2008 (700078)
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)
5C THSC Chapter 382 382.085(b)
Description: Failure to include all instances of deviations for Federal Operating Permit (FOP) No. O-01956 in two semi-annual deviation reports dated May 18, 2007 and

November 16, 2007. The regulated entity failed to include in the following deviation reports a total of three deviations from October 19, 2006 through October 18, 2007. This timeframe encompassed 2 six-month periods which included (1) October 19, 2006 through April 18, 2007, and (2) April 19, 2007 through October 18, 2007.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 122, SubChapter B 122.146(5)(D)
5C THSC Chapter 382 382.085(b)

Description: Failure to include or reference in the Federal Operating Permit (FOP) No. O-01956 Permit Compliance Certification the identification of all other terms and conditions of the permit for which compliance was not achieved. Specifically, by failing to report all instances of deviations in the Permit Compliance Certification for certification period April 19, 2006 through April 18, 2007, the regulated entity failed to certify an accurate report for the period.

Self Report? NO Classification: Minor

Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)
5C THSC Chapter 382 382.085(b)

Description: Failure to certify the first date of the reporting period represented in the semiannual deviation report dated February 23, 2007. Specifically, the regulated entity failed to certify the first day, July 27, 2006, of the reporting period, July 27, 2006 through January 25, 2007, by incorrectly using the date, July 28, 2006, as the first day of the reporting period.

18 Date: 08/31/2008 (714958) CN602650954

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

19 Date: 09/05/2008 (701546)

Self Report? NO Classification: Minor

Citation: 01954 / Special Condition No. 18 OP
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
7699 / Special Condition No. 8 PA

Description: Failure to conduct daily visible emission checks of silo bag house vents. Specifically, between August 14, 2006 through March 21, 2007, Formosa Point Comfort Plant personnel failed to conduct EPA Method 22 observations of various baghouse vents in the PVC Unit on 14 separate dates.

Self Report? NO Classification: Minor

Citation: 01954 / Special Condition No. 18 OP
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
7699 / Special Condition No. 9 PA

Description: Failure to conduct weekly inspections of bag houses. Specifically, between June 26, 2006 through March 4, 2007, Formosa Point Comfort Plant personnel failed to conduct weekly inspections of various bag houses in the PVC Unit.

Self Report? NO Classification: Minor

Citation: 01954 / Special Condition No. 18 OP
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
7699 / Special Condition No. 9 PA

Description: Failure to conduct semi-annual detailed inspections of bag houses. Specifically, between August 9, 2006 through February 8, 2007, Formosa Point Comfort Plant personnel failed to conduct semi-annual detailed inspections of various bag houses in the PVC Unit.

Self Report? NO Classification: Moderate

Citation: 01954 / Special Condition No. 18 OP
30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)
7699 / Special Condition No. 16(E) PA

Description: Failure to equipp each open-ended line with a cap, blind flange, plug, or a second valve. Specifically, on January 22, 2007, Formosa Point Comfort Plant personnel discovered an open-ended valve in the pipe rack behind PV 701D.

Self Report? NO Classification: Minor

Citation: 01954 / Special Condition No. 3(A)(iii) OP

30 TAC Chapter 122, SubChapter B 122.143(4)
Description: Failure to conduct quarterly visible emissions observations of bag houses. Specifically, between May 9, 2007 through August 8, 2007, Formosa Point Comfort Plant personnel failed to conduct quarterly visible emissions observations of two bag houses in the VCM Unit in accordance with EPA Method 9.

20 Date: 04/30/2009 (771401) CN602650954
Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)
Description: Failure to meet the limit for one or more permit parameter

21 Date: 08/03/2009 (748900) CN602650954
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 335, SubChapter C 335.62
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(a)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(b)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(c)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(c)(1)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(c)(2)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.11(d)
Description: Failure to conduct a waste determination for each solid waste generated.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 335, SubChapter A 335.6(c)
30 TAC Chapter 335, SubChapter A 335.6(c)(1)
30 TAC Chapter 335, SubChapter A 335.6(c)(2)
30 TAC Chapter 335, SubChapter A 335.6(c)(3)
30 TAC Chapter 335, SubChapter A 335.6(c)(4)
30 TAC Chapter 335, SubChapter A 335.6(c)(5)
30 TAC Chapter 335, SubChapter A 335.6(c)(5)(A)
30 TAC Chapter 335, SubChapter A 335.6(c)(5)(B)
30 TAC Chapter 335, SubChapter A 335.6(c)(5)(C)
30 TAC Chapter 335, SubChapter A 335.6(c)(5)(D)
Description: Failure to provide written notification for all industrial solid waste streams and associated management units.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 335, SubChapter A 335.6(c)
Description: Failure to document changes or additional information with respect to that originally provided within 90 days of changes.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 335, SubChapter A 335.13(k)
30 TAC Chapter 335, SubChapter A 335.13(k)(1)
30 TAC Chapter 335, SubChapter A 335.13(k)(2)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT D 262.42
Description: Failure to submit an exception report to TCEQ when the original copy of the manifest was not received back from the TSDF within 45 days of the date of shipment.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 335, SubChapter A 335.13(i)
40 CFR Chapter 262, SubChapter I, PT 262, SubPT D 262.40(b)
Description: Failure to maintain manifests for at least three years from the date the waste was accepted by the initial transporter.

22 Date: 08/25/2009 (765182)
Self Report? NO Classification: Minor
Citation: 01957 / Special Condition No. 1(A) OP
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Description: Failure to conduct periodic monitoring as specified in the Federal Operating Permit. Specifically, between April 7, 2008 through April 13, 2008, Formosa Point Comfort Plant personnel failed to conduct a weekly EPA Method 9 observation of their standby Thermal Incinerator (EPN H923B) located in the High Density Polyethylene Plant.

23 Date: 08/28/2009 (766981)
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Special Condition No. 1 PERMIT
Special Terms and Conditions No. 17 OP

Description: Failure to comply with the special conditions contained in a permit. Specifically, the pound per hour (lb/hr) allowable emissions rate limits for carbon monoxide (CO) and nitrogen oxides (NOx) listed in TCEQ Air Permit No. 19168 and PDS-TX-760M7, Special Condition No. 1, was exceeded for Unit ID Nos. 1003, 1004, 1005, 1007, 1008, and 1009B on several dates as specified in the February 22, 2008 and August 25, 2008 semi-annual deviation reports for Federal Operating Permit No. O-01958.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter G 116.715(a)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Special Condition No. 7 PERMIT
Special Terms and Conditions OP

Description: Failure to comply with the special conditions contained in a permit. Specifically, the Catalyst Regeneration Heater (EPN: 8001B) exceeded its limit of 438 hours per year of operation on a rolling 12-month average on several dates listed as specified in the February 22, 2008 and August 25, 2008 semi-annual deviation reports for Federal Operating Permit No. O-01958.

24 Date: 01/11/2010 (827904) CN602650954

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 305, SubChapter F 305.125(17)

Description: NON-RPT VIOS FOR MONIT PER OR PIPE

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 305, SubChapter F 305.125(17)

Description: NON-RPT VIOS FOR MONIT PER OR PIPE

F. Environmental audits:

Notice of Intent Date: 09/29/2008 (705355)

No DOV Associated

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A