LSC

# TEXAS RIOGRANDE LEGAL AID, INC.

**Austin Office**
4920 North IH-35
Austin, Texas 78751
Telephone (512) 374-2700, Fax (512) 447-3940

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2015 SEP 21 PM 2:44
CHIEF CLERKS OFFICE

September 18, 2015

IWD #2457

**COVER SHEET**

Dear Chief Clerk's Office:

The following permit comments were already submitted online on Friday September 18, 2015. A duplicate hard copy of the comments and attachments are attached only because the two attachments with photos were too large to upload through TCEQ's online comment system. If you have any questions, I can be reached at 512-374-2739.

Thank you,

Erin Gaines
Texas RioGrande Legal Aid

REVIEWED
SEP 23 2015
By

H

LSC

**TEXAS RIOGRANDE LEGAL AID, INC.**

**Austin Office**

4920 North IH-35

Austin, Texas 78751

Telephone (512) 374-2700, Fax (512) 447-3940

September 18, 2015

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

RE: Major Permit Amendment Formosa Utility Venture, Ltd. and Formosa Plastics Corp. TPDES PERMIT NO. WQ0002436000 Request for Contested Case Hearing.

Dear Ms. Bohac:

Please consider this request for a contested case hearing by the Union of Commercial Oystermen of Texas, the Texas Injured Workers, and the San Antonio Bay Water Keeper (collectively "Protestants").

Union members are shrimpers and oystermen who fish and/or earn their livelihood in Lavaca/Chocolate Bay and other bays in the vicinity. The bays, shrimp and oysters are directly affected by the wastewater discharged by Formosa. Likewise, members' ability to earn a living is affected by Formosa's wastewater discharge.

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 health and safety protections in the workplace and value the aesthetics and beauty of the bays as well as the recreational opportunities they afford. Members' livelihoods, health and safety, and recreational opportunities are affected by Formosa's wastewater discharges.

The Water Keeper is a grassroots group committed to preserving and protecting the health of San Antonio, Lavaca, and Matagorda Bays and its watershed for our children, our economy and our future, through advocacy, education, and enforcement of the Clean Water Act. Water Keeper members' use and enjoyment of the bays and watershed are affected by Formosa's wastewater discharges.

Protestants contend Formosa's Texas Pollutant Discharge Elimination System (TPDES) permit as proposed by the Texas Commission on Environmental Quality (TCEQ) is not sufficiently protective of Lavaca Bay/Chocolate Bay (Lavaca Bay) and will harm their ability to fish, shrimp and enjoy the bay and to earn a livelihood from the bay. The proposed permit will also harm endangered and threatened species that live in and around the Bay.

Protestants have members who own property, reside, work, and recreate near Formosa's facility and its discharges and who would be adversely affected by discharges in the proposed draft permit. Accordingly, Protestants are affected persons as defined by 30 Tex. Admin. Code §55.205(a)(1).

Individual members of the Protestants would have standing to request a hearing in their own right, but no individual member's participation is required for Protestants to assert any claims or seek any relief in a contested case hearing regarding Formosa's application. Individual members of the three groups live at the following addresses:

Union of Commercial Oystermen of Texas
Mauricio Blanco, 714 S. San Antonio Street, Port Lavaca, Texas 77979.
Hurtado Francisco, 418 W. Manhan, Port Lavaca, Texas 77979.
Jose Luis Cruz, 418 W. Manhan, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

Texas Injured Workers
Dale Jurasek, 403 Tommy Dr, Port Lavaca, Texas 77979.
Ronnie Hamrick, 380 Royal Rd, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

San Antonio Bay Water Keeper
David and Christi Campos, 881 Hackberry St, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

Lavaca Bay is part of the Matagorda Bay System, which connects to the Gulf of Mexico. Lavaca Bay contains extensive oyster reefs and also shrimp nurseries. Unfortunately, Lavaca Bay has already suffered environmental insults. Extensive discharges of mercury into the Bay by Alcoa led to a declaration that the contamination was sufficient to require a Superfund cleanup. Also, Lavaca Bay is fragile because drought conditions in Texas are limiting fresh water to replenish the Bay. Red tides and algal blooms stress the existing ecosystem. Formosa seeks to discharge additional copper and chloroform into the Bay, as well as continue discharges of a long list of toxins. Formosa seeks to increase the amount of contaminated water it discharges, as well as the quantity of toxins it discharges. Protestants seek to protect Lavaca Bay from additional and

ongoing pollution that will degrade the Bay. Protestants offers the following specific comments on Formosa's TPDES permit as well as responses to TCEQ's response to previously filed comments.

Protestants request a contested case hearing.

## I. BACKGROUND

In July 1994, Formosa entered into an agreement with Diane Wilson, EPA, and TNRCC to create a process to assess "the feasibility of waste water recycling and/or reduction and/or removal programs to be studied and/or implemented at Formosa Plastics, Texas with the goal of zero discharge to Lavaca Bay."[1] A Technical Review Commission evaluated studies showing that zero discharge was technically feasible for the Formosa plant, but Formosa decided not adopt the system. Now, over 20 years later, Formosa seeks to increase its permitted discharge levels of certain pollutants and TCEQ has failed to demonstrate why stricter discharge limits are not applicable.

Formosa continues to discharge pursuant to a wastewater permit issued in 2005, which expired in 2010, and has been "administratively continued" now for five years.

Formosa has a repeated record of non-compliance with environmental laws, including its water discharge permits, air permits, and RCRA compliance. It has been fined numerous times and has failed to comply with a consent decree with the EPA.

A goal of the Texas Coastal Management Program is "to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas." Texas Coastal Management Program 2012 Annual Report.[2] A permit that allows additional toxic pollutants into estuaries and bays, that fails to sufficiently restrict the discharge of new dioxins and furans and that does not provide specific enough terms to restrict the discharge of solid waste does not meet this goal.

## II. SPECIFIC DEFICIENCIES IN FORMOSA'S DRAFT PERMIT

TCEQ's draft TPDES permit is deficient and does not comply with the Clean Water Act (CWA) in the following ways.

### 1. Increased copper discharges allowed in permit violate anti-backsliding provisions of CWA and threaten aquatic species.

[1] Wilson-Formosa Zero Discharge Agreement, Formosa Recycling/Reduction/Removal Mediation, July 1994.
[2] http://www.glo.texas.gov/what-we-do/caring-for-the-coast/_publications/2012-cmp-annual-report.pdf

The anti-backsliding provisions of the Clean Water Act restrict a facility from increasing the pollutant load on a body of water. 30 TAC ch. 307; 40 CFR 122.44(l). In spite of this, Formosa requests, and TCEQ approves an increase in copper loading in Lavaca Bay from a daily average of 1.37 pounds/day to 1.47 pounds/day, or up to 36.5 additional pounds of copper each year. Remarkably, it appears the process changes that will lead to this increase in copper discharge have already occurred—that is, that Formosa has already made changes to its manufacturing process that have led to higher pounds of copper being discharged. The CWA does not allow a regulated entity to so entrap an agency, by changing the process without requesting a permit amendment, and then arguing that it can't help but discharge more because the changed process leads to more discharges. If Formosa seeks to change its process and discharge more copper, that entire process must come under review, and Formosa should not have been exceeding or getting close to exceeding its permit requirements prior to this permit amendment.

TCEQ contends that 40 CFR § 122.44(l)(2)(i)(A) allows Formosa to legally discharge higher levels of copper because there have been "material and substantial alterations to the permitted facility [which] occurred after permit issuance which justify the application of a less stringent effluent limitation." Yet TCEQ simply makes a conclusory statement without explaining the alterations that would justify a less stringent effluent limitation. TCEQ's conclusion that whatever necessary unarticulated changes that have been made "justify" lower effluent standards is thus arbitrary and not justified in the record.

Allowing increased amounts of copper to be discharged into Lavaca Bay increases the risk of damage to aquatic species. "Elevated levels of copper are toxic in aquatic environments and may adversely affect fish, invertebrates, plants and amphibians. Acute toxicity effects may include mortality of organisms; chronic toxicity can result in reductions in survival, reproduction and growth."[3]

Further, since Lavaca Bay has been contaminated with mercury, and since mercury and copper have a synergistic effect in a variety of aquatic species,[4] allowing additional copper into the Bay has higher risk of injuring aquatic species, and potentially birds dependent on those aquatic species, including endangered species.

Even assuming Formosa somehow meets an exception to the anti-backsliding provisions of the CWA, there is no evidence in the record to show that these additional copper discharges won't

[3] EPA, "Water Quality Criteria Copper Aquatic Life Criteria: Supplementary Training Materials," http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/copper/background.cfm

[4] Syntham ilselvan Dwivedi, A Chezhian, N Kabilan and T Suresh Kumar, "Synergistic Effect of Mercury and Chromium on the Histology and Physiology of Fish, *Tilapia Mossambica* (Peters, 1852) and *Lates calcarifer Calcarifer* (Bloch, 1790)," Toxicol. Intl. 2012 ep-Dec; 19(3): 235–240. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3532766/

sufficiently degrade the Bay to cause harm to aquatic species and endangered species and violate state water quality standards. See 40 CFR 122.44(l)(2)(ii); see also US EPA Interim Objection to Draft Permit and Request for Additional Information to TCEQ, July 28, 2011, at 1 ("Given that the copper limit at Outfall 001 is based on a state water quality standard, it is unclear how an increase in copper loadings through Outfall 001 can reasonably be justified.").

Finally, TCEQ should include concentration based effluent limits as well as mass limits for copper in the permit. On page 1 of its 2011 Interim Objection Letter, EPA stated: "given that the water quality standard for copper is concentration based, the draft permit should also include concentration based effluent limits as well as mass limits."

**2. Increased chloroform discharges violate anti-backsliding provisions of CWA and threaten aquatic species.**

Formosa's draft permit likewise violates the anti-backsliding provisions of the CWA by increasing chloroform discharges to 1.89 lbs/day average and 4.99 lbs/day maximum. 30 TAC ch. 307; 40 CFR 122.44(l). Even though Formosa apparently did not request an increase in chloroform levels in its permit application,[5] TCEQ approved an increase in chloroform loading in Lavaca Bay, stating that Formosa's testing shows higher levels of chloroform than anticipated and arguing that this "new information" exempts Formosa from anti-backsliding requirements. TCEQ's conclusion violates 30 TAC ch. 307 and the CWA.

TCEQ misreads federal anti-backsliding regulations. If there is now "information which was not available at the time of permit issuance," then Formosa can use the anti-backsliding exemption. 40 CFR § 122.44(l)(2)(i)(A)(emphasis added). There is nothing indicating that information about chloroform discharges was not available at the time of the original permit. Further, "new testing methods" are specifically not allowed as a reason to backslide. *Id.*

Chloroform is acutely toxic to pink shrimp.[6] Increases in chloroform discharges also may harm aquatic species and potentially birds dependent on those species, including endangered species.

Even assuming Formosa somehow meets the anti-backsliding provisions of the CWA, there still must be evidence in the record to show that these additional chloroform discharges won't sufficiently degrade the Bay to cause harm to aquatic species and endangered species and violate state water quality standards.

---

[5] See Formosa Application Attachment H, Major and Minor Amendment Requests.

[6] Bentley, R.E., et al. 1975. Acute toxicity of chloroform to bluegill (Lepomis macrochirus), rainbow trout, (Salmo gairdneri), and pink shrimp (Penaeus durorarum). Contract No. WA-6-99-1414-6. U.S. Environ. Prot. Agency.

**3. Permit condition giving Formosa three years to meet dioxin and furan discharge standards is an abuse of discretion and violates the CWA.**

Formosa continues to discharge pursuant to a permit issued in 2005, which expired in 2010 and has been "administratively continued" now for five years. Formosa filed a permit renewal application in 2010 – now five years ago – which described a need to discharge dioxins and furans. Formosa has thus had five years to manage its dioxin and furan discharge. Instead of demanding that Formosa immediately protect the receiving waters, TCEQ, with no evidence showing the need for additional time, now gives Formosa three additional years to comply with furan and dioxin standards. Notably, this is longer than the "one-year compliance period" for 2,3,7,8-TCDD equivalents that TCEQ stated would be included in the draft permit in its May 2013 FACT SHEET, Part VIII B.1.

To now give Formosa three additional years to comply with furan and dioxin standards is an abuse of discretion and harmful to water quality. TCEQ has the authority to allow a discharger time to comply with new effluent limitations, 30 TAC § 307.2(f), but accounting for the five year extension on the permit, Formosa will have had *eight years* notice to comply with these standards from the time of its last permit expiration.

Dioxins and furans, 2,3,7,8 TCDD equivalents, were defined as "priority pollutants" under the CWA in 1982. Appendix A to 40 CFR part 423. At that time, EPA set standards for Best Available Technology Economically Achievable for these pollutants, and in 1997, a new EPA method for analysis of these pollutants was issued.

Formosa should be required to meet the permit limitations for 2,3,7,8 TCDD equivalents (dioxins and furans) immediately.

**4. Formosa's discharges will degrade segments 2453, 2454, Cox Lake and Cox Bay, Lavaca Bay/Chocolate Bay in violation of the CWA.**

Formosa must analyze how tidal activity affects its discharges. Cox Lake has high aquatic life use, and Cox Lake, Cox Bay and Lavaca Bay/Chocolate Bay have exceptional aquatic life use. Texas law prohibits waters to be toxic to aquatic or terrestrial life. Additionally, tides and waves can affect the dispersion and concentration of pollutants discharged, as well as other characteristics of the receiving waters.[7]

[7] See, e.g., Evaluation of Tidal Dilution of Wastewater Discharges into the Delta Using DSM2 QUAL DSM2 User's Group Meeting April 25, 2006, http://baydeltaoffice.water.ca.gov/modeling/deltamodeling/DSM2UsersGroup/DeltaWastewaterDischarges.pdf; Response of Nereis diversicolor (Polychaeta, Nereidae) populations to reduced wastewater discharge in the polluted estuary of Oued Souss, Bay of Agadir, Morocco, A. Ait Alla, B. Detsch, P. Gillet, A. Moukrim, and H. Begayou, ESTUARINE COASTAL AND SHELF SCIENCE (Dec. 2006);

Formosa has violated its permit discharge limits for many pollutants over the last 10 years, including pH, oil & grease, TOC, copper, zinc, 1,2-Dichloroethane, 1,1-Dichloroethane, 2,3,7,8-Tetrachlorodibenzo-p-dixoin, mercury, phenol, purgeable hydrocarbons, BOD, and whole effluent toxicity.[8] And Formosa has been regularly coming close to violating other permit limits, which is why it is seeking an increase in limits for copper and chloroform in particular. Formosa's analysis should demonstrate that its discharges are not harming any estuaries and that its pollutant loads are not affected by tides in such a way that harms aquatic species.

**5. TCEQ inaccurately determines Formosa's compliance history.**

TCEQ's compliance history analysis artificially determines that Formosa is "two clients" and generates two separate compliance histories, one for Formosa Plastics Corporation and one for Formosa Utility Venture. All compliance problems of each "client" should be reviewed for one entity, Formosa Plastics, the applicant in this proceeding. Such a complete review could change whether Formosa, the responsible party, actually has a "satisfactory" compliance history. TCEQ is required to consider "aggregate compliance history" and "patterns of environmental compliance." 30 TAC 60.3(a)(1)(B). By splitting Formosa into two "clients," TCEQ abandons the standards in 30 TAC 60.3(a)(1)(B).

The compliance history also only includes the period from 2005–2010, but since it is now 2015 and the permit has not been issued, the compliance history review should be expanded to include up to the present date per 30 TAC 60.1(b) ("The compliance history period may be extended beyond the date the application for the permit or participation in an innovative program is received by the executive director, up through completion of review of the application."). In particular, it is not clear whether EPA's 2012 Administrative Order under RCRA has been considered as part of the compliance history.

Further, the numerous violations discovered in the joint EPA/TCEQ inspection of Formosa in June 2010 should be included in the compliance history. (See Pellets in discharge, below) Drainage ditches littered with PVC pellets are a clear violation of Formosa's permit. As TCEQ agreed in the ED's Response to Public Comment, PVC pellets discharged from the facility violate the CWA. Likewise a crack in the headwall of outfall number 4 also violated the TPDES permit. See EPA official photos no. 73, 74, Appendix A Photographs from June 16, 2010 Inspection of Formosa.[9]

---

www.researchgate.net/publication/222662225_Response_of_Nereis_diversicolor_(Polychaeta_Nereidae)_populations_to_reduced_wastewater_discharge_in_the_polluted_estuary_of_Oued_Souss_Bay_of_Agadir_Morocco

[8] Compliance data from EPA Enforcement and Compliance History Online (ECHO) database, Effluent Charts for Formosa Point Comfort Plant, http://echo.epa.gov/effluent-charts#TX0085570, and Discharge Monitoring Report Pollution Loading Tool, http://cfpub.epa.gov/dmr/facility_detail.cfm ; Accessed September 18, 2015.

[9] Photo files are too large to attach for these online comments per TCEQ's limit on uploading documents. TCEQ likely already has copies of these photos from the EPA inspection, but if not, here are links to the photos:

**6. The permit needs more specific standards to prohibit LLDPE pellets and PVC dust from being discharged into waters of the United States.**

Protestants have commented that Formosa discharges and continues to discharge polyethylene pellets and PVC pellets and dust in its wastewater. Protestants ask for a specific permit condition stating that LLDPE pellets and PVC dust are solids, and it violates the CWA for Formosa to discharge them. TCEQ responds that such discharges violate Formosa's general permit conditions, but refuses to add a specific condition to the permit. Protestants ask that Formosa be required to notify TCEQ within 24 hours of discharging LLDPE pellets and/or PVC dust. TCEQ again refuses and opines that TCEQ already gets 24-hour notice when a discharge endangers the environment. As LLDPE and PVC dust are toxic solids that do not belong in bodies of water, Protestants demand that TCEQ specify that discharges of these solids requires a 24-hour notice.

TCEQ's disregard for Formosa's discharges of LLDPE pellets and/or PVC dust, a solid waste, in violation of the CWA and its current permit is remarkable. TCEQ participated in an EPA inspection of Formosa in June of 2010. At that time, EPA documented LLDPE pellets and PVC dust littering the ground as well as Formosa's stormwater drainage ditches.

Official photographs taken by EPA during an inspection of the Formosa facility show solid waste destined for discharge. *See* Appendix A Photos, 061610 Formosa; Appendix B Photos, 061710 Formosa. [10] The photos are filled with images of a littered surface at the Formosa facility as well as stormwater drainage ditches and discharges with LLDPE pellets and PVC dust. A few of the many examples include:

- LLDPE pellets on concrete in the rail car loading area. (EPA official photo no. 6, App A Photos 061610 Formosa);
- LLDPE pellets on train track. (EPA official photo no. 7, id.);
- PVC dust in parking lot, (EPA official photo no. 11, id.);
- Drainage ditch with "piles of PVC in drainage channel," (EPA official photo no. 14, id.);
- Apparent PVC dust in drainage channel; (EPA official photo no. 16, id.);
- PVC pellets floating in discharge; (EPA official photo no. 78, 79, 80 id.);
- PVC resin in stormwater discharge (EPA official photo no. 32, App B Photos 061710 Formosa);
- PVC resin on ground near bagging area; (EPA official photo no. 32a [labeled 32], id.).

---

https://www.dropbox.com/s/j5ndxyqif7lybt4/App%20A.%20Photos%20061610%20Formosa.pdf?dl=0; https://www.dropbox.com/s/4vw0m02bywa8icy/App%20B.%20Photos%20061710%20Formosa.pdf?dl=0

[10] See footnote 9.

Clearly, the permit conditions are not stopping Formosa from discharging solid waste into waters of the United States. Permit conditions should be made clearer, 24-hour reporting should be required, to protect the Bay and the fish, oysters and other species depending on clean water.

**7. TCEQ must formally consult US Fish and Wildlife Service regarding the effect on endangered and threatened species of these discharges, and such consultation must include information about LLDC pellets and PVC dust in the discharge, as well as increased copper and chloroform limits.**

A number of endangered species could be taken as a result of discharges by Formosa, and a number of threatened species could be harmed. 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 peregrines tundrius), piping 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 (Cemophora coccinea), and South Texas siren (Siren sp. 1) have been documented in Calhoun County.

TCEQ now agrees that there are bodies of water of critical concern to the endangered Whooping Crane in Calhoun County, where Formosa proposes to discharge. TCEQ admits that it must consult with EPA "and, if appropriate, consult[] with USFWS." TCEQ states that it has "informally" notified U.S. Fish and Wildlife Service of the permit, but USFWS has no record of any consultation on this water discharge permit.

Attorneys for Protestants sent a Freedom of Information request to USFWS regarding any EPA referral for consultation with Formosa. The only consultation related to Formosa's greenhouse gas permit and when to use certain tall equipment in order not to harm the Whooping Cranes. (See attached Exhibit A). USFWS has no record of receiving information about Formosa's water discharges. USFWS has not been consulted about the effects of these discharges on endangered and threatened species.

Any consultation should inform FWS about LLDC pellets and PVC dust in the discharge, as well as increased copper and chloroform limits. Further, TCEQ should inform FWS about the "excursions" on pH and temperatures allowed under this permit as well as the extended period given to Formosa to comply with dioxin and furan limits so that FWS can analyze the effects on threatened and endangered species.

TCEQ has not complied with the Endangered Species Act and must consult with USFWS.

**8. Toxicity Reduction Evaluation should be required.**

As part of the ESA consultation with USFWS, TCEQ should consult USFWS regarding Toxicity Reduction Evaluation (TRE) that would sufficiently protect aquatic life in the Bay. Lavaca Bay has been assaulted by mercury and other pollutants, is a source of fish and oysters and the basis of many persons' livelihood, and should be protected. Just because a toxic discharge doesn't kill aquatic species – and only produces "sublethal" results – does not reduce the significance of the event. A TRE should be required after two toxic events within two months. Depending on the severity of the toxic event, TCEQ should require TRE for one event. The permit requirement that TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. TRE should be mandated in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event. Further, TCEQ should consult TPWD and USFWS regarding this requirement to ensure there is adequate protection for the aquatic life in the Bay.

**9. Formosa should be subject to NSPS Standards**

When Formosa began construction of its Vinyl Chloride Monomer Plant in 1982, it operated on a definite tract of land. In 1987, EPA adopted a final rule for the Organic Chemicals, Plastic and Synthetic Fibers industry. In 1994, Formosa added seven new plants, and in 2001 Formosa added three additional plants. TCEQ contends that these new plants are new "dischargers" and not "new sources" of discharge. However, new land purchased for new plants are not part of the original site.[11] Whether the new plants completed in 1994 and 2001 are located at a new site is significant in determining whether the new plants are "new dischargers" (if at an existing "site") or "new sources" (at a new "site").

On page 2 of its Interim Objection Letter to the Draft Permit in 2011, EPA agreed that Formosa is misclassified as an existing source. EPA stated, "Furthermore, discussion in the fact sheet indicates that the Formosa Plastics facility is an existing source discharger because it began operations in 1982. Information included in the permit application states that the facility completed the 'largest one time expansion of any facility in the State of Texas by the addition of manufacturing facilities at its Point Comfort, Texas location in 1994.' Such a major plant expansion after the 1982 promulgation date for the OCPSF regulations would qualify the expanded operations at the Point Comfort plant as a 'new source' under the regulations rather than an existing source. The addition of the Special Polyvinyl Chloride (SPVC) operations in 2010, would also qualify as a 'new source.'"

[11] "Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity." 40 CFR 122.2

Regardless of whether some of the effluent guidelines for certain pollutant categories are the same for new sources and existing sources, these regulatory distinctions are significant because the facility has not been properly classified and TCEQ has not demonstrated that all proper NSPS standards have been applied, in violation of the CWA.

**10. Effluent limits based on Best Professional Judgment must clearly document and evaluate whether stricter, including zero discharge limits, are proper.**

Many of the effluent limitations in the Draft Permit are based on TCEQ's best professional judgment (BPJ) because no applicable effluent limitation guidelines exist. Except for the five conventional pollutants, the CWA requires technology based effluent limitations to be achieved using the "best available technology economically achievable" or BAT. 33 USC 1311(b)(2). Thus, TCEQ must determine BAT on a case-by-case basis for all pollutant sources not subject to established effluent limitation guidelines, and "the need for and derivation of the permit condition, and the basis for its establishment, should be clearly defined and documented."[12]

It's not clear from the record that TCEQ's process for determining BPJ adequately considered the best available technology. The BPJ analysis for the Draft Permit must be revisited and thoroughly documented to establish the process used and materials considered in reaching the BPJ decision for each pollutant, including whether stricter limits, including zero discharge limits, for these pollutants are BAT. Effluent limitations, including those set by BPJ, must require the elimination of all pollutants where technologically and economically achievable. 33 USC 1311(b)(2)(A). [13] Thus, the levels in the Draft Permit set by TCEQ's BPJ do not meet the technology based effluent limitations required by the CWA.

**11. Significant pH and temperature excursions should be reported within 24 hours and the resulting damage should be monitored.**

TCEQ allows Formosa to have 7 hours and 26 minutes of excursions of pH and temperature levels in any month, with the excursions not exceeding one hour. While the law requires 24-hour reporting to TCEQ of excursions that threaten human and aquatic health, that standard is not clear. Acidification of the seas is a significant threat to oysters. TCEQ should consult with USFWS and put clear permit conditions that establish what pH and temperature levels are significant to aquatic species. Those more specific terms should be added to the permit.

**12. Draft permit must require that all samples and measurements taken for the purpose of monitoring the regulated discharge are representative of the monitored activity.**

---

[12] U.S. EPA Permit Writer's Manual at 5.1.4.12.

[13] *Cf. Tex. Oil & Gas Ass'n v. U.S. EPA*, 161 F.3d 923, 927–29 (upholding EPA's zero discharge limits as BAT in a general permit for the coastal oil and gas industry).

As EPA stated on page 2 of its Interim Objection Letter to the Draft Permit in 2011: "Discussion in the fact sheet and permit indicate that these regulated wastestreams are being mixed with groundwater remediation streams, equipment facility wash down, stormwater, firewater and utility wastewater prior to the application of limitations. 40 CFR Part 122.41(j) requires that all samples and measurements taken for the purpose of monitoring the regulated discharge, shall be representative of the monitored activity. Monitoring of the regulated wastestreams for compliance with ELGs must be performed prior to mixing with any other unregulated wastestreams. Based on this requirement, the current draft permit does not appear to be in compliance with the CWA or the NPDES permitting regulations."

TCEQ has not fixed this issue to comply with the proper standard in the current draft permit – for instance, Page 2a of the draft permit states that "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."

**13. Proper test procedures not included in draft permit.**

It does not appear that the Draft Permit's Test Procedures section on page 4 has been revised to meet 40 CFR 122.41(j)(4), which requires all monitoring for all permits to be conducted according to test procedures approved under 40 CFR 136. As EPA urged in its Interim Objection Letter at page 3, TCEQ must cite 40 CFR 136 as the only source for approved monitoring methods to be in compliance with the CWA.

## III. CONCLUSION

Formosa's Draft Permit suffers from a number of serious legal defects, which must be addressed before the final permit may issue. Protestants appreciate your prompt attention to these comments. Please call Erin Gaines at 512-374-2739 with any questions.

Sincerely,

Erin Gaines
Amy Johnson
Enrique Valdivia
Texas RioGrande Legal Aid
4920 N. I-35
Austin, TX 78751
egaines@trla.org

# Exhibit A

Enrique Valdivia
Attorney
Texas RioGrande Legal Aid, Inc.
1111 North Main Avenue
San Antonio, Texas 78212
(210) 212-3707
evaldivia@trla.org

September 26, 2013

Edith Erfling
Project Leader
USFWS c/o TAMU-CC
6300 Ocean Drive
Corpus Christi, Texas 78412
(281) 286-8282 ext. 228
edith_erfling@fws.gov

Dear Ms. Erfling,

This is a request under the Freedom of Information Act. 5 U.S.C. § 552 et seq. I am requesting all public records and any information considered during the consultation process regarding the two following U.S. Fish & Wildlife Services (FWS) consultations or attempted consultations:

1) a 2004 consultation regarding a wastewater permit renewal between FWS and Formosa Utility Venture, Ltd. and/or Formosa Plastics Corp., and

2) a July 2011 Environmental Protection Agency referral to FWS for an Endangered Species Act consultation with Formosa Utility Venture, Ltd. and/or Formosa Plastics Corp.

If there are any fees for searching or copying these records, please inform me if the cost will exceed $50.00 (fifty). However, I would also like to request a waiver of all fees in that the disclosure of the requested information is in the public interest as Texas RioGrande Legal Aid is a non-profit law firm representing indigent clientele. This information is not being sought for commercial purposes. I am able to accept electronic copies of the named documents if such are available.

If you deny any or all of this request, please cite each specific reason you feel justifies the refusal to release the information and notify me of the appeal procedures available to me under the law.

Thank you for considering my request.

Sincerely,

Enrique Valdivia
Texas RioGrande Legal Aid, Inc.

Mary Orms/R2/FWS/DOI
08/07/2012 03:40 PM

To Steve McVey <smcvey@zephyrenv.com>
cc Dawn Whitehead/R2/FWS/DOI@FWS, Craig Giggleman/R2/FWS/DOI@FWS
bcc
Subject Re: Clarification for Conservation Measures (consultation no. 02ETCC00-2012-TA-0276)

Mr, McVey,

1. We normally request the crane or tall equipment that can be laid down nightly, but if not possible, marking the equipment with some sort of flagging or device that would alert the bird there is an object there and distract them from any linear wires they may collide with.

2. There are different types of bird diverters available. An example is the large balls that cell towers place on their guy wires or that occur on transmission lines.

3. I understand the facility will be lit as it it is now. Whooping cranes will probably avoid such lit areas, and I am not familiar whether the facility marks any tall structures. I would assume that the time whooping cranes may be more vulnerable would be at dawn or dusk when they are flying in or out of an area, and during storms.

4. I was referring haulting construction if a whooping crane appeared and can be resumed once the whooping crane is outside the 1000 ft. area.

5. The bird diverters or potentially the 15 ft+ high equipment being laid down if being used at times for days at the facility.

I hope this helped. I will be ouf of town from 8/8 to 8/15. If you need additional help you may ask for Dawn Whitehead or Craig Giggleman.

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office
c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262

Steve McVey <smcvey@zephyrenv.com>

Steve McVey
<smcvey@zephyrenv.com>
07/30/2012 03:25 PM

To "Mary_Orms@fws.gov" <Mary_Orms@fws.gov>
cc Karen Olson <kolson@zephyrenv.com>
Subject Clarification for Conservation Measures

Mary, What is required in the "marking" of elevated construction equipment? What methods are acceptable/effective?

Also, is marking and installing bird diverters the same?

Does this assume that the construction site will be lit at night with large flood lamps to increase visibility of elevated structures?

To clarify, you recommended that all construction be suspended when a whooping crane was observed within a buffer of 1,000 feet of the construction site. Does this include the existing facility, or just the construction area?

Lastly, which of these recommendations extend beyond the construction period?

Thank you for your responses.

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

02ETCC00-201 TA-0276

Mary Orms/R2/FWS/DOI
07/24/2012 09:49 AM

To Steve McVey <smcvey@zephyrenv.com>
cc
bcc
Subject RE: Greenhouse Gas Permit - Lavaca Bay

Steve,

Whooping Crane
Calhoun County is within the whooping crane (*Grus americana)* migratory corridor and the wintering grounds of the endangered whooping crane. Whooping cranes usually arrive on the Texas coast between late-October and mid-November and spend almost six months on the wintering grounds. As spring approaches, they leave for the breeding grounds normally between March 25 and April 15 with the last birds usually gone by May 1st (occasional stragglers may stay into mid-May).

Usually, whooping crane migration flights are generally at altitudes of between 1,000 and 6,000 feet, but they fly at lower altitudes when seeking stopover habitats. They will often make low flights up to two miles from a stopover site to forage late in the day or in early morning. They may also interrupt migration flights to drink and/or forage in agricultural fields or wetlands for brief periods and may be at low altitudes during mid-day. Whooping cranes are largely opportunistic in their use of stopover sites along the Central Flyway, and will use sites with available habitat when weather or diurnal conditions require a break in migration. **The Service recommends that**: 1) project construction should be complete prior to the spring and autumn migration of late March to early May and mid-September to mid-November, respectively and 2) if equipment above 15 feet is proposed for use during construction, please mark and/or lie cranes/equipment down during night time hours and periods of low visibility.

Additional recommendations that we spoke of on the telephone call were:
If new transmission lines are required, we recommend they be buried.
If new transmission lines are to be above ground we recommend marking them with bird diverters.
If there are existing transmission lines we recommend those be marked with bird diverters.
Contractors and workers should be educated as to what species may occur in the area, their appearance, habitats and what protection listed species are offered under the Endangered Species Act and Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act.
If a whooping crane appears on site and is within 1000 feet of construction activities, work should cease until it moves away outside the 1000 foot buffer zone. (You may want to hire a biological monitor during the whooping crane season).
Develop a protocol to notify the proper persons if a whooping crane is observed.

I have attached the map and post monitoring guidelines for the bald eagle. Those are all the recommendations I can think of at the moment, or thought I discussed with you on our phone call.

Calhoun County WHCR map.pptx FINAL BEPDM 05-11-2010_for posting.pdf

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office

c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262
Steve McVey <smcvey@zephyrenv.com>

**Steve McVey**
**<smcvey@zephyrenv.com>**
07/23/2012 01:30 PM

To "Mary_Orms@fws.gov" <Mary_Orms@fws.gov>
cc
Subject RE: Greenhouse Gas Permit - Lavaca Bay

Here is my address.

Thank you for any information that you can provide.

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

**From:** Mary_Orms@fws.gov [mailto:Mary_Orms@fws.gov]
**Sent:** Thursday, July 05, 2012 1:16 PM
**To:** Steve McVey
**Subject:** Re: Greenhouse Gas Permit - Lavaca Bay

Thank you for the info we will be calling in at 1:30

**Steve McVey <**
**smcvey@zephyrenv.com>**

**07/05/2012 01:06 PM**

**To** "<Mary_Orms@fws.gov>"
**cc** Clay Fischer <cfischer@zephyrenv.com>, "Craig_Giggleman@fws.gov" <Craig_Giggleman@fws.gov>, Karen Olson <kolson@zephyrenv.com>
**Subject** Re: Greenhouse Gas Permit - Lavaca Bay

Great! We can use Zephyr's conference call to facilitate our discussion. Please call the following phone number and use the codes to access our conference line.

281-668-7351
at the voice prompt
Press 1 as a user
Press conference PIN 731#
again, press 731#

Please email me if you have difficulties.

Thanks,
Steve
Sent from my iPhone

On Jul 5, 2012, at 12:52 PM, <Mary_Orms@fws.gov> wrote:

1:30 would be fine

**Steve McVey <**
**smcvey@zephyrenv.com>**

**07/05/2012 12:06 PM**

**To**"Mary_Orms@fws.gov" <Mary_Orms@fws.gov>, Clay Fischer <cfischer@zephyrenv.com>
**cc**"Craig_Giggleman@fws.gov" <Craig_Giggleman@fws.gov>, Karen Olson <kolson@zephyrenv.com>
**Subject**RE: Greenhouse Gas Permit - Lavaca Bay

Thank you Ms. Orms. Would you and Mr. Giggleman be available for a call today at 1:30 or 3:30?

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

**From:** Mary_Orms@fws.gov [mailto:Mary_Orms@fws.gov]
**Sent:** Thursday, July 05, 2012 10:32 AM
**To:** Steve McVey; Clay Fischer
**Cc:** Craig_Giggleman@fws.gov
**Subject:** Fw: Greenhouse Gas Permit - Lavaca Bay

Mr. Fischer and Mr. McVey,

Sorry for the lateness in response. Dawn had sent us the email below and I failed to contact you earlier. Craig Giggleman, our contaminants supervisor and myself are available in the office today if you would like to call in and we can discuss the project. I am sure Dawn explained that the Service does not consult on green house gas impacts, however, we are willing to provide recommendations for other activities associated with the construction if applicable.

Please let us know if you are still interested in having the call today and a recommended time.

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office
c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262

----- Forwarded by Mary Orms/R2/FWS/DOI on 07/05/2012 09:59 AM -----

**Dawn Whitehead/R2/FWS/DOI**

06/29/2012 10:00 AM

To Mary Orms/R2/FWS/DOI@FWS, Craig Giggleman/R2/FWS/DOI@FWS, Clare Lee/R2/FWS/DOI@FWS

cc Allan Strand/R2/FWS/DOI@FWS, Pat Clements/R2/FWS/DOI@FWS

Subject Fw: Greenhouse Gas Permit - Lavaca Bay

Could you all handle a conference call sometime next week on a GHG Permit for expansion of Formosa Plastics? I am out all next week. I don't think Allan needs to sit in and not sure Pat needs to either. Mary please get back with Clay about what you decide.

Dawn

----- Forwarded by Dawn Whitehead/R2/FWS/DOI on 06/29/2012 09:56 AM -----

**Clay Fischer <**
cflscher@zephyrenv.com
**>**

06/29/2012 09:48 AM

To "Dawn_Whitehead@fws.gov" <Dawn_Whitehead@fws.gov>, "Allan_Strand@fws.gov" <Allan_Strand@fws.gov>, "Pat_Clements@fws.gov" <Pat_Clements@fws.gov>

cc Steve McVey <smcvey@zephyrenv.com>

Subject Greenhouse Gas Permit - Lavaca Bay

Hello,

I hope all is well and that you are enjoying the nice summer weather. I am contacting you in regards to an ongoing project Zephyr is assisting with in Calhoun County. Formosa Plastics USA is looking to expand an existing facility in Point Comfort, Texas. Expansion of the facility will require a Greenhouse Gas Permit from EPA. As part of that permit, Zephyr is assisting with the biological assessment of the study area. The attached figure details the study area. The study area is generally situated over Calhoun County but also encompasses portions of Jackson and Victoria Counties. Zephyr has identified the various federally-protected species listed for the counties and is currently studying their likelihood of occurrence in the study area as well as the possible impacts to those species due to the project. I am curious if one, all of you, or someone else from your office would be available next week for a discussion relating to any species of concern to the USFWS within the study area. At this point, we are proposing to accomplish the discussion via conference call, but could arrange a face to face meeting if you feel it is justified. Steve McVey of Zephyr would likely also be involved in those discussions. Please reply to Steve and/or myself with your availability. Thanks!

Regards,

**Clay V. Fischer**
Natural Resources Project Manager
Zephyr Environmental Corp.
2600 Via Fortuna
Suite 450
Austin, Texas 78746
cfischer@zephyrenv.com
www.zephyrenv.com
512.879.6629 (o)
512.592.8591 (c)
512.329.8253 (fax)

7/5/ Steve McVey } natural Resources BA Craig
Clay Fischer Mary
Karen Olsen - Zephyr - air permitting

Proposed Action - Formosa build plant expansion
w/in property
Ethylene & Propelyne replace
stock
Propelene - go to new plant

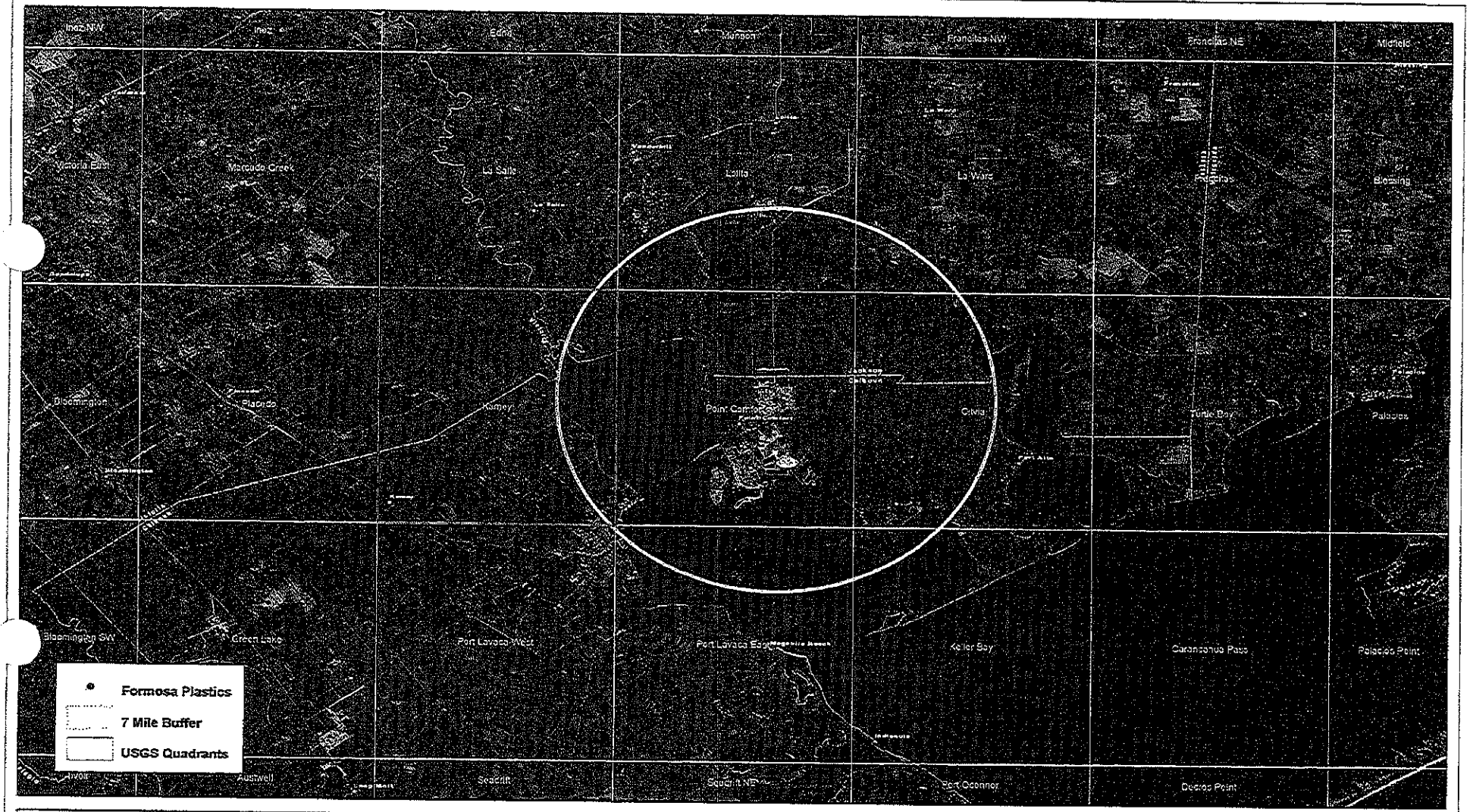
Will exceed a
certain amt of
green house gas - TCEQ - permits - EPA

foot print of new 86-110 acres Max
construction disturbed
all disturbance - on ground.

Told them repetivetly we do not consult on
Green house gases.

Forward - Language -
BE guidelines

02ETCC00-2012-TA-0276




Scale 1:200,000 1 in = 16,667 ft

0 10,000 20,000 Meters

0 30,000 66,000 Feet

Data Sources:
TNRIS, ESRI- icubed imagery

zephyr

**Quadrants Within a 7 Mile Buffer: GHG Permit**

**Formosa Plastics, Calhoun County, Texas**

File Location:

| Drafted By: J. Knowles | Reviewed By:S. McVey | Project No.: 11255.002 | Date: 02/07/2012 |
|---|---|---|---|

# APPENDIX A

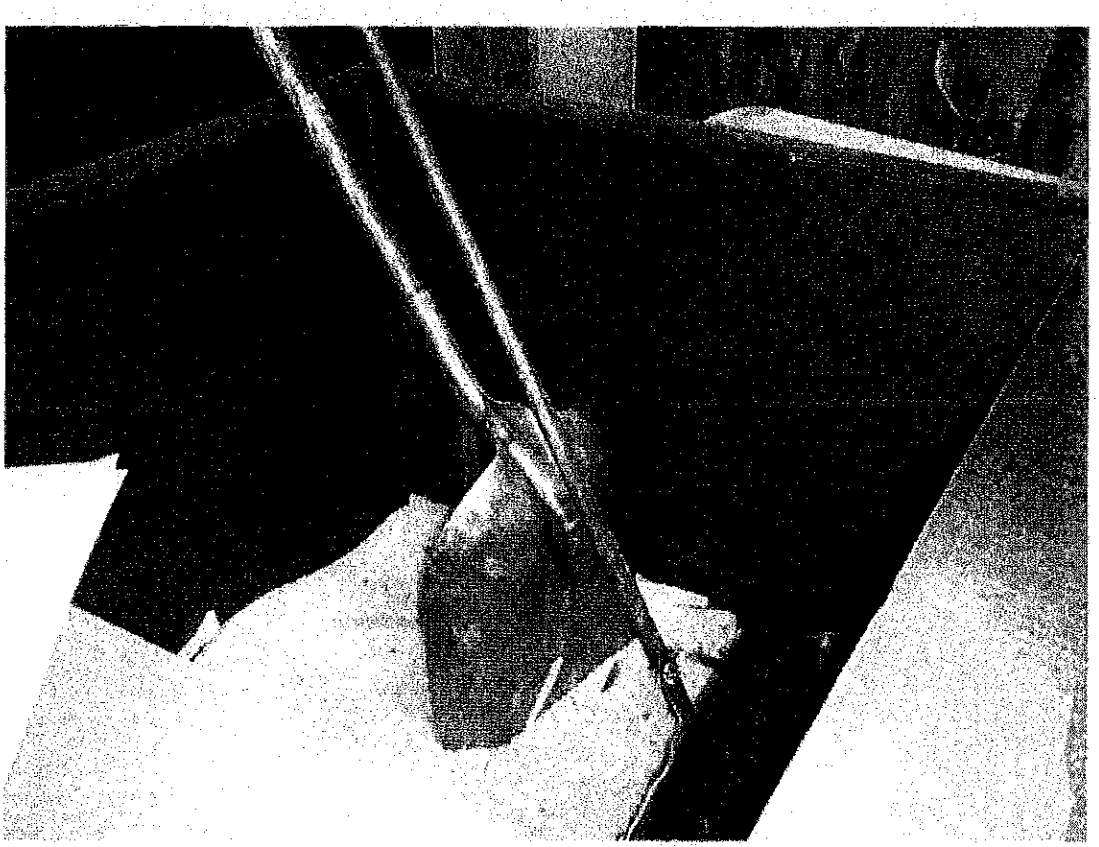
## FORMOSA PLASTICS CORPORATION
## Point Comfort, Texas

---

## Photographs from June 16, 2010 Inspection

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

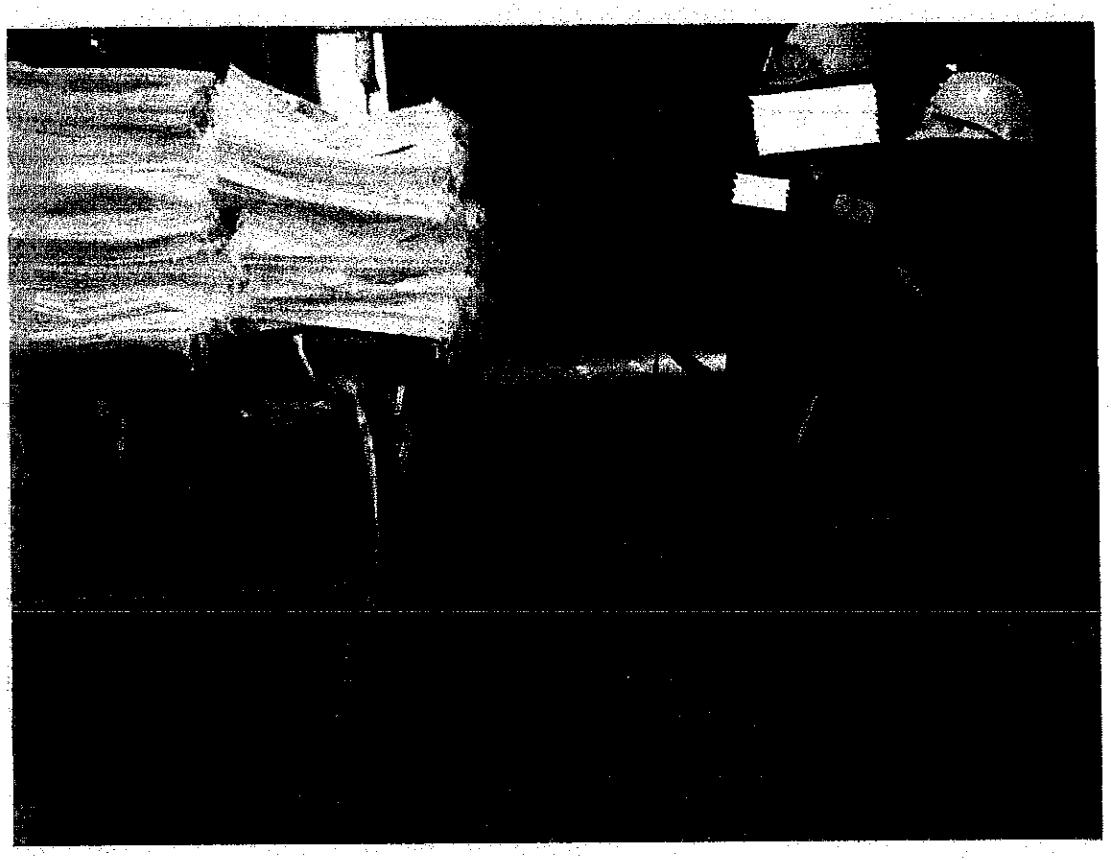
Official Photograph Log
Photo No. 1



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:16:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: LLDPE Bagging Area - Floor sweep pellets stored in box | | |
| Photo ID: DSCF3328 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 2



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:16:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp | | |
| Subject: LLDPE Bagging Area - inspector | explaining process to Frances Verhalen, EPA R6 6EN | |
| Photo ID: DSCF3329 | | |

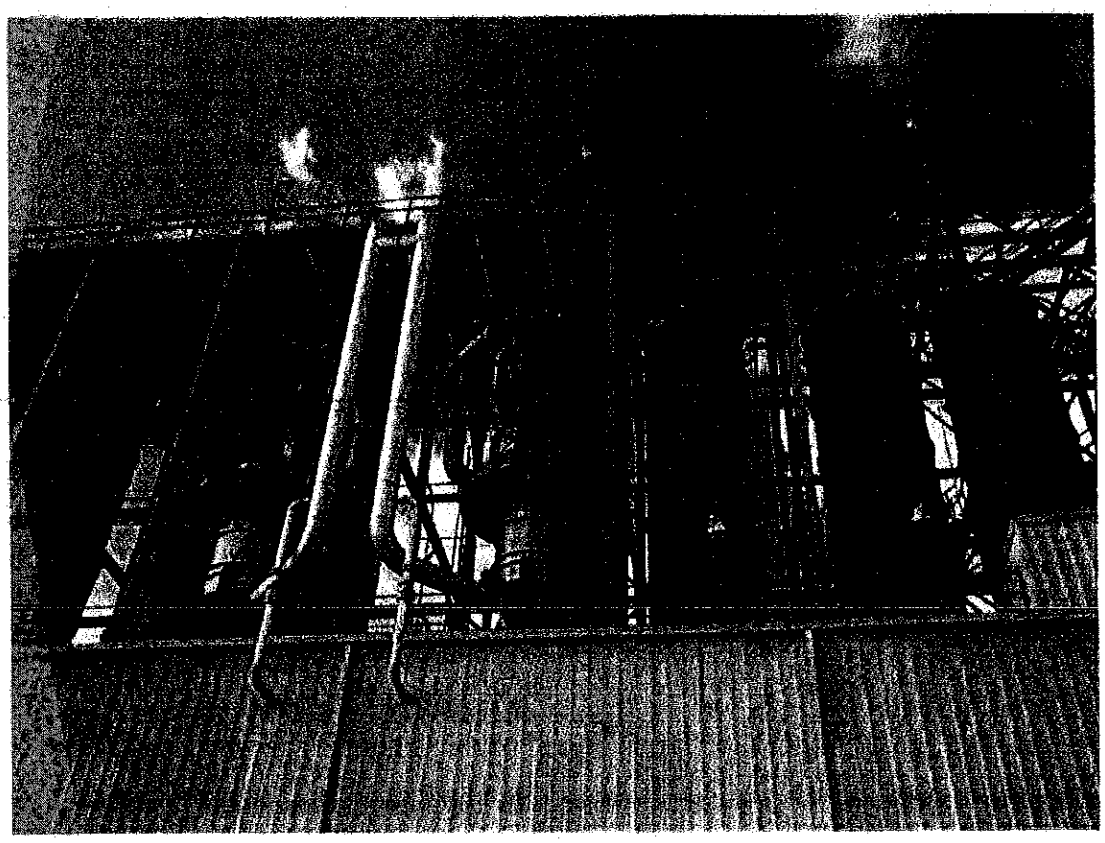
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 3

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2000 | Time: 9:20:00 AM |
| City/County: Point Comfort/Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corporation | | |
| Subject: LLDPE Bagging Area - FPC workers at bagging process line | | |
| Photo ID: DSCF3330 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

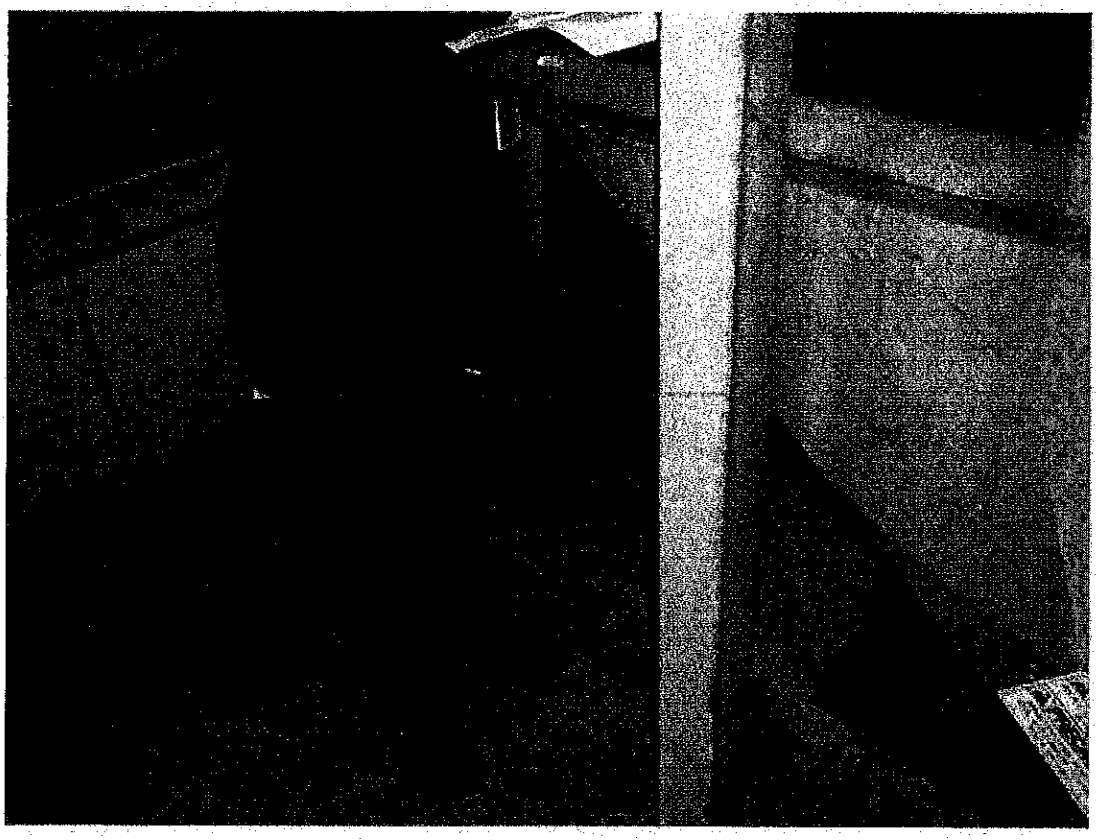
Official Photograph Log
Photo No. 4



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:25:00 AM |
| City/County: Point Comfort/Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corporation | | |
| Subject: LLDPE Bagging Area - Silos to LLDPE | | |
| Photo ID: DSCF3331 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

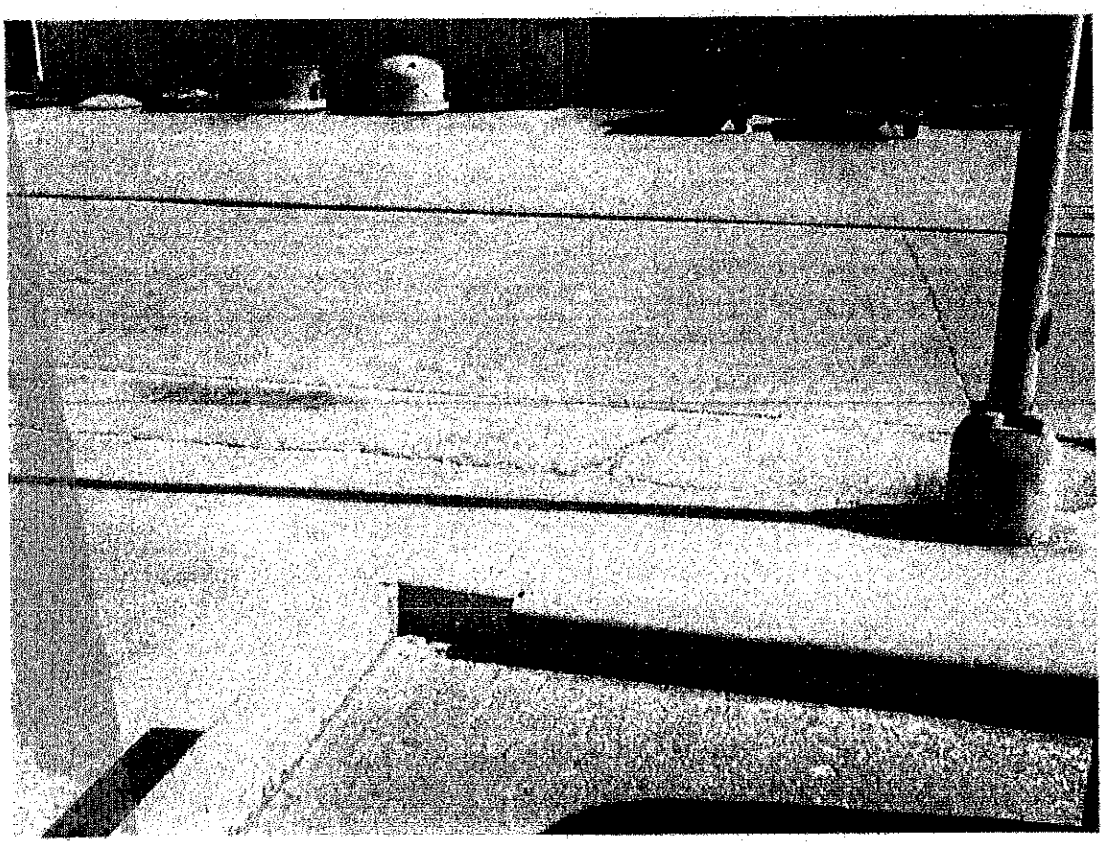
Official Photograph Log
Photo No. 5



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:29:00 AM |
| City/County: Point Comfort/Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corporation | | |
| Subject: LLDPE Railcar Loading Area - Hopper of scrap LLDPE inside railcar loading area | | |
| Photo ID: DSCF3332 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

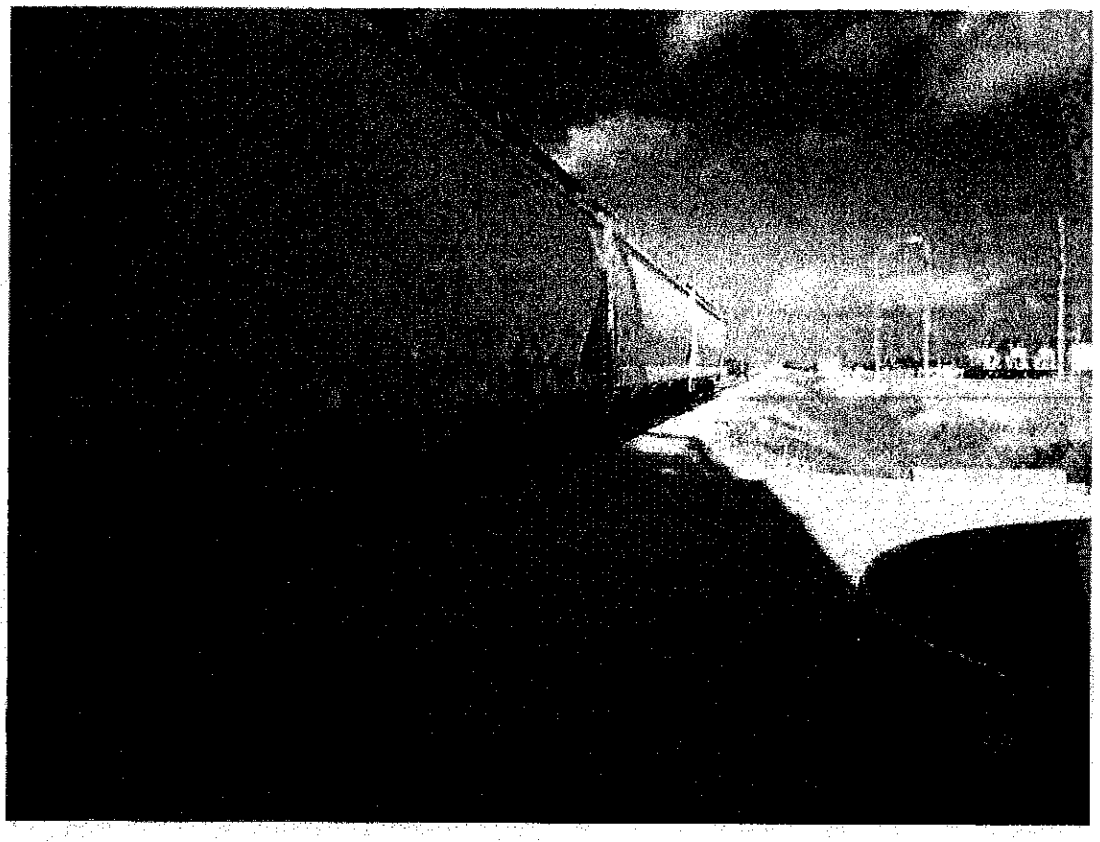
Official Photograph Log
Photo No. 6



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:33:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: LLDPE Railcar Loading Area - LLDPE pellets on concrete | | |
| Photo ID: DSCF3333 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

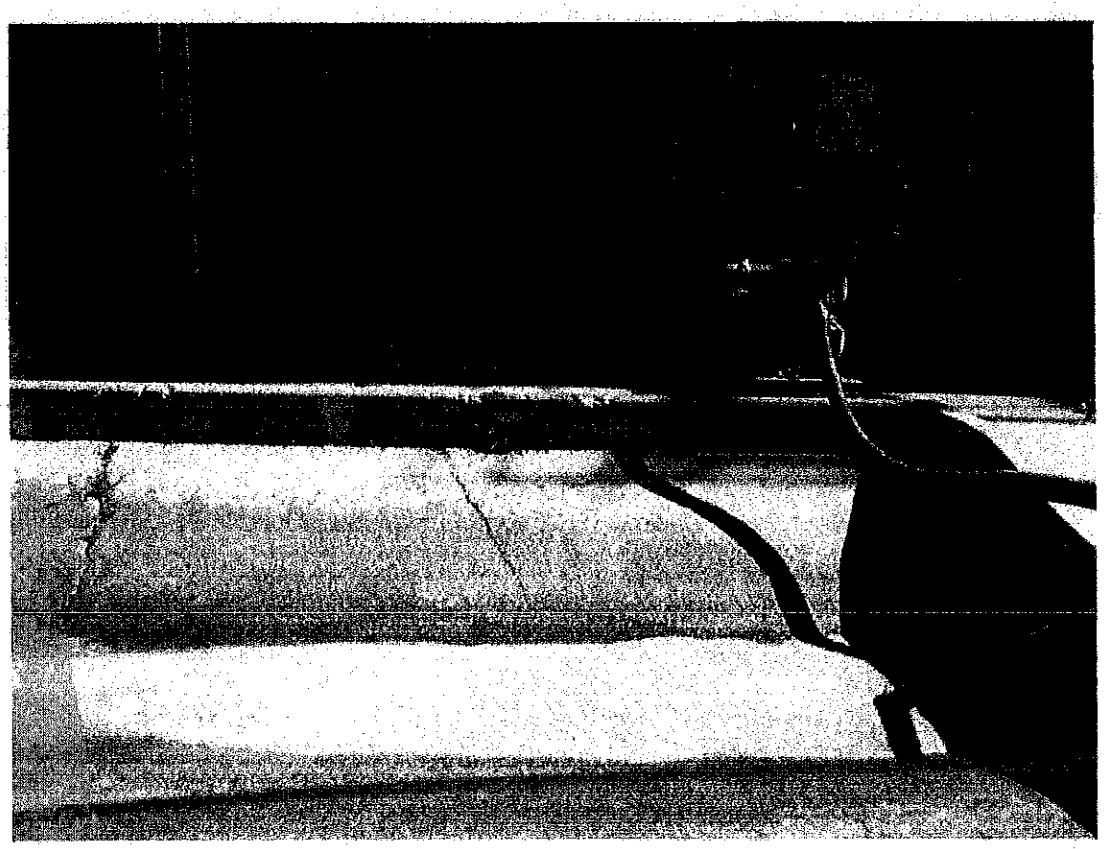
Official Photograph Log
Photo No. 7



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:34:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: LLDPE Railcar Loading Area - LLDPE pellets on traintrack loading area | | |
| Photo ID: DSCF3334 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

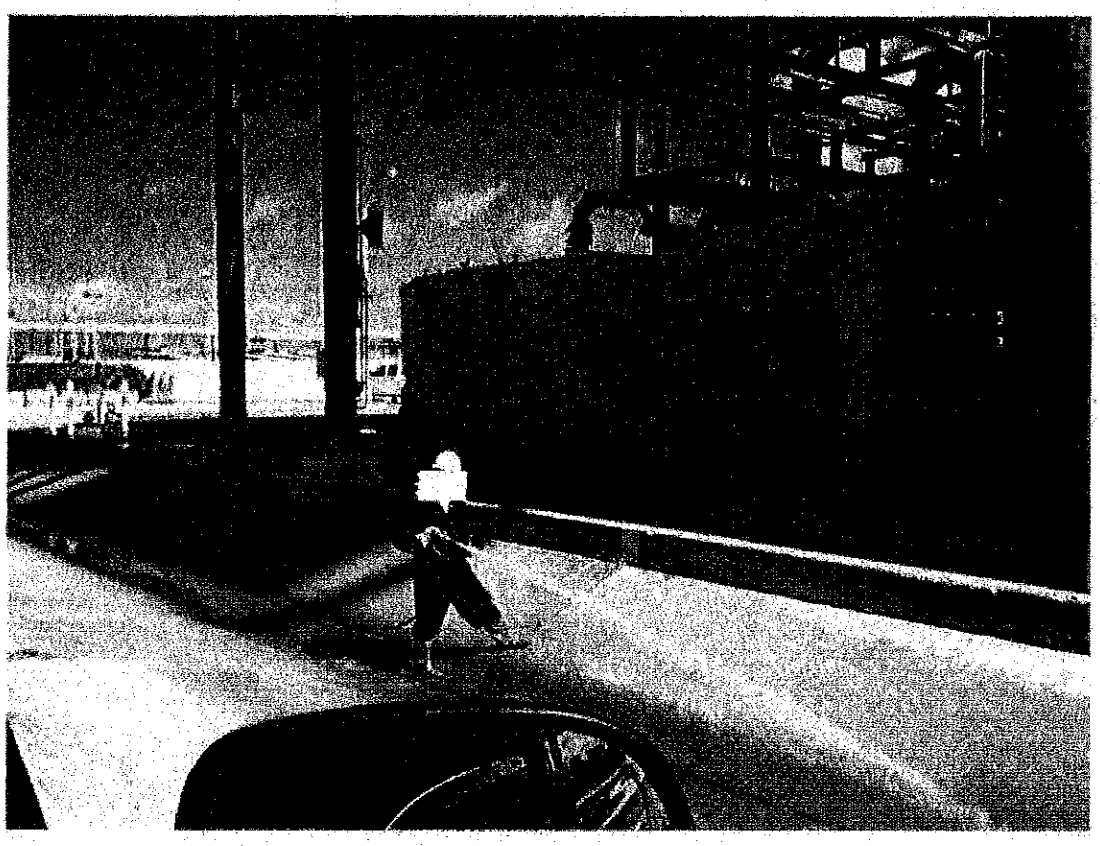
Official Photograph Log
Photo No. 8



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:48:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Drainage ditch; sign posted "Cancer suspect agent area Authorized Personnel Only" (with Photo 9) | | |
| Photo ID: DSCF3335 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

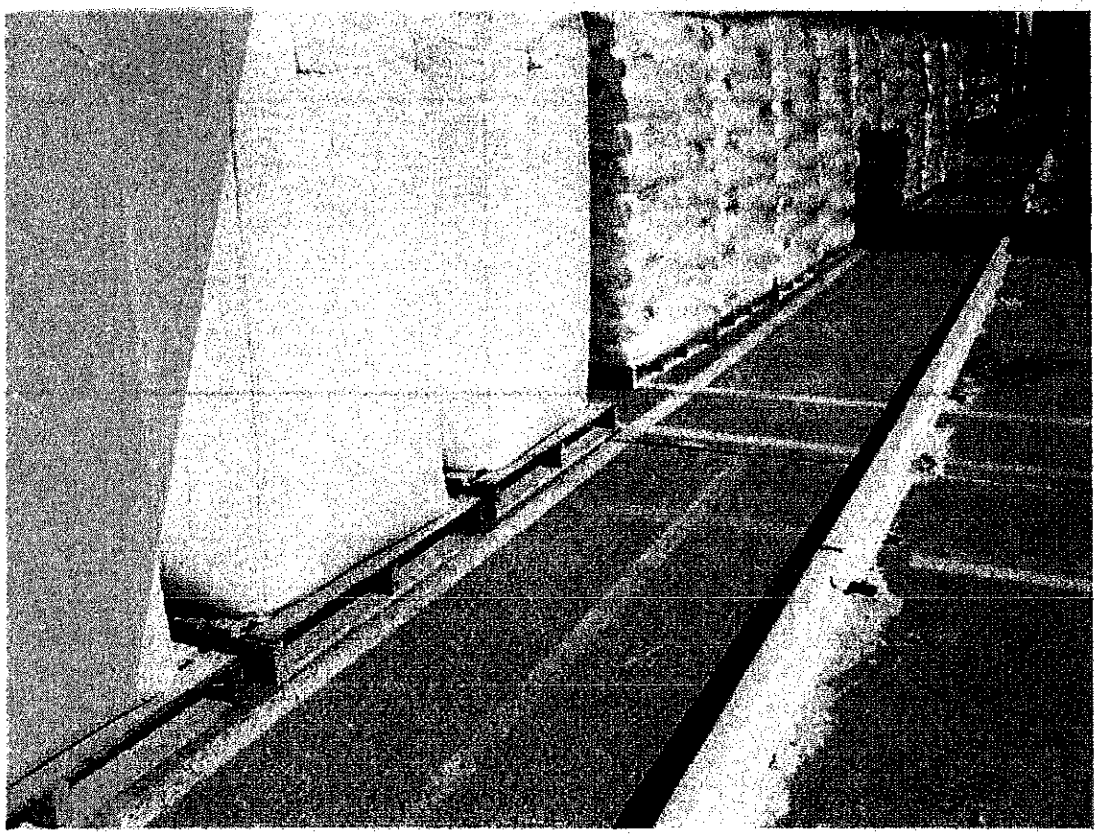
Official Photograph Log
Photo No. 9



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:48:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Drainage ditch; Employee washing down drainage ditch (with Photo 8) | | |
| Photo ID: DSCF3336 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 10



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:51:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - One (1) ton bags of PVC product | | |
| Photo ID: DSCF3337 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 11

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:52:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC dust in PVC plant parking lot and roadway; transformers in background | | |
| Photo ID: DSCF3338 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 12

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:52:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Storm drain culvert | | |
| Photo ID: DSCF3339 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 13

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:54:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Storm drainage in PVC plant with piles of PVC in drainage channel | | |
| Photo ID: DSCF3340 | | |

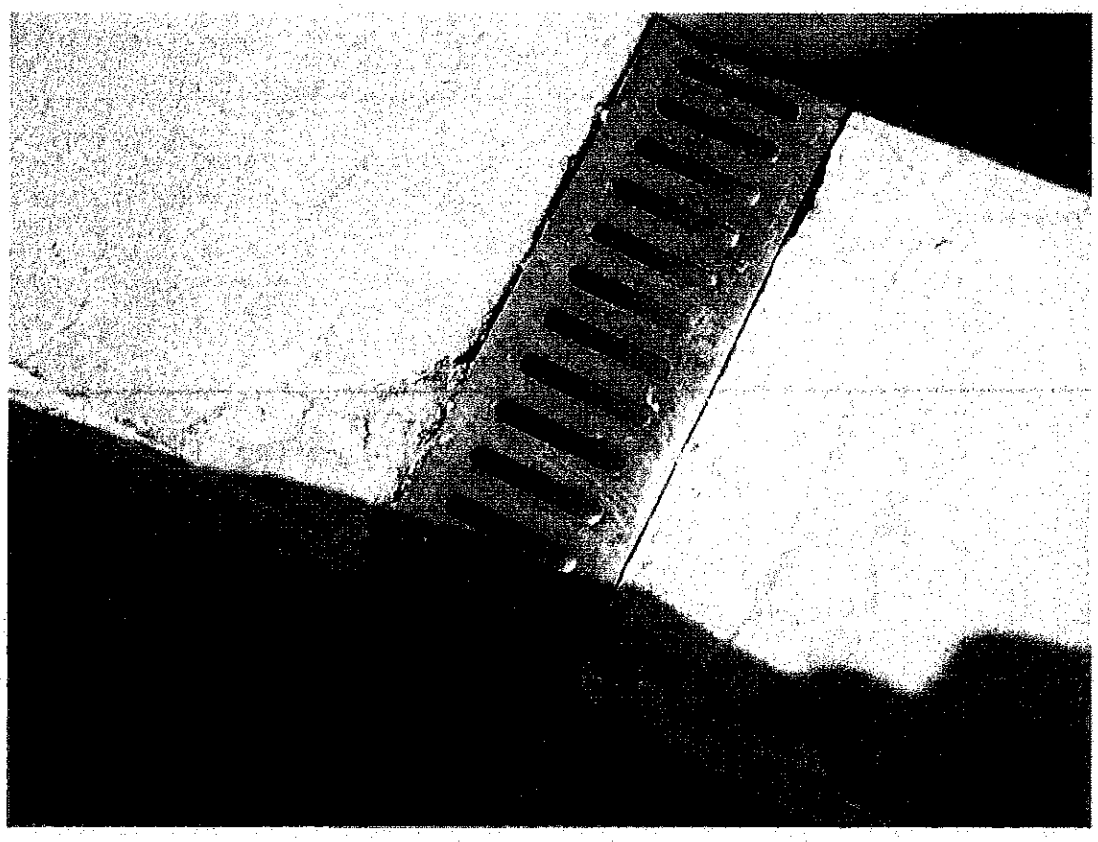
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 14

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 9:54:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Storm drainage in PVC plant with piles of PVC in drainage channel | | |
| Photo ID: DSCF3341 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 15



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:04:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Storm grate in PVC plant | | |
| Photo ID: DSCF3342 | | |

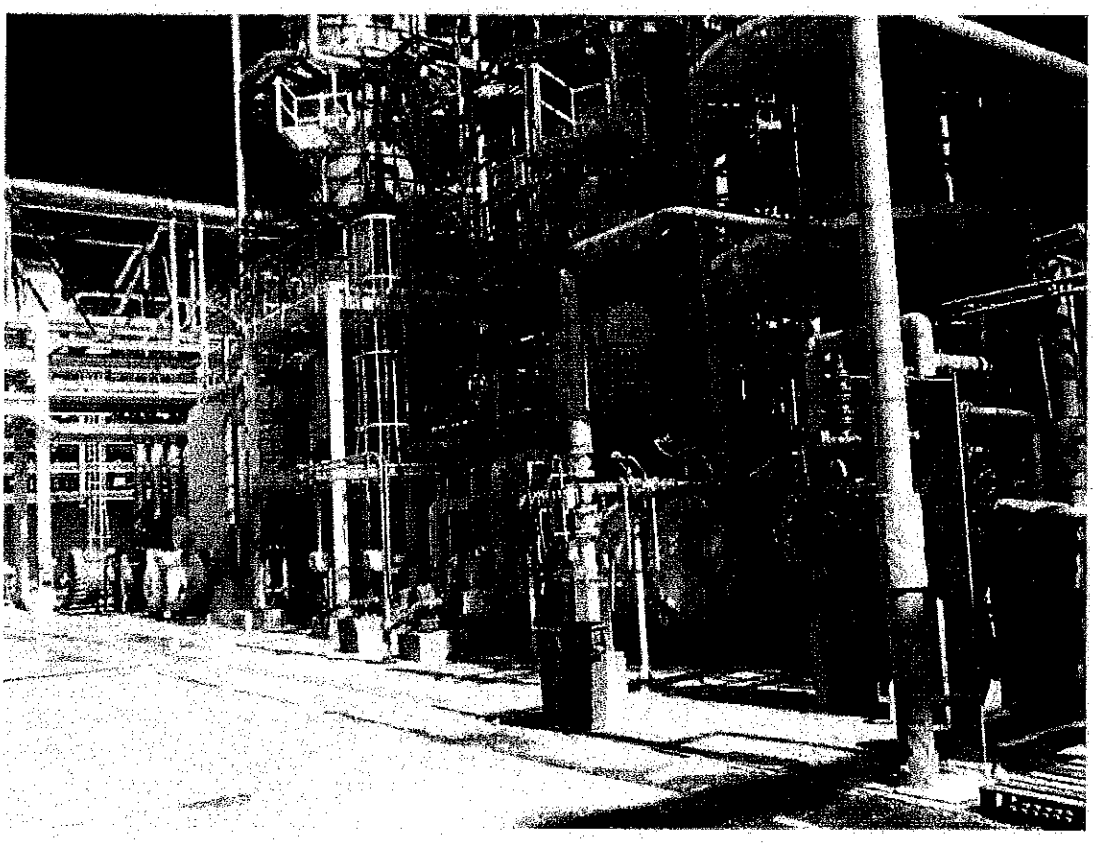
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 16

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:04:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Storm grate in PVC plant; apparent PVC dust in drainage channel | | |
| Photo ID: DSCF3343 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

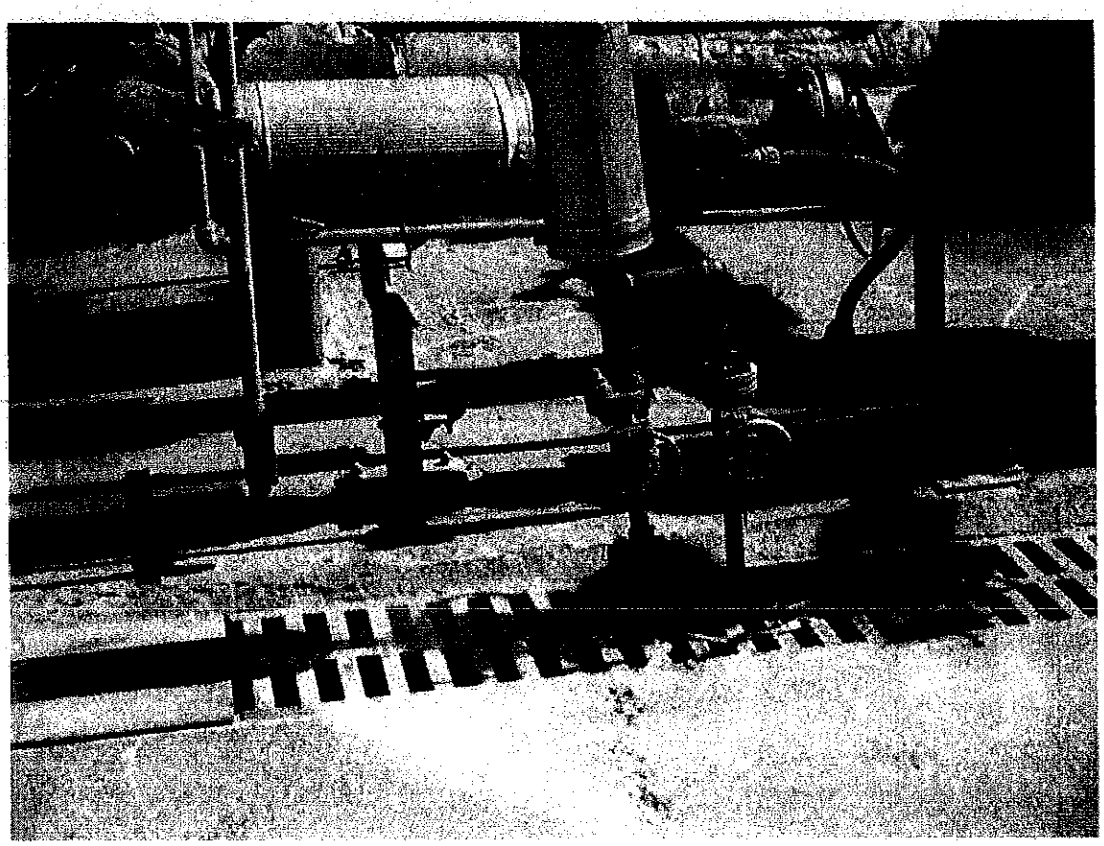
Official Photograph Log
Photo No. 17



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:07:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC reactors; gray trash cans marked "Scale Only" | | |
| Photo ID: DSCF3344 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

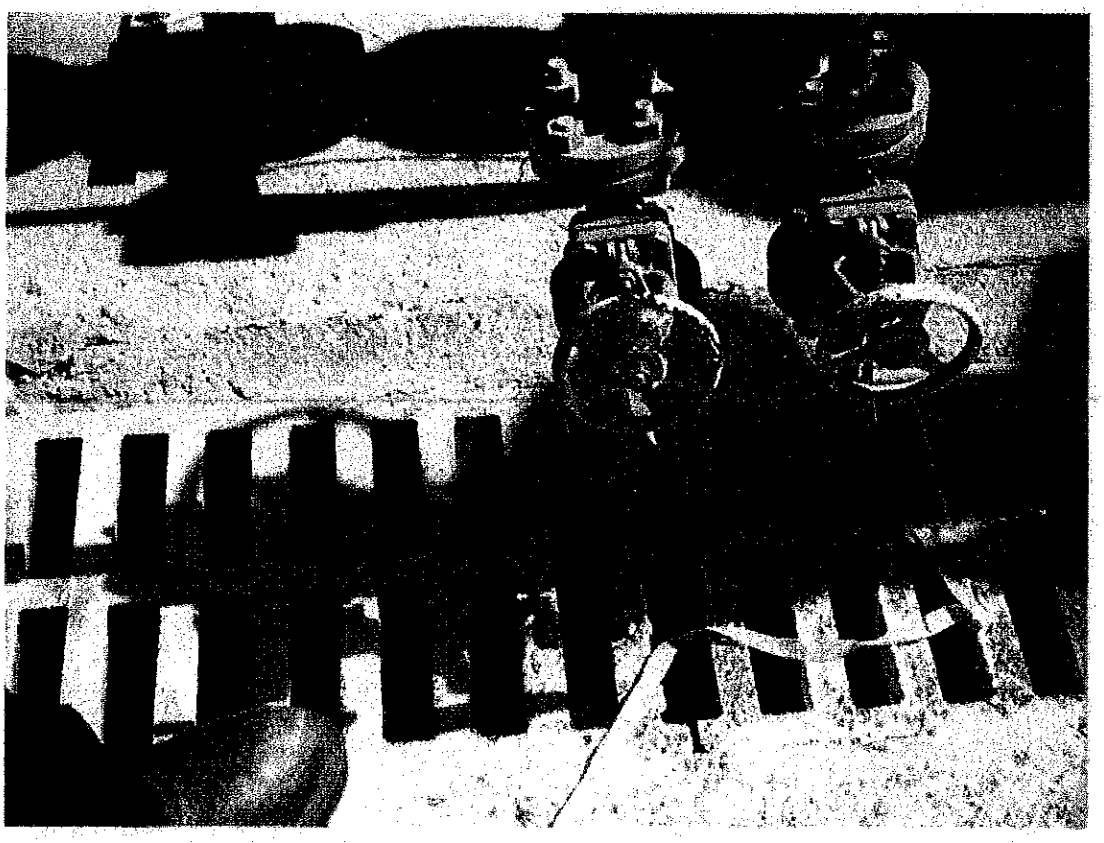
Official Photograph Log
Photo No. 18



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC scrubber area; Steam trap with PVC dust on ground (with Photo 19) | | |
| Photo ID: DSCF3345 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 19



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC scrubber area; Steam trap with PVC dust on ground (with Photo 18) | | |
| Photo ID: DSCF3346 | | |

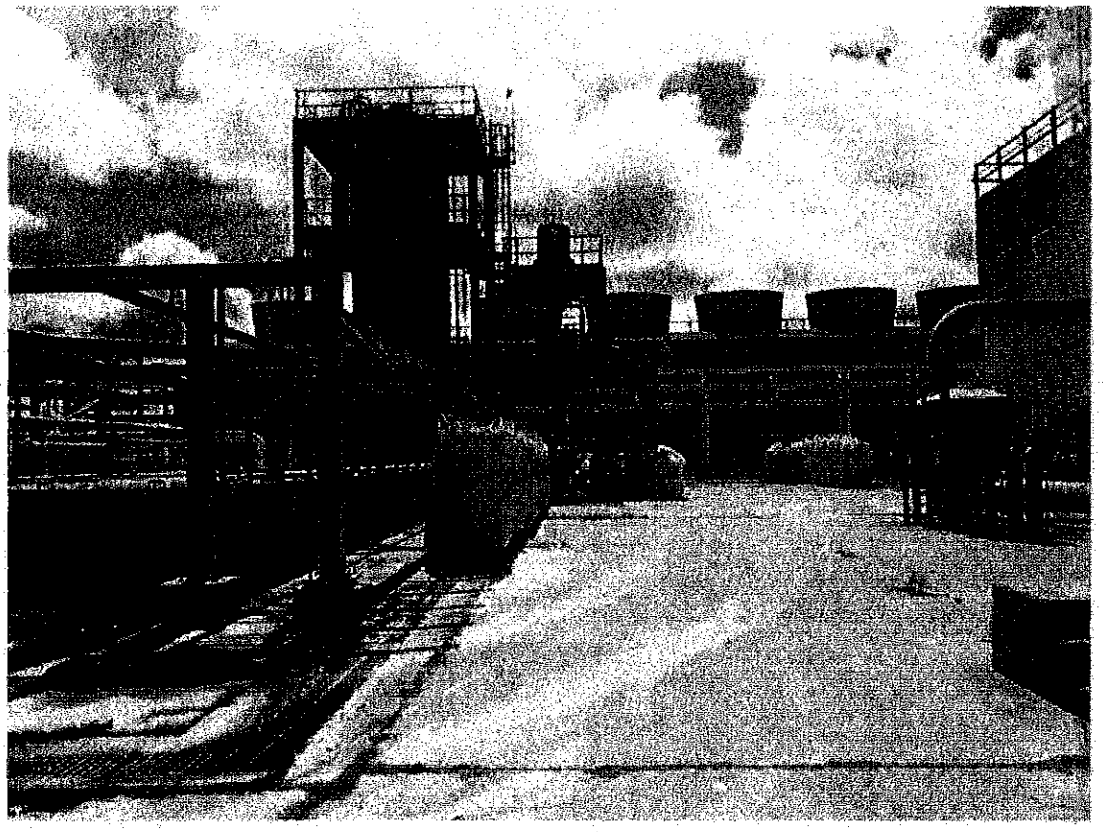
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 20

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:14:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC settling pit and overflow area | | |
| Photo ID: DSCF3347 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 21



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:18:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC settling pit with one (1) ton bags of settling pit sludge marked PTC 06 staged adjacent to pit; overflow on concrete area adjacent to storm drainage channel | | |
| Photo ID: DSCF3348 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 22

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:19:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - One (1) ton bags of settling pit sludge marked PTC 06 staged adjacent to pit | | |
| Photo ID: DSCF3349 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 23

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 10:25:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - PVC silos | | |
| Photo ID: DSCF3350 | | |

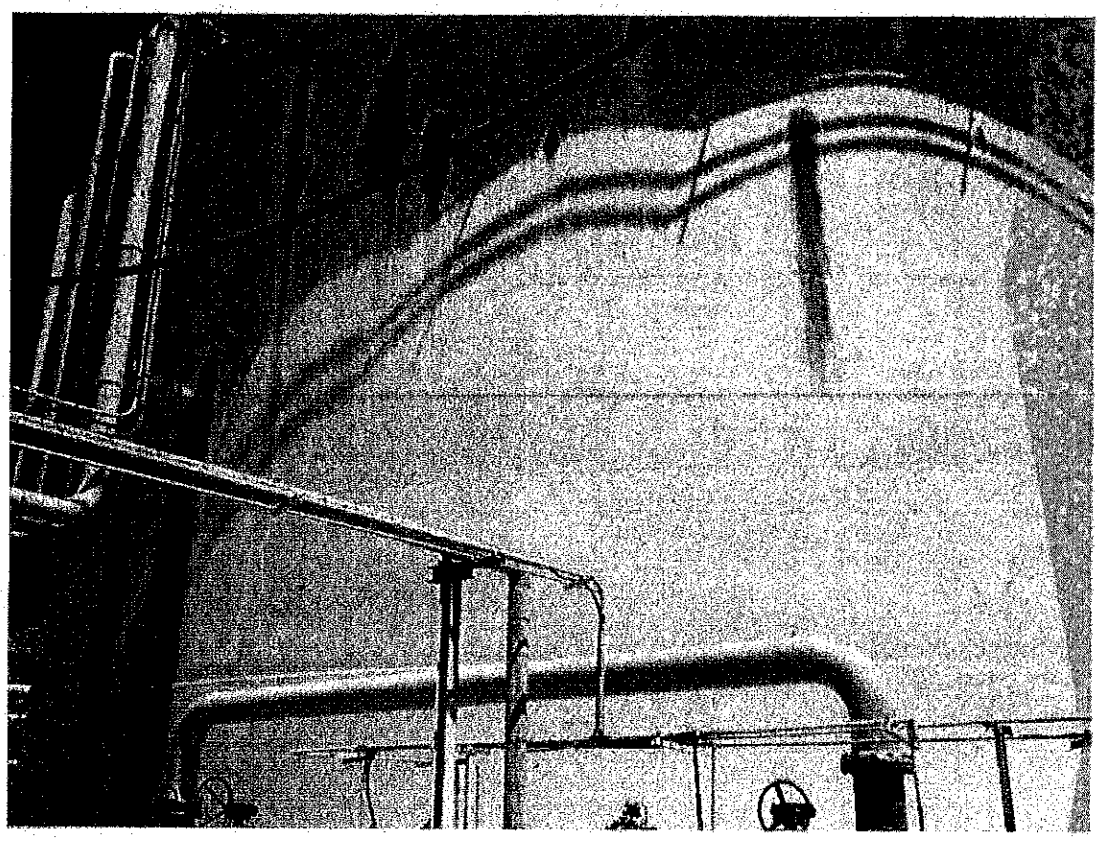
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 24

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:16:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: 90 Day Hazardous Waste Storage Yard - Roll-off boxes of soil and debris; non-hazardous waste boxes stored on hazardous waste pad | | |
| Photo ID: DSCF3351 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

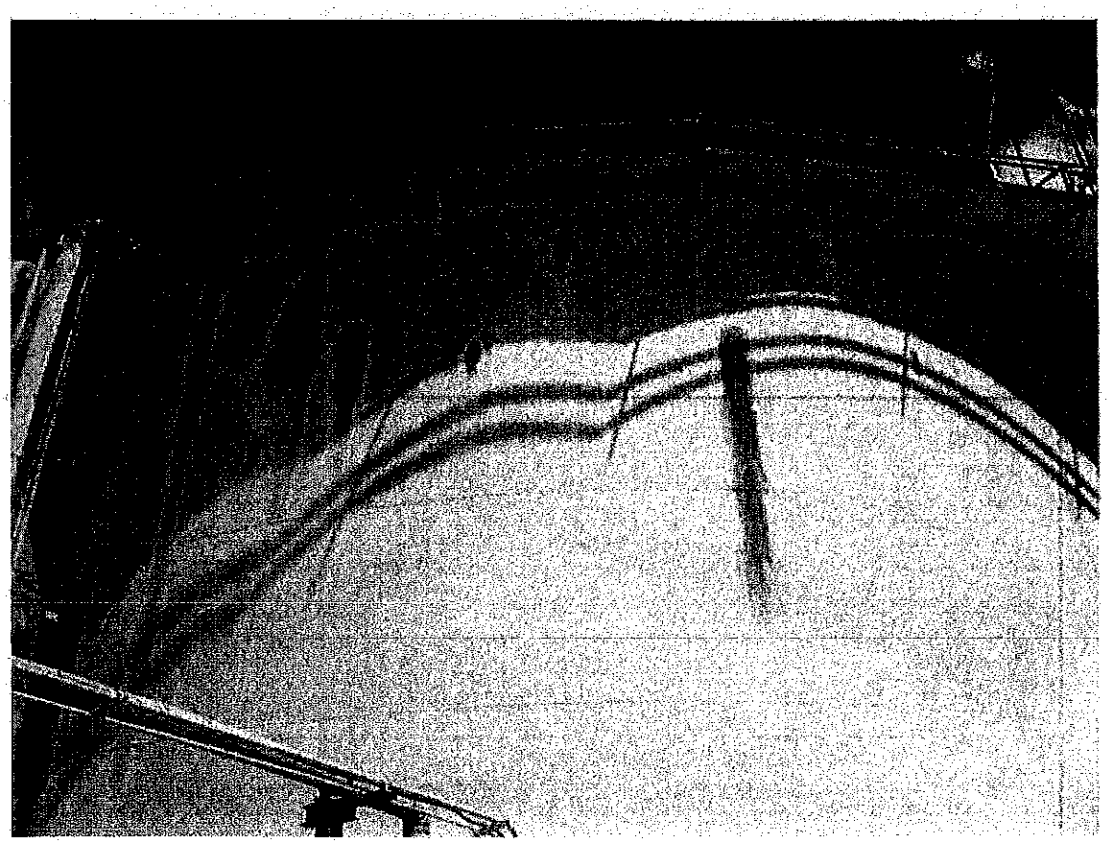
Official Photograph Log
Photo No. 25



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:39:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Combined WWTP - Tank TTT-44, with apparent rust stains (with Photo 26) | | |
| Photo ID: DSCF3352 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

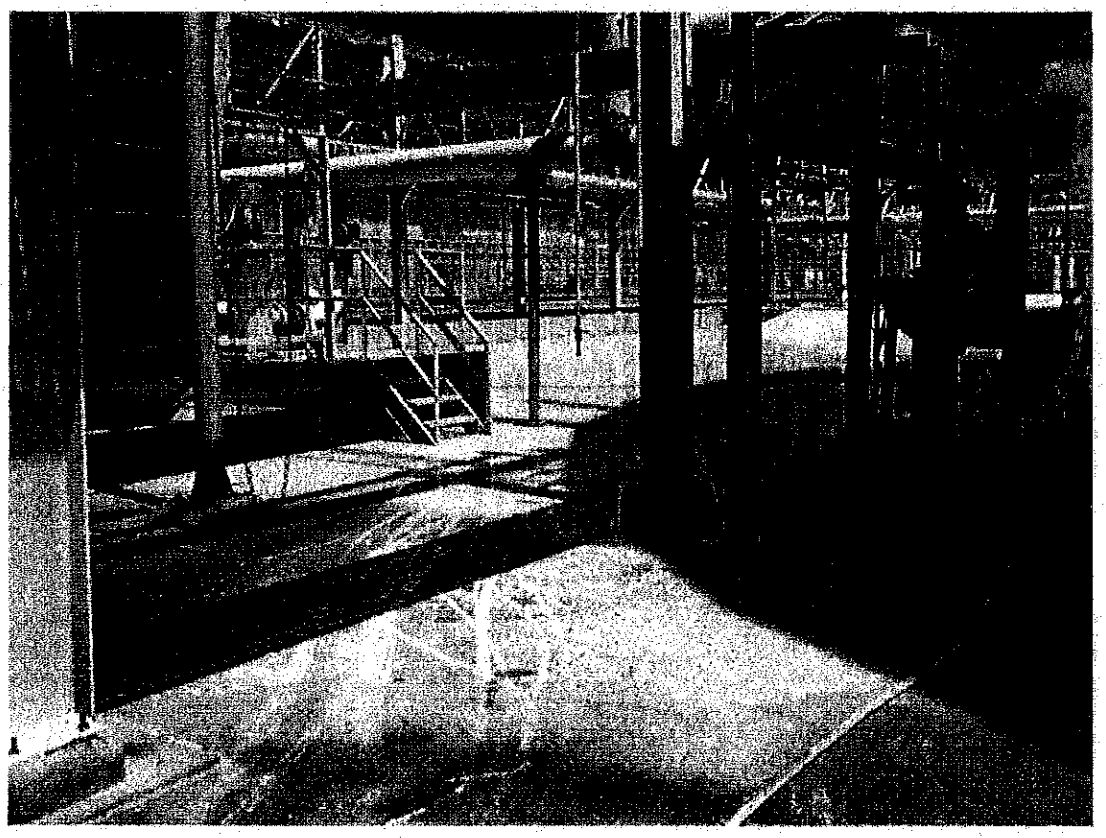
Official Photograph Log
Photo No. 26



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:39:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Combined WWTP - Tank TTT-44, with apparent rust stains (with Photo 25) | | |
| Photo ID: DSCF3353 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

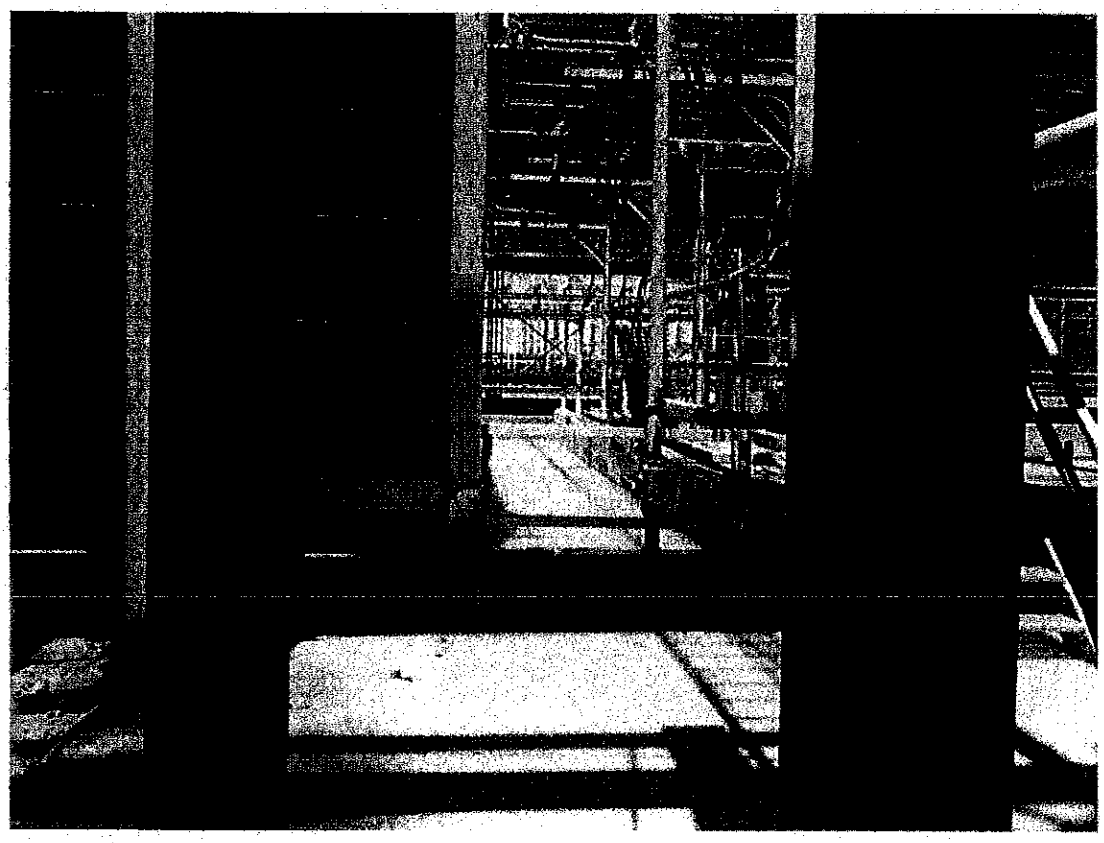
Official Photograph Log
Photo No. 27



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:41:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Combined WWTP - Overflow discharged onto concrete pad from cooling tower associated with chlor-alkali plant (see Photo 28) | | |
| Photo ID: DSCF3354 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

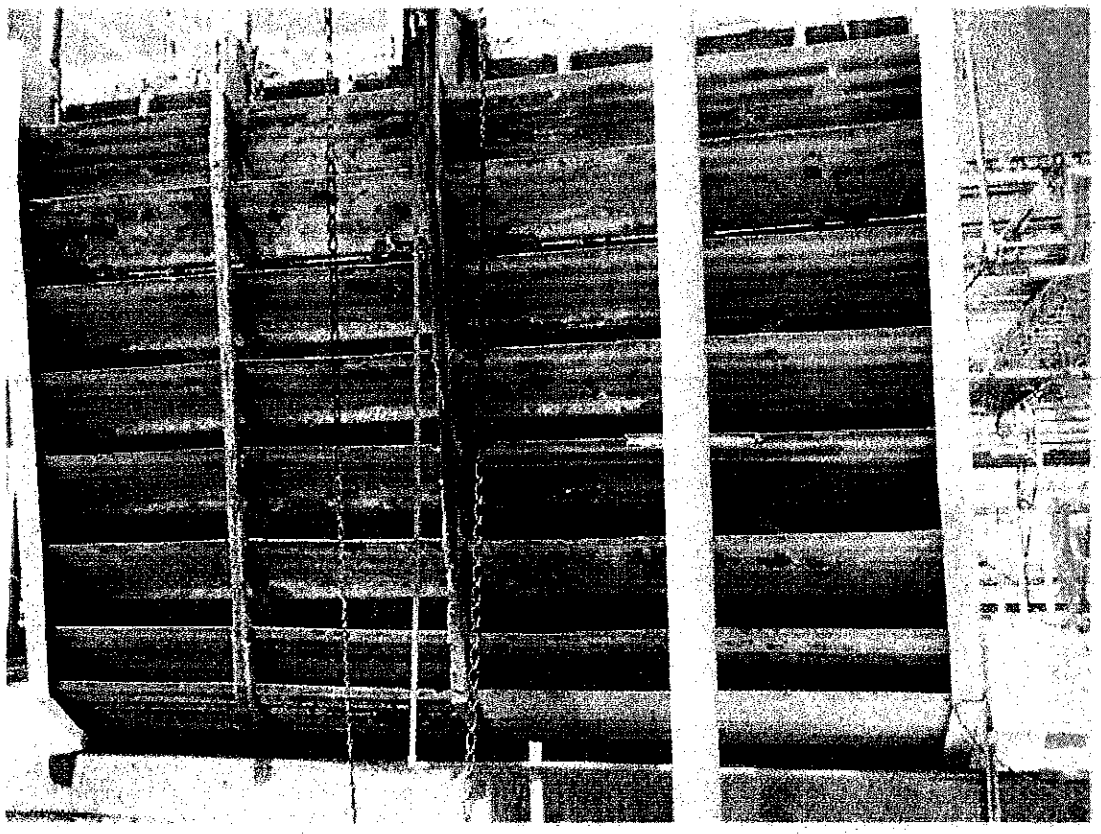
Official Photograph Log
Photo No. 28



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:42:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Combined WWTP - Overflow originating from overflow from cooling tower associated with chlor-alkali plant (see Photo 27) | | |
| Photo ID: DSCF3355 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

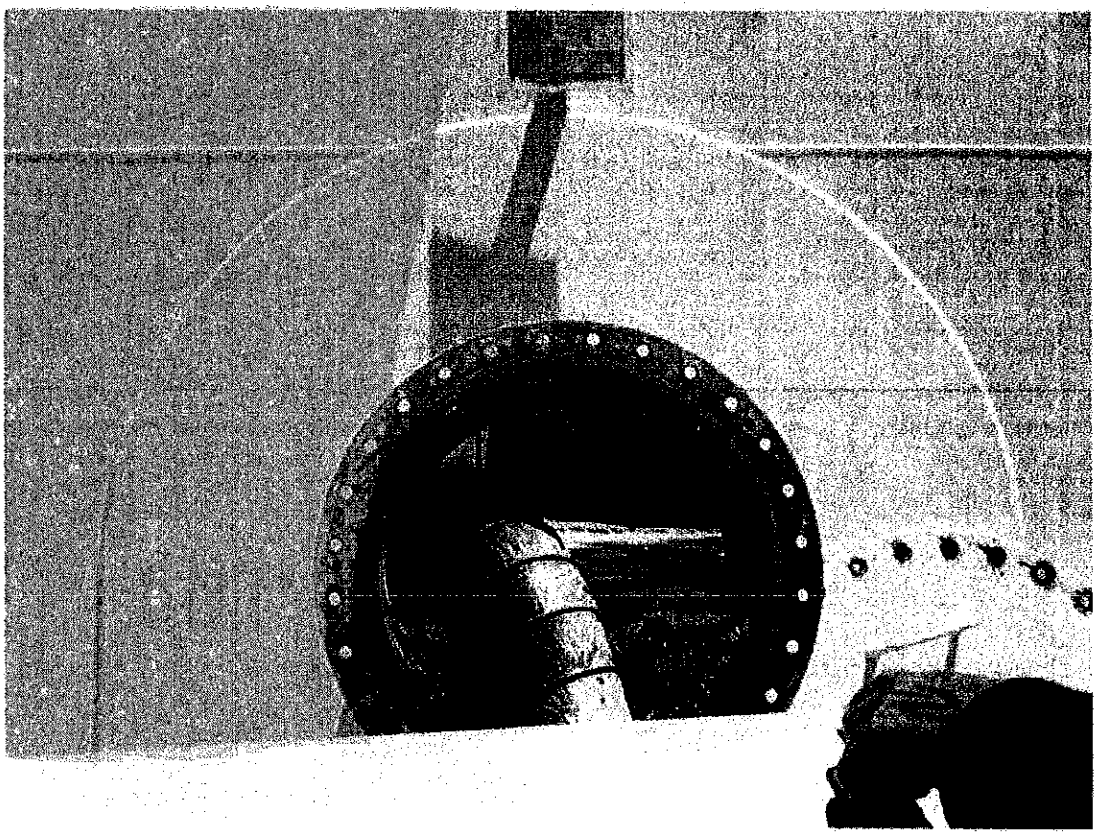
Official Photograph Log
Photo No. 29



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:42:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Apparent corrosion on vanes of cooling tower associated with chlor-alkali plant | | |
| Photo ID: DSCF3356 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

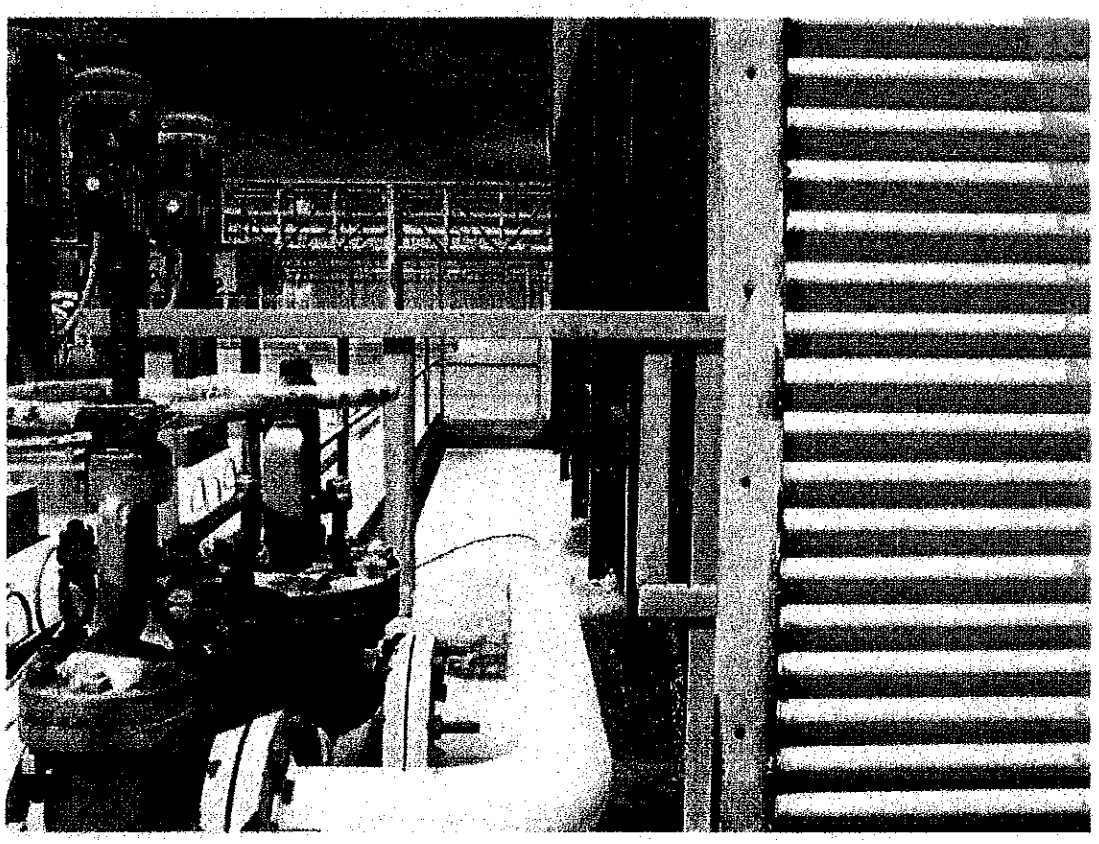
Official Photograph Log
Photo No. 30



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:54:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Out-of-service tank down for cleaning of sludges (approximately 3 feet deep) from tank bottom (TTT-08A) | | |
| Photo ID: DSCF3357 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 31



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 11:58:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Apparent corrosion of pumps and appurtenances in CWWTP area | | |
| Photo ID: DSCF3358 | | |

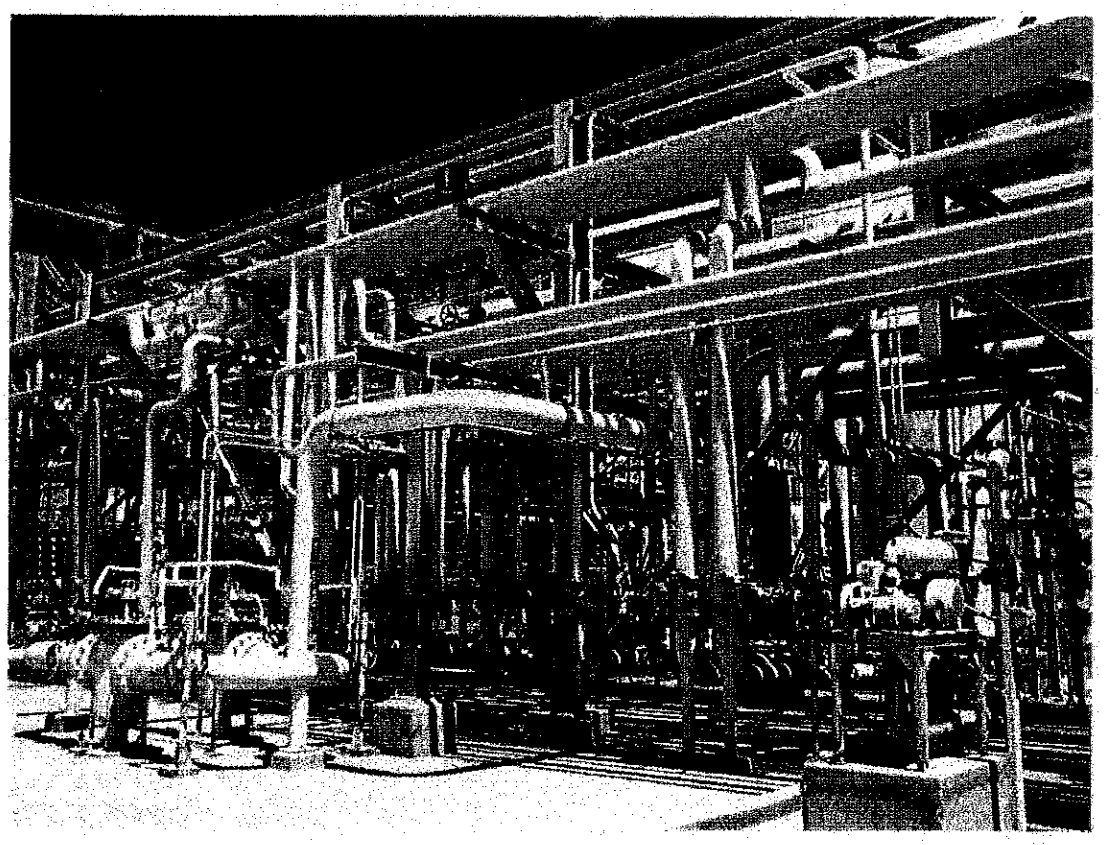
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 32

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:00:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP – Water decant pipe with sludge flowing into north storm water drainage channel that flows back into the CWWTP system | | |
| Photo ID: DSCF3359 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

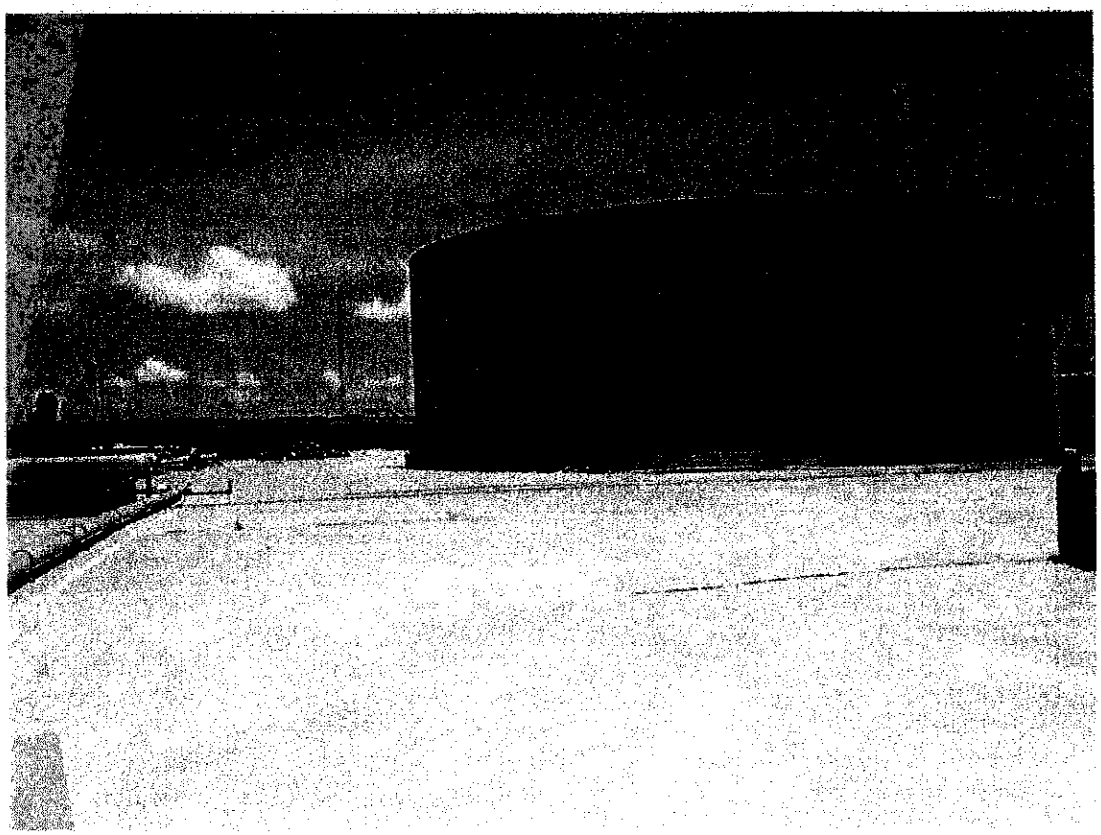
Official Photograph Log
Photo No. 33



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:03:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Pretreatment area (influent piping) | | |
| Photo ID: DSCF3360 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

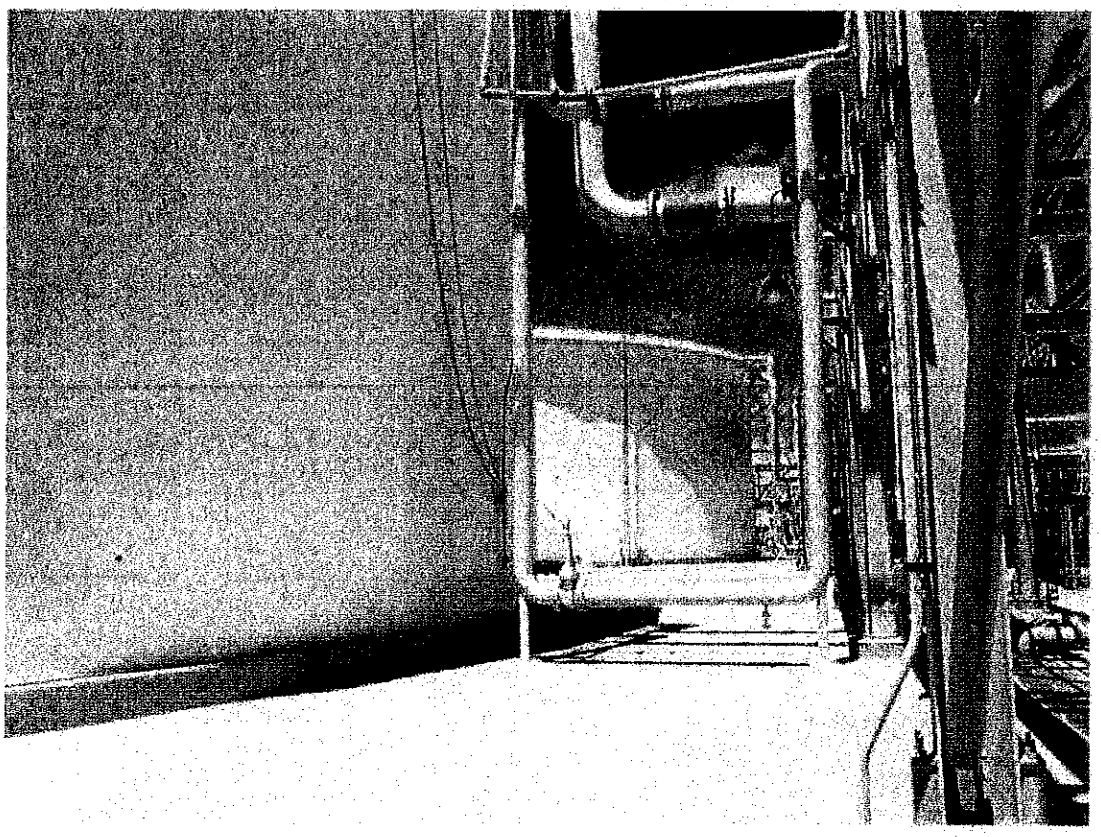
Official Photograph Log
Photo No. 34



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:07:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - New tank being installed | | |
| Photo ID: DSCF3361 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 35



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:07:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - TTT-02 tank in foreground; part of biological pretreatment area | | |
| Photo ID: DSCF3362 | | |

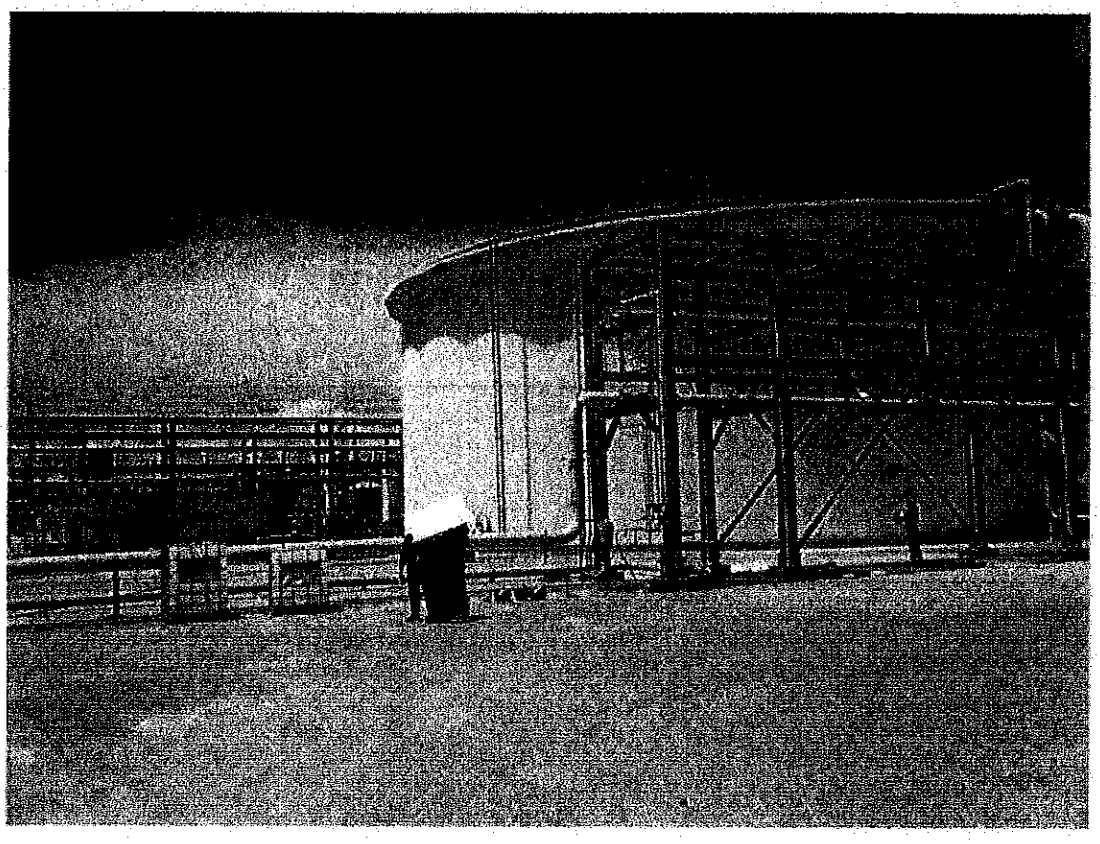
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 36

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:10:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - View of new Tank TTT-01A and Tank TTT-02 (panorama with Photos 37 and 38) | | |
| Photo ID: DSCF3363 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

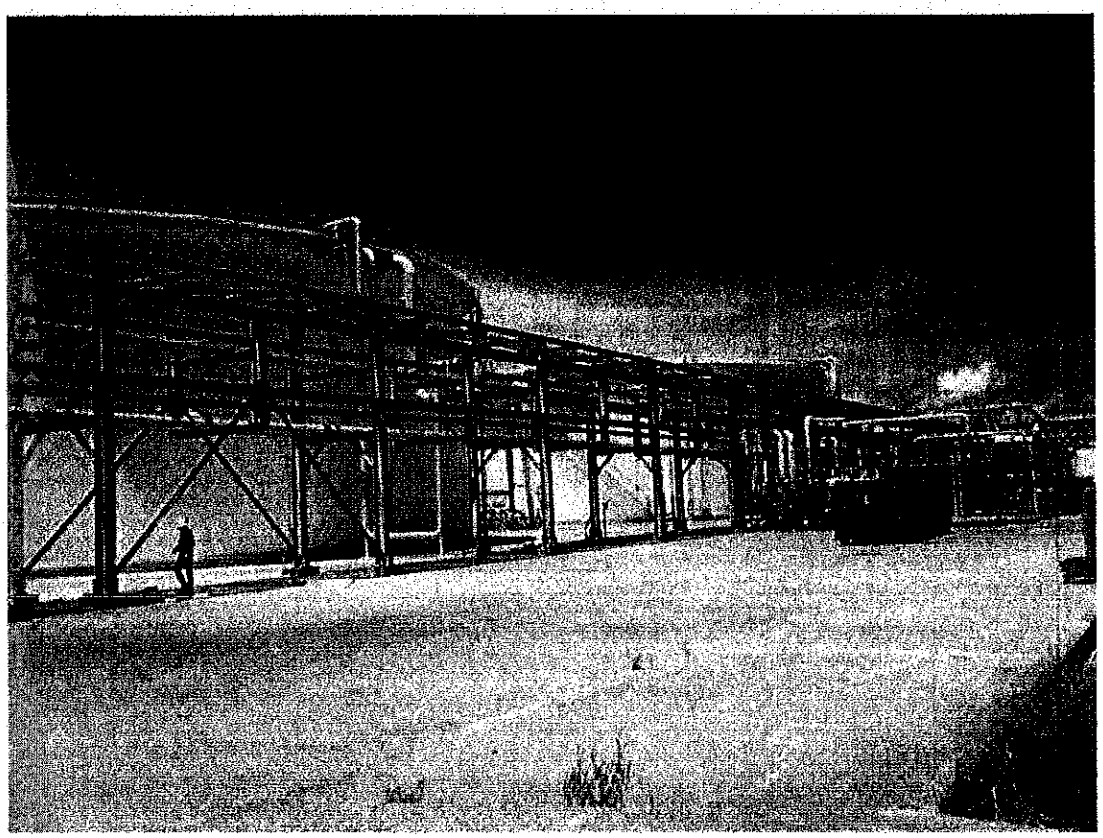
Official Photograph Log
Photo No. 37



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:10:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - View of Tank TTT-02 (panorama with Photos 36 and 38) | | |
| Photo ID: DSCF3364 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

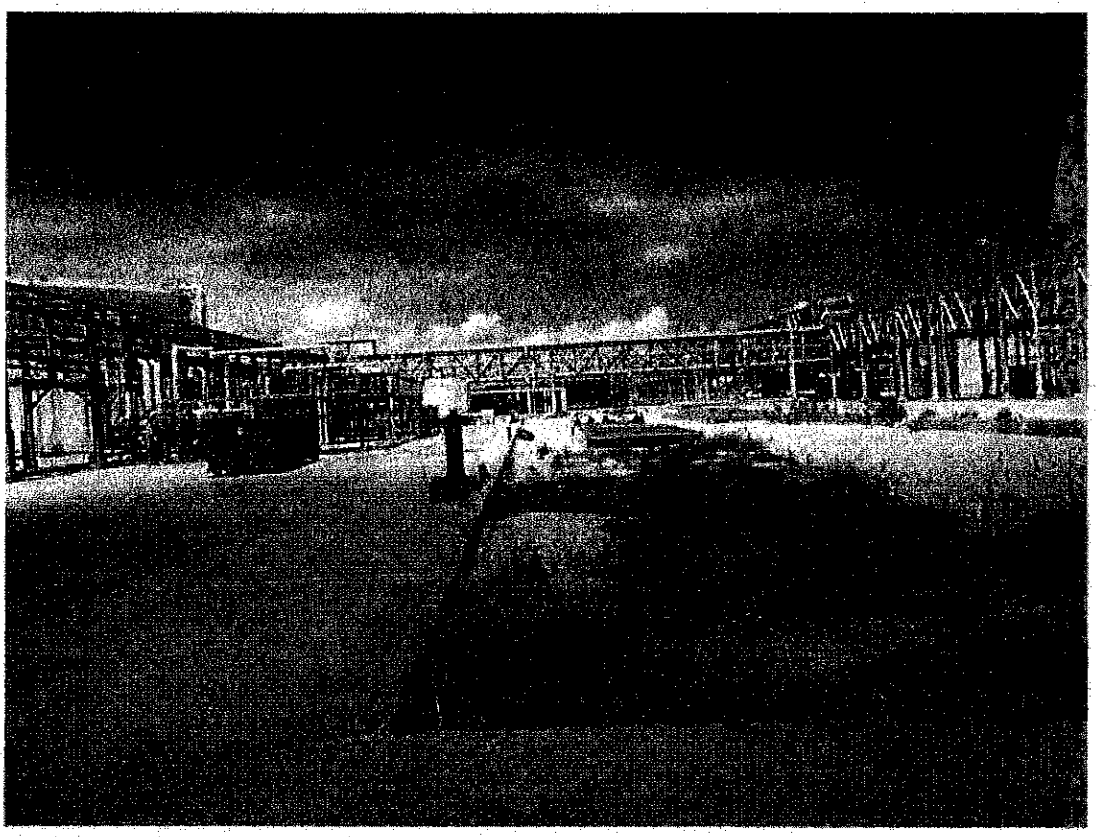
Official Photograph Log
Photo No. 38



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:10:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - View of Tank TTT-01A and Tank TTT-02 (panorama with Photos 36 and 37) | | |
| Photo ID: DSCF3365 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

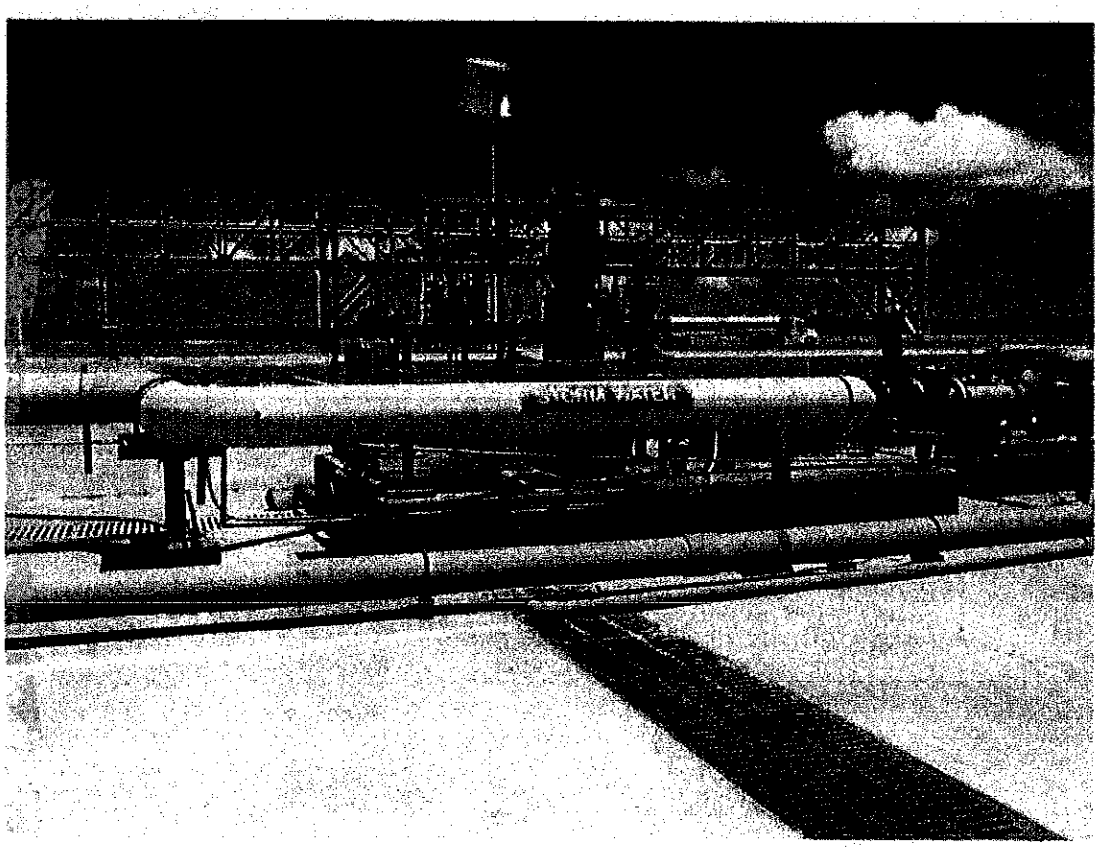
Official Photograph Log
Photo No. 39



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:10:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Process area showing distressed vegetation; north of TTT-01A and TTT-02 (According to FPC personnel, vegetation controlled with commercial herbicide) | | |
| Photo ID: DSCF3366 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

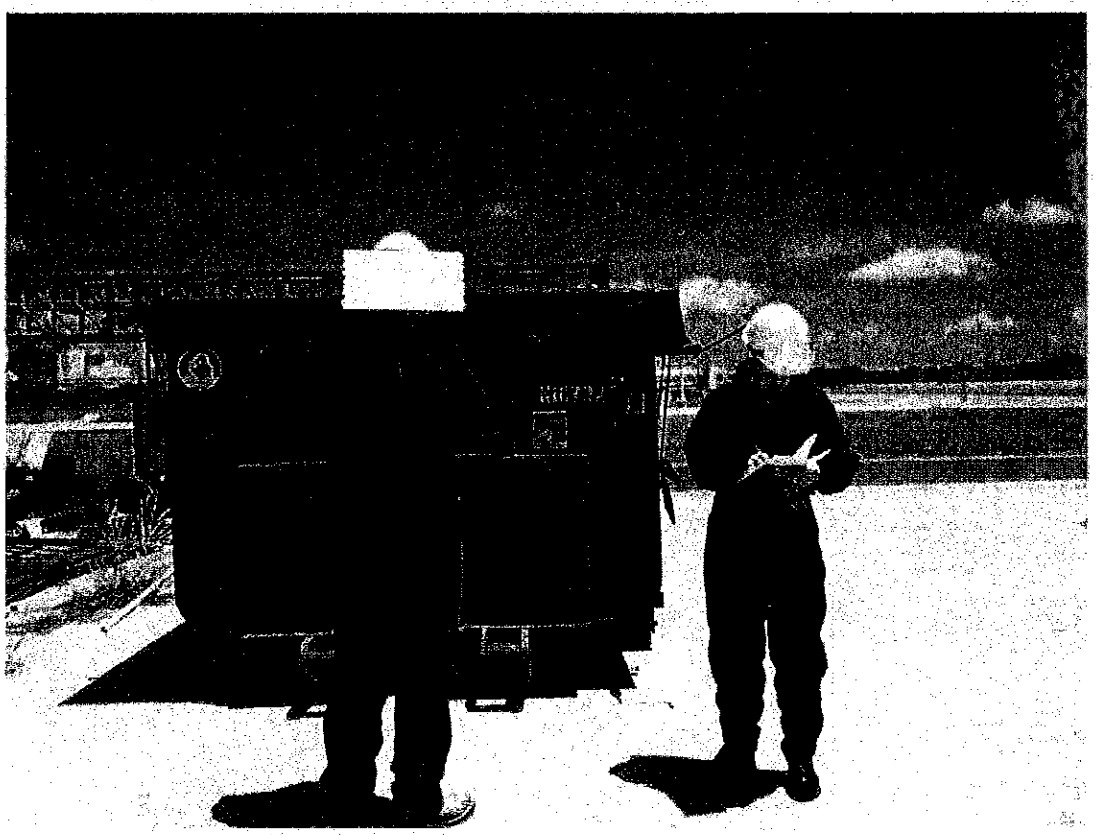
Official Photograph Log
Photo No. 40



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:14:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Storm water piping, sump, and pumps at CWWTP | | |
| Photo ID: DSCF3367 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

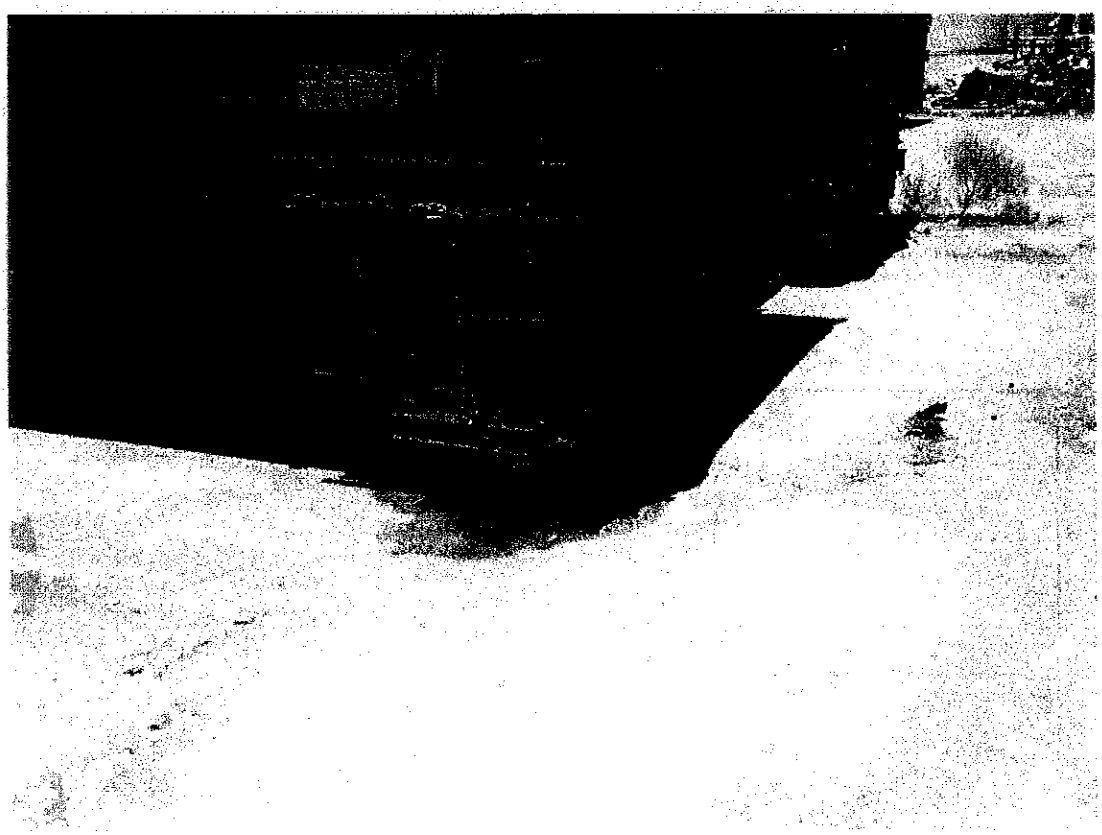
Official Photograph Log
Photo No. 41



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:15:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Roll-off container of sludge covered with black tarp (Verhalen - EPA and - FPC in photo) | | |
| Photo ID: DSCF3368 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

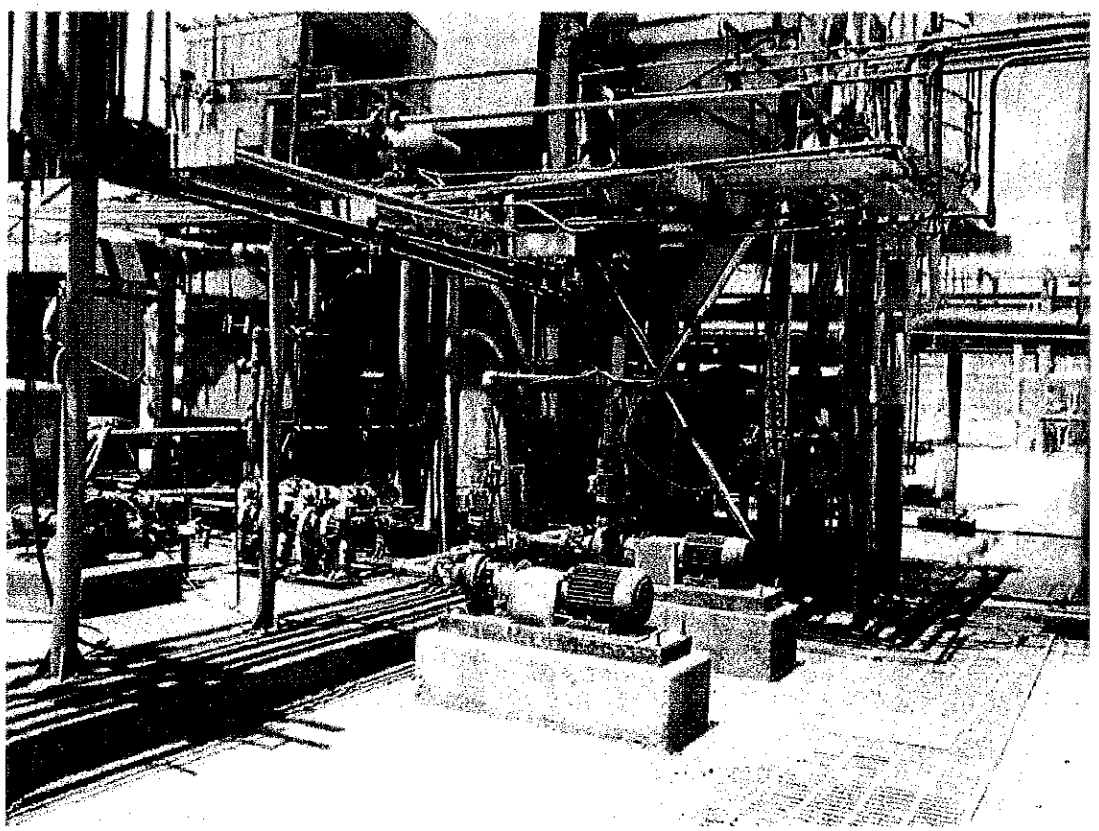
Official Photograph Log
Photo No. 42



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:20:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Drainage from roll-off box of sludge from CWWTP prior to off-site disposal of sludge in Class 2 landfill | | |
| Photo ID: DSCF3369 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

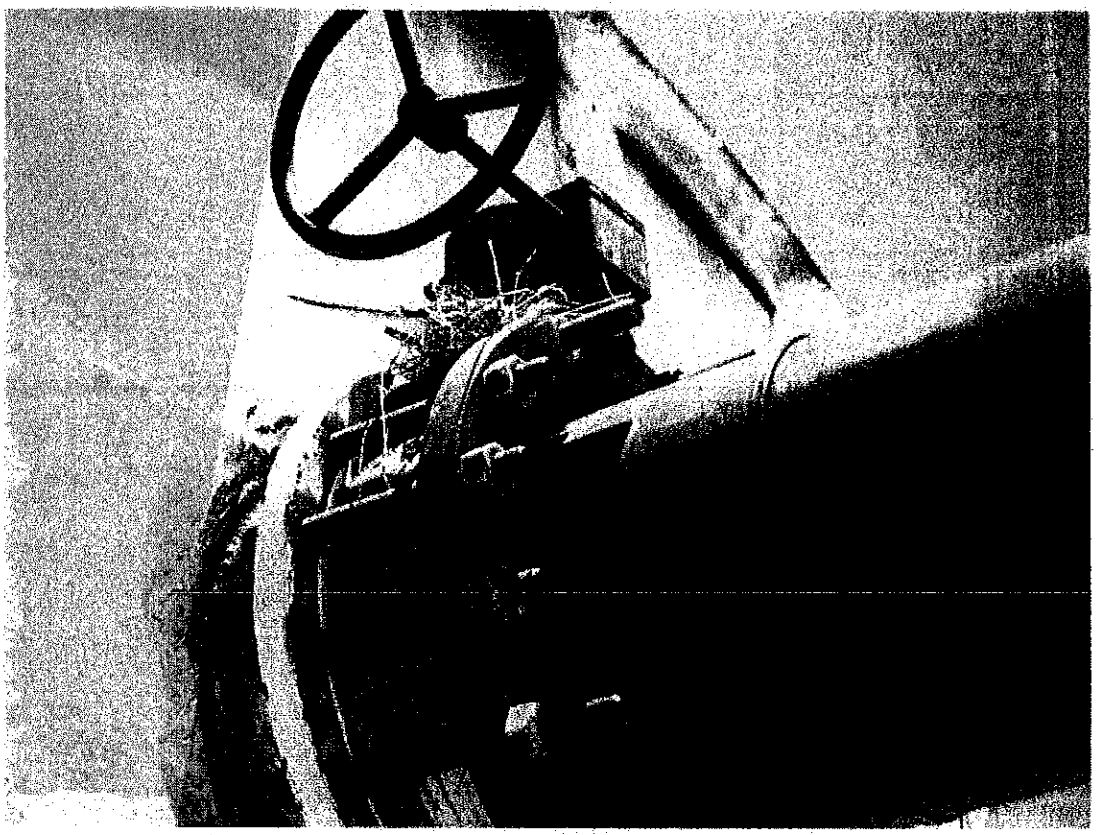
Official Photograph Log
Photo No. 43



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:25:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Pumps located adjcent ot corrosive storm water drainage area | | |
| Photo ID: DSCF3370 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

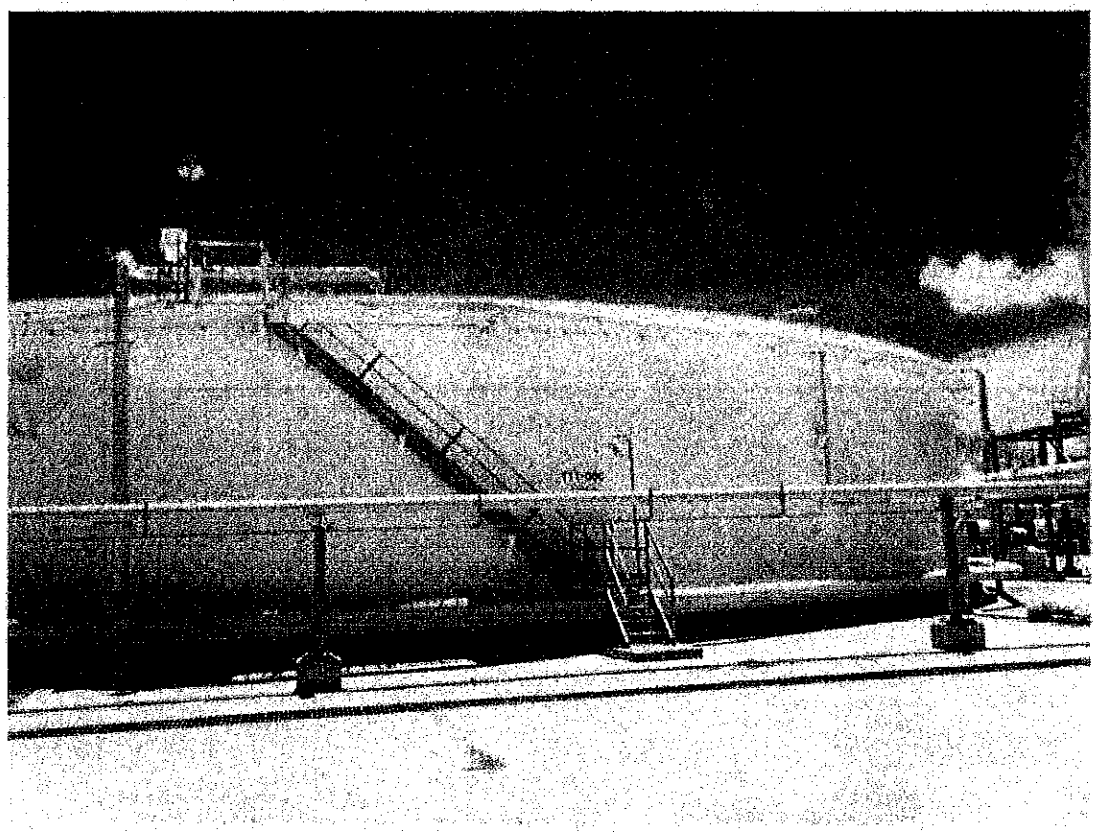
Official Photograph Log
Photo No. 44



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:26:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Bird nest on piping in CWWTP area | | |
| Photo ID: DSCF3371 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

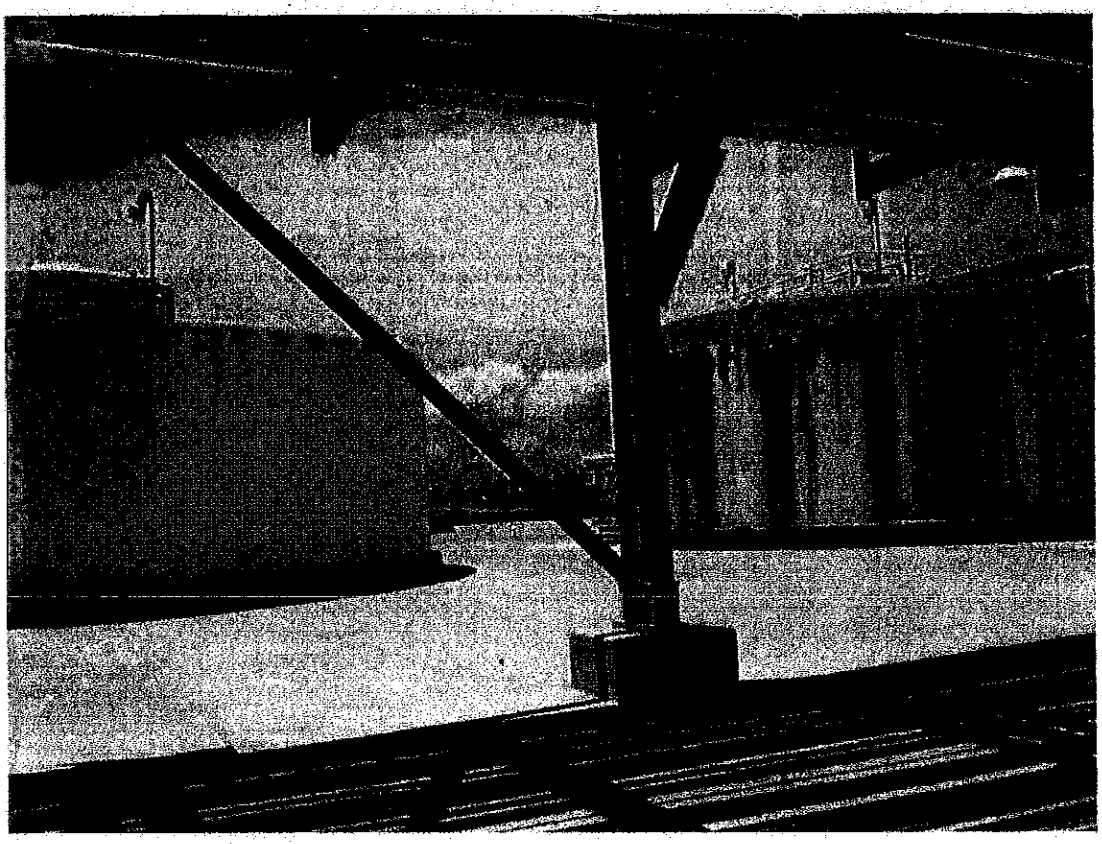
Official Photograph Log
Photo No. 45



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:28:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP – Biological aeration tank TTT-08C (see Photos 46 and 47) | | |
| Photo ID: DSCF3372 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

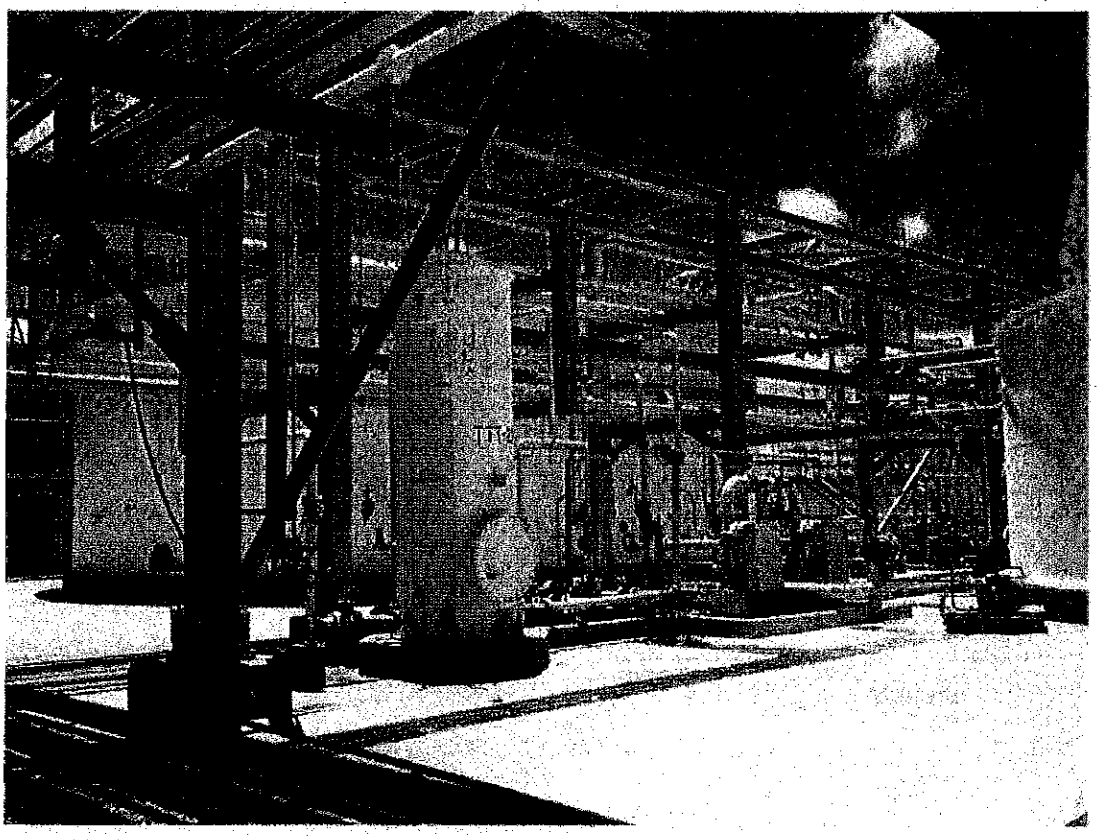
Official Photograph Log
Photo No. 46



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:31:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Sludge handling tanks TTT-22, and TTT-30 (see Photos 45 and 47) | | |
| Photo ID: DSCF3373 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

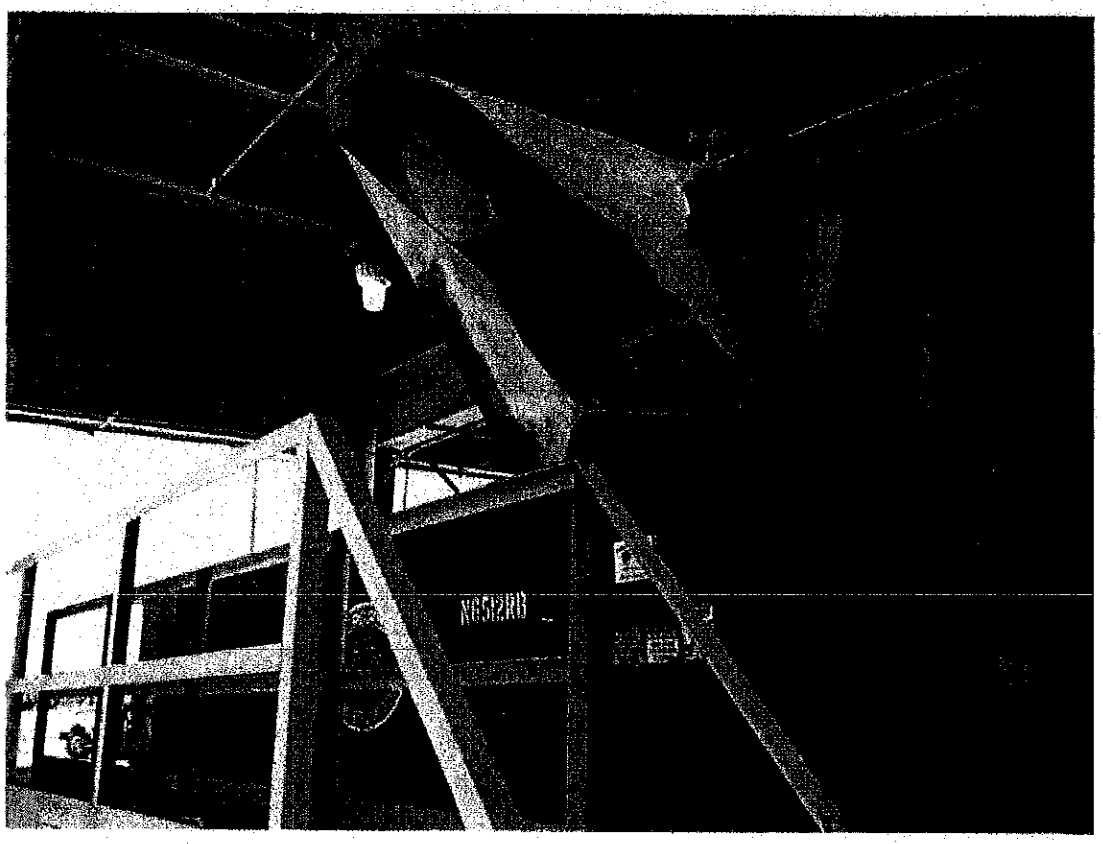
Official Photograph Log
Photo No. 47



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:32:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Sludge handling tanks TTT-22, and TTT-30 (see Photos 45 and 46) | | |
| Photo ID: DSCF3374 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 48



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:34:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Sludge drying process; sludges are dropped thorugh a chute and stored in roll-off boxes (see Photos 49 and 50) | | |
| Photo ID: DSCF3375 | | |

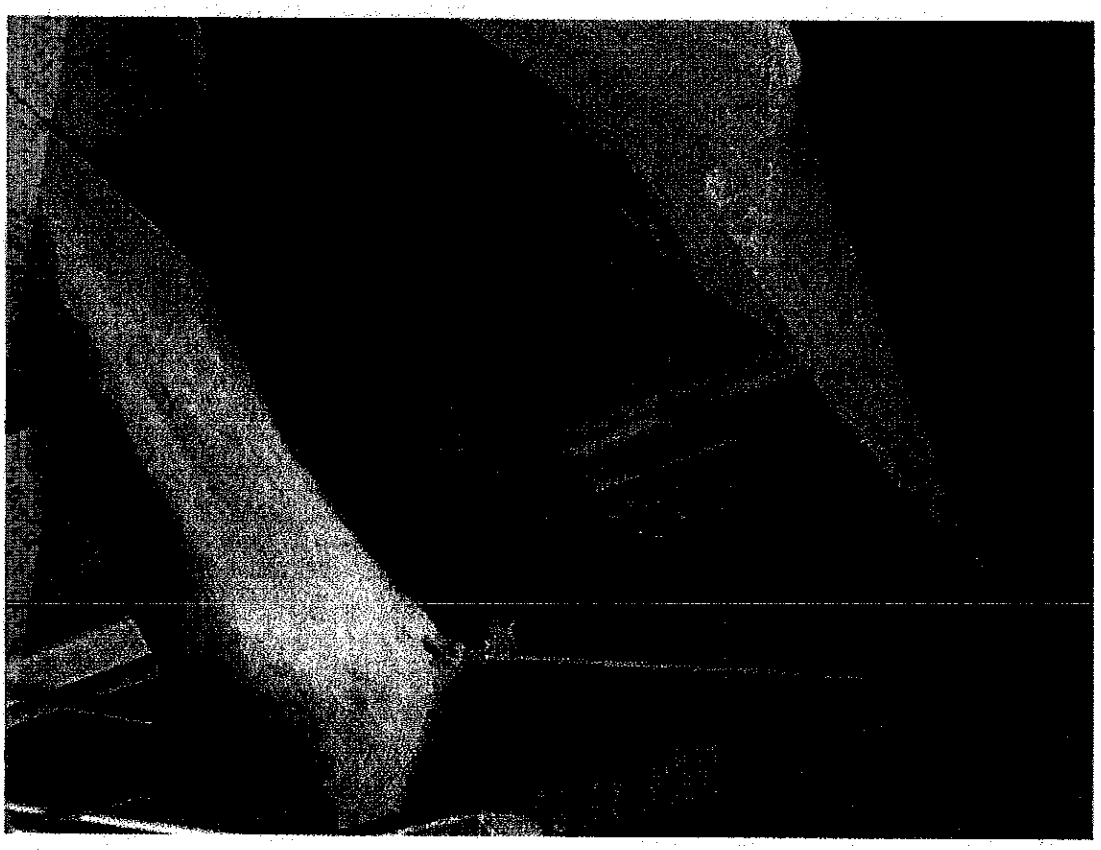
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 49

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:35:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Sludge drying process; sludges are dropped thorugh a chute and stored in roll-off boxes (see Photos 48 and 50) | | |
| Photo ID: DSCF3376 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 50



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:35:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Sludge drying process; sludges are dropped thorugh a chute and stored in roll-off boxes (see Photos 48 and 49) | | |
| Photo ID: DSCF3377 | | |

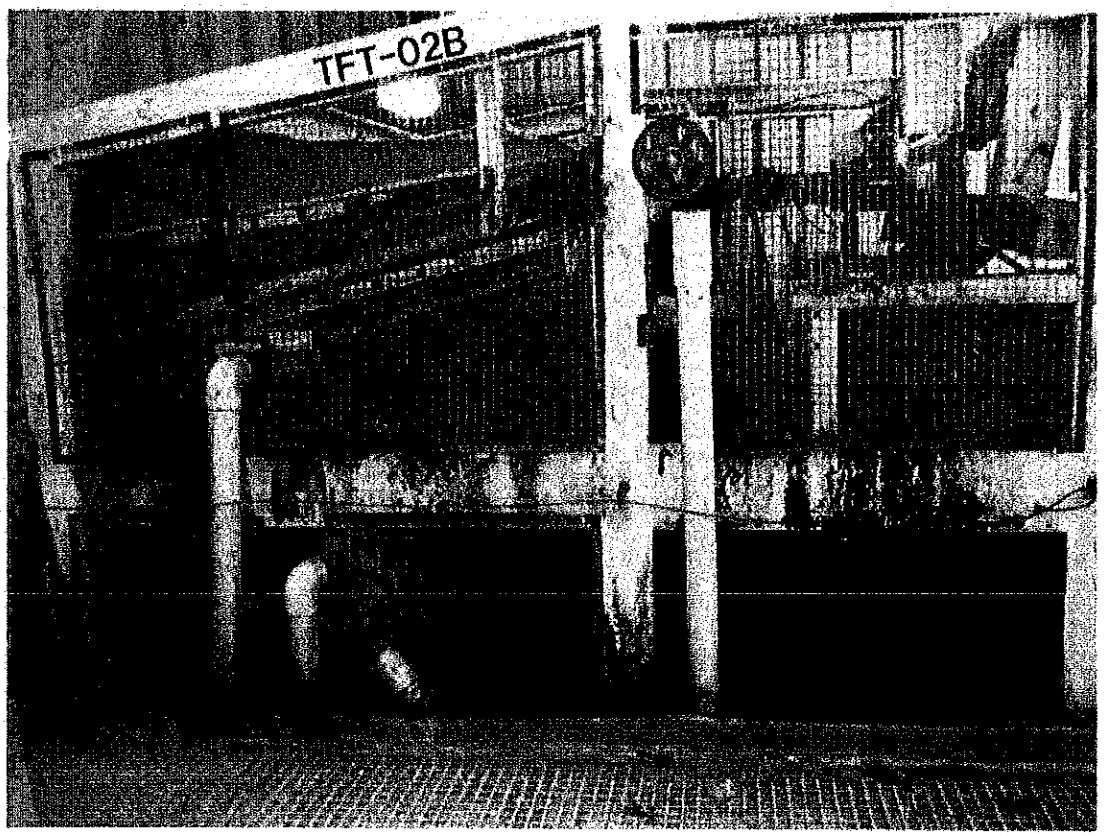
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 51

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:37:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Dried sludge falling from belt of pressing machine | | |
| Photo ID: DSCF3378 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

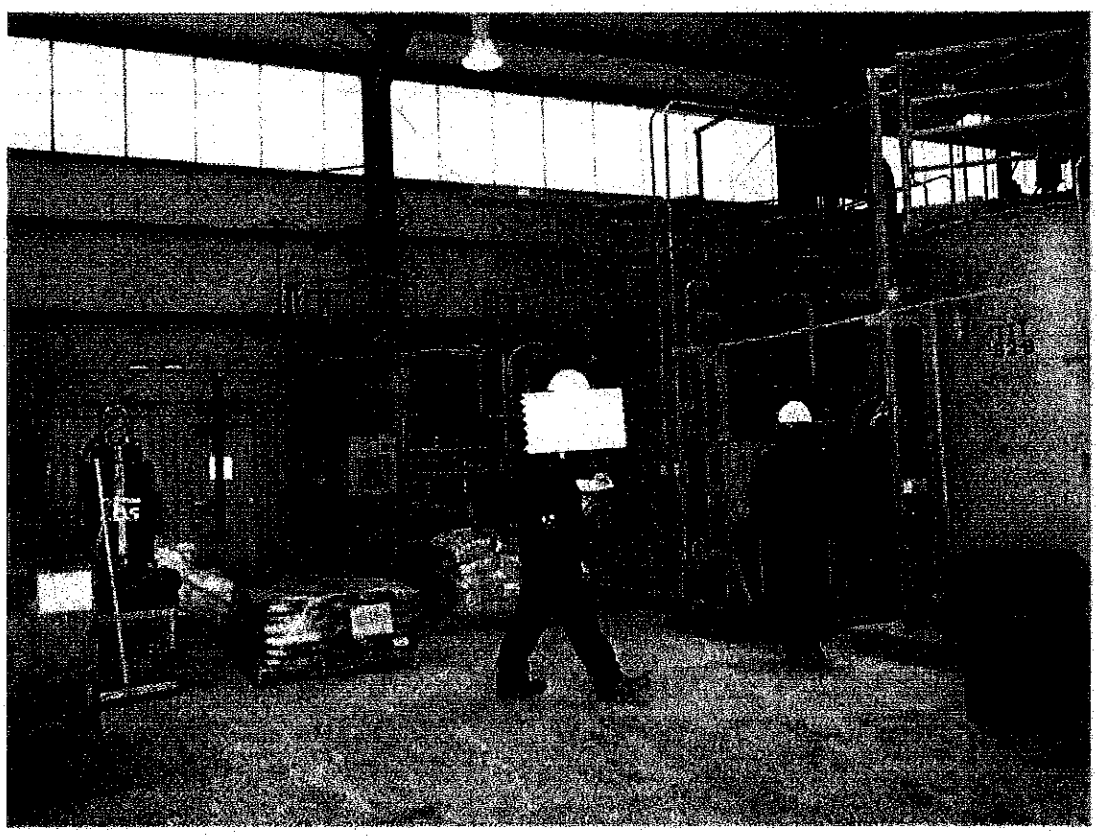
Official Photograph Log
Photo No. 52




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:37:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - TFT-02B sludge pressing machine | | |
| Photo ID: DSCF3379 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 53



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:40:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Inside Chemical Storage Building - Product storage area ( - FPC, Verhalen - EPA, and Phyllis Cunningham - TCEQ in picture) | | |
| Photo ID: DSCF3380 | | |

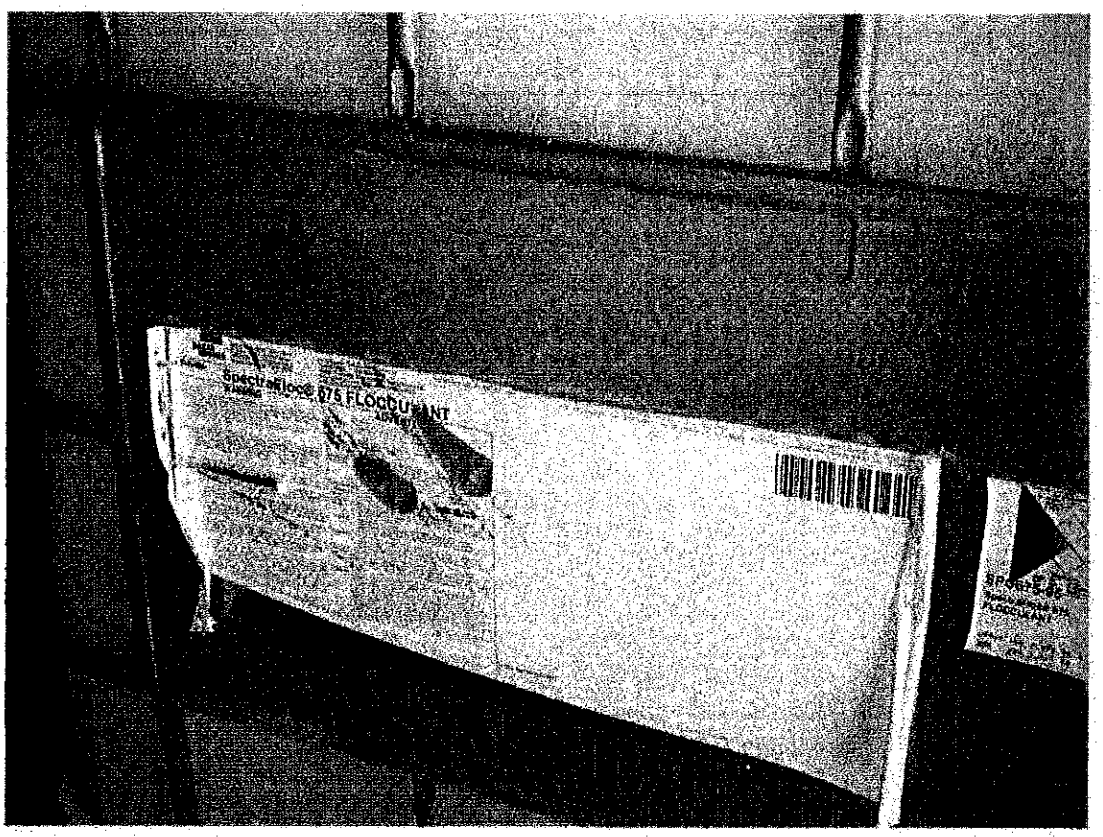
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 54

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:41:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Inside Chemical Storage Building -Flocculant container | | |
| Photo ID: DSCF3381 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 55



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:42:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Inside Chemical Storage Building -Label on flocculant container | | |
| Photo ID: DSCF3382 | | |

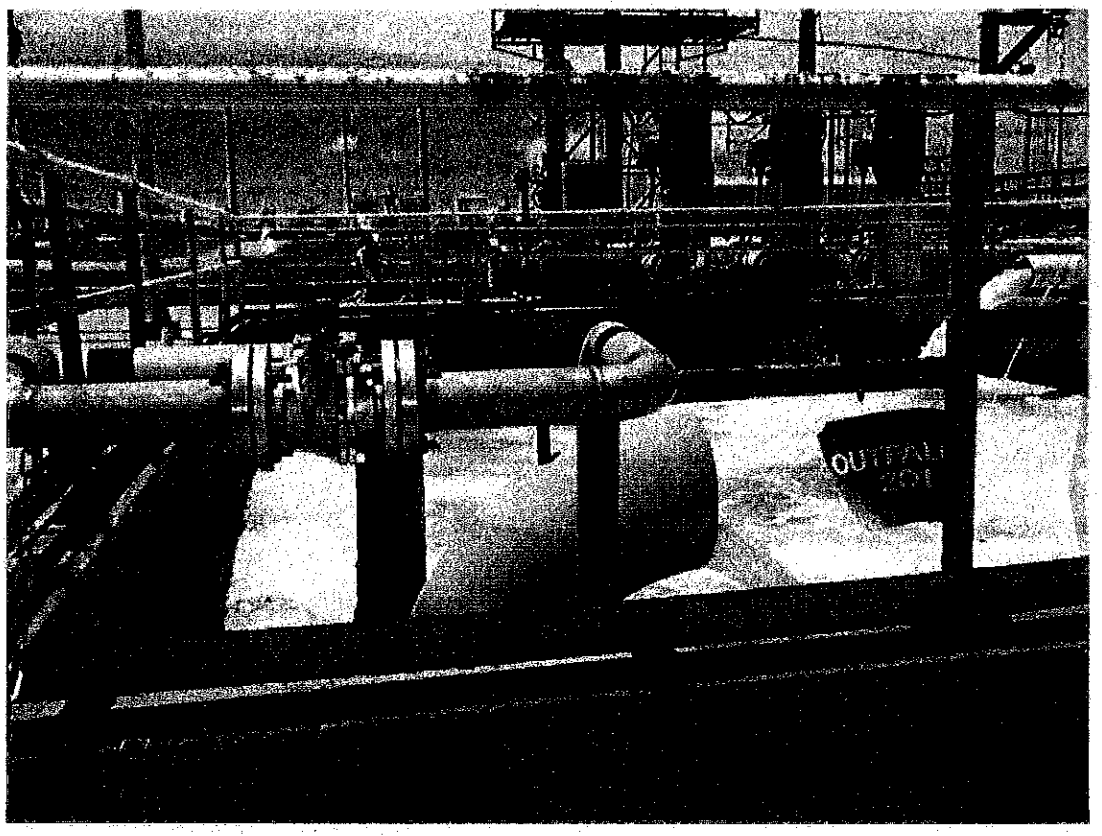
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 56

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:43:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Outside Chemical Storage Building -Drums of sodium bisulfite | | |
| Photo ID: DSCF3383 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

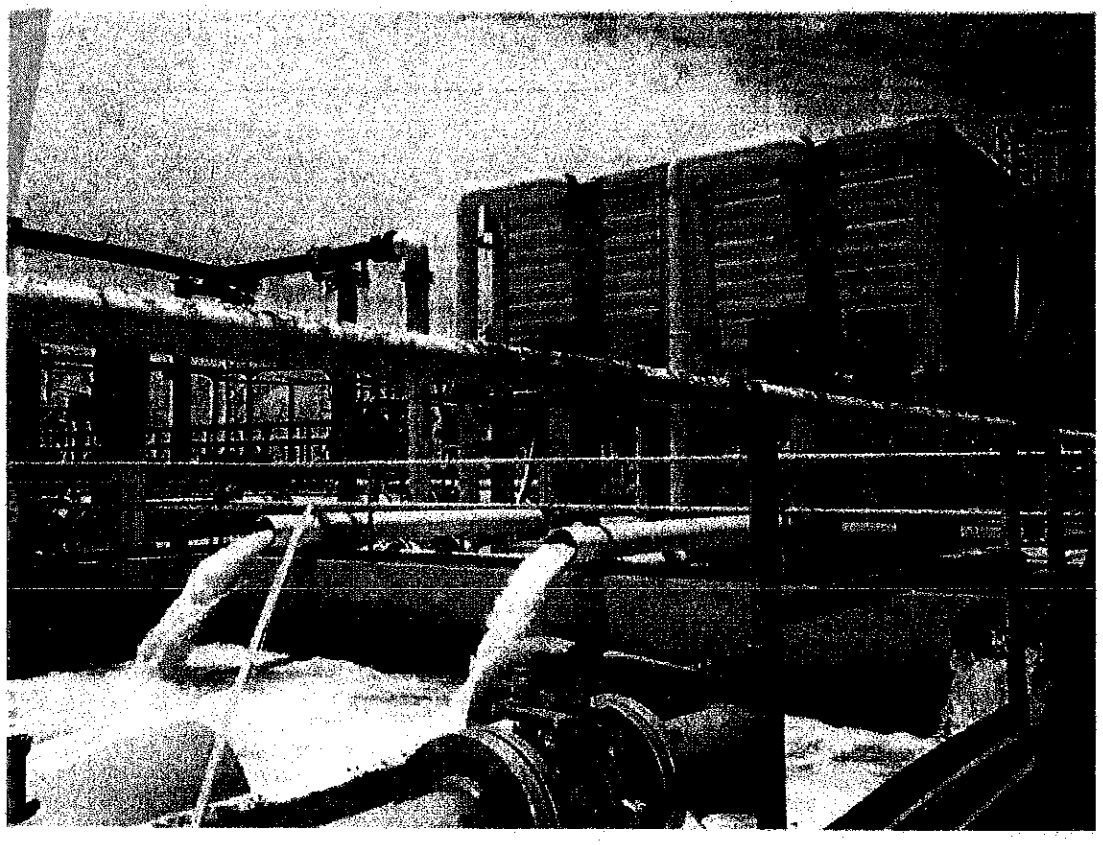
Official Photograph Log
Photo No. 57



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:47:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Treated groundwater from VC-630A discharges into mixing basin for Outfalls 201 and 101. | | |
| Photo ID: DSCF3384 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

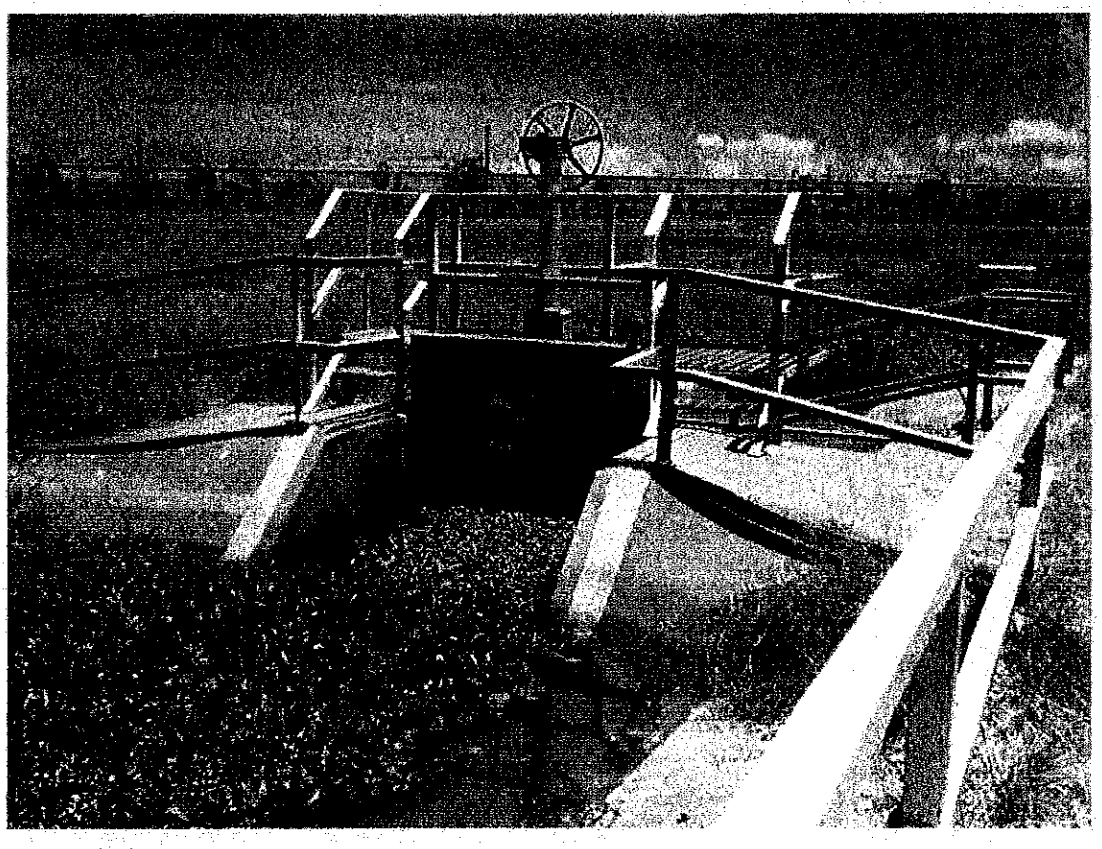
Official Photograph Log
Photo No. 58



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 12:52:00 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Central WWTP - Mixing basin for Outfalls 201 and 101 | | |
| Photo ID: DSCF3385 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 59



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 1:58 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 00? - Most likely outfall 003 but the number has eroded away; water up- and down-stream of the gate | | |
| Photo ID: DSCF3386 | | |

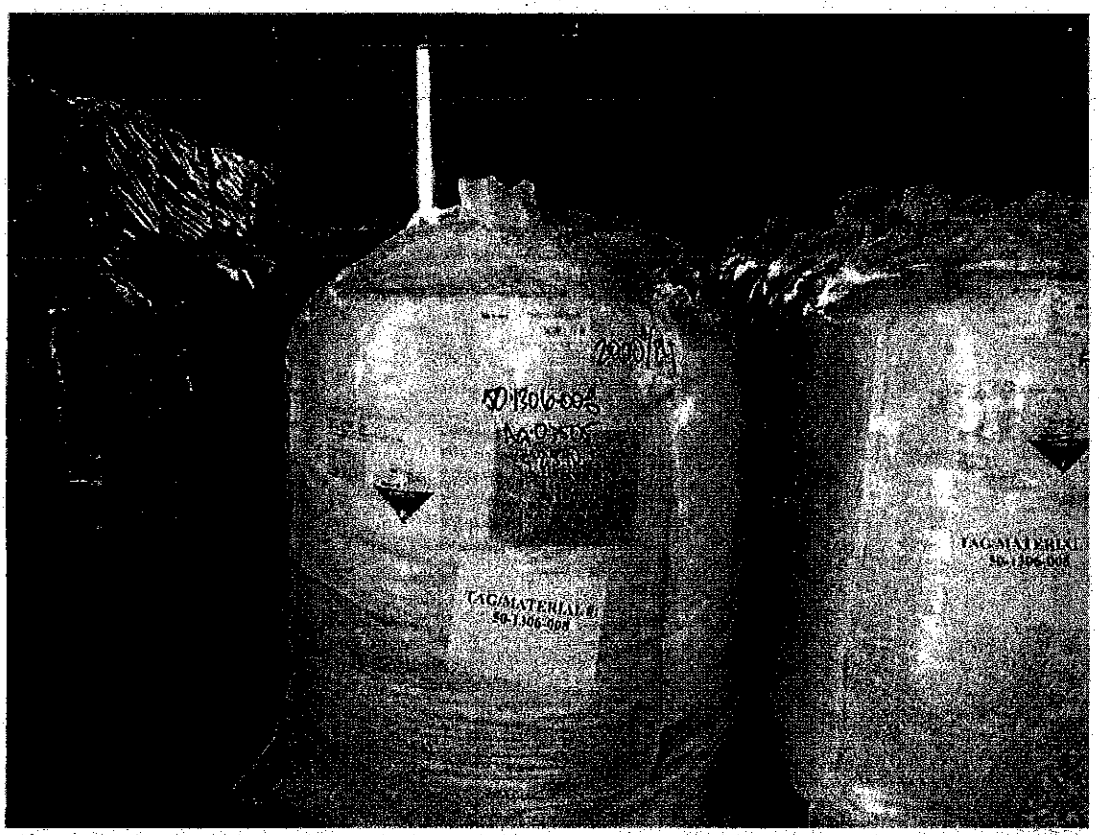
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 60

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:02 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage | | |
| Photo ID: DSCF3387 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

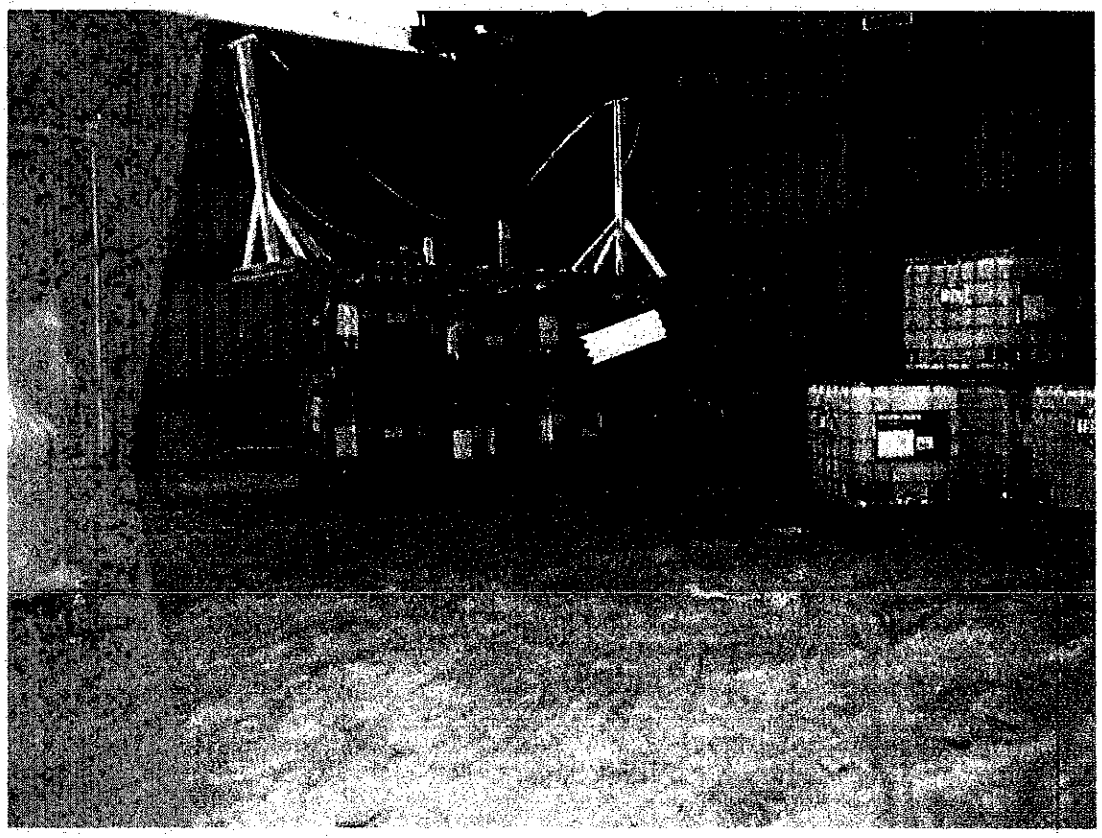
Official Photograph Log
Photo No. 61



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:02 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, bagged material | | |
| Photo ID: DSCF3388 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

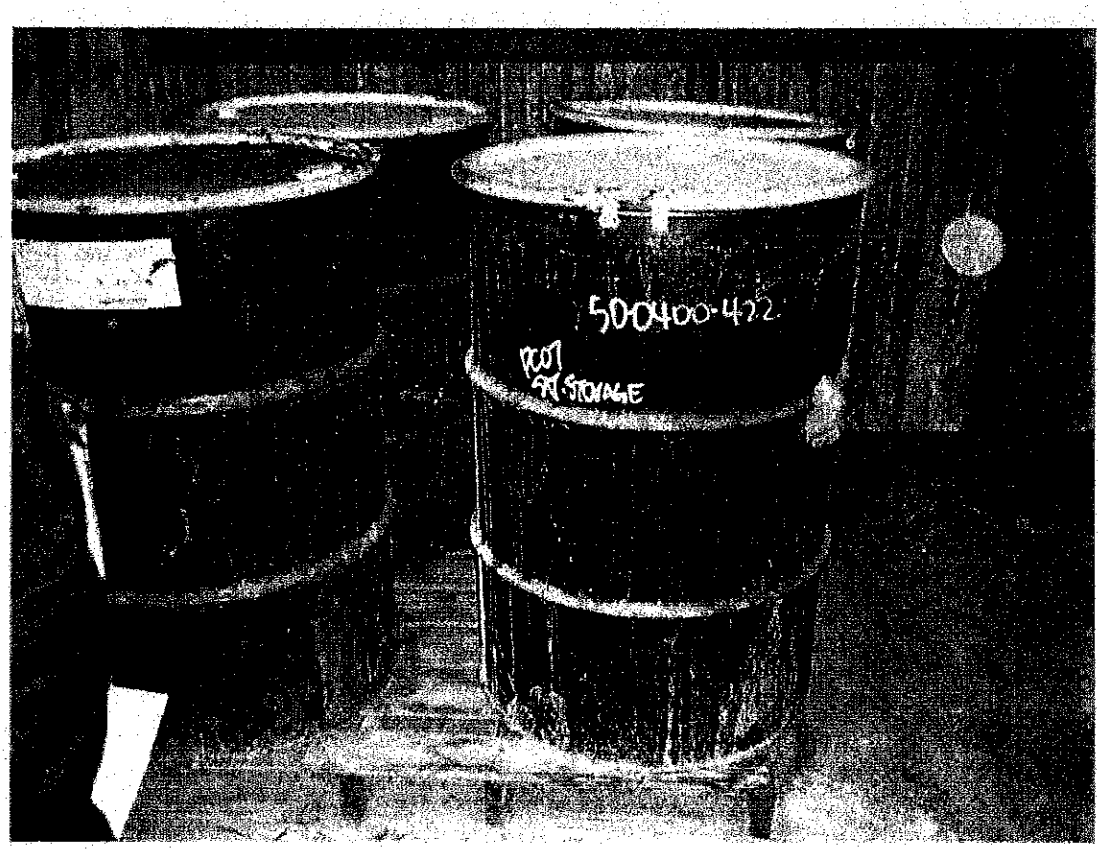
Official Photograph Log
Photo No. 62



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:03 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, materials in drums or totes | | |
| Photo ID: DSCF3389 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 63




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:03 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, drum labeled 'PC07 SAT Storage' | | |
| Photo ID: DSCF3390 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 64

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:04 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, drum labeled 'Pationic AS-33" | | |
| Photo ID: DSCF3391 | | |

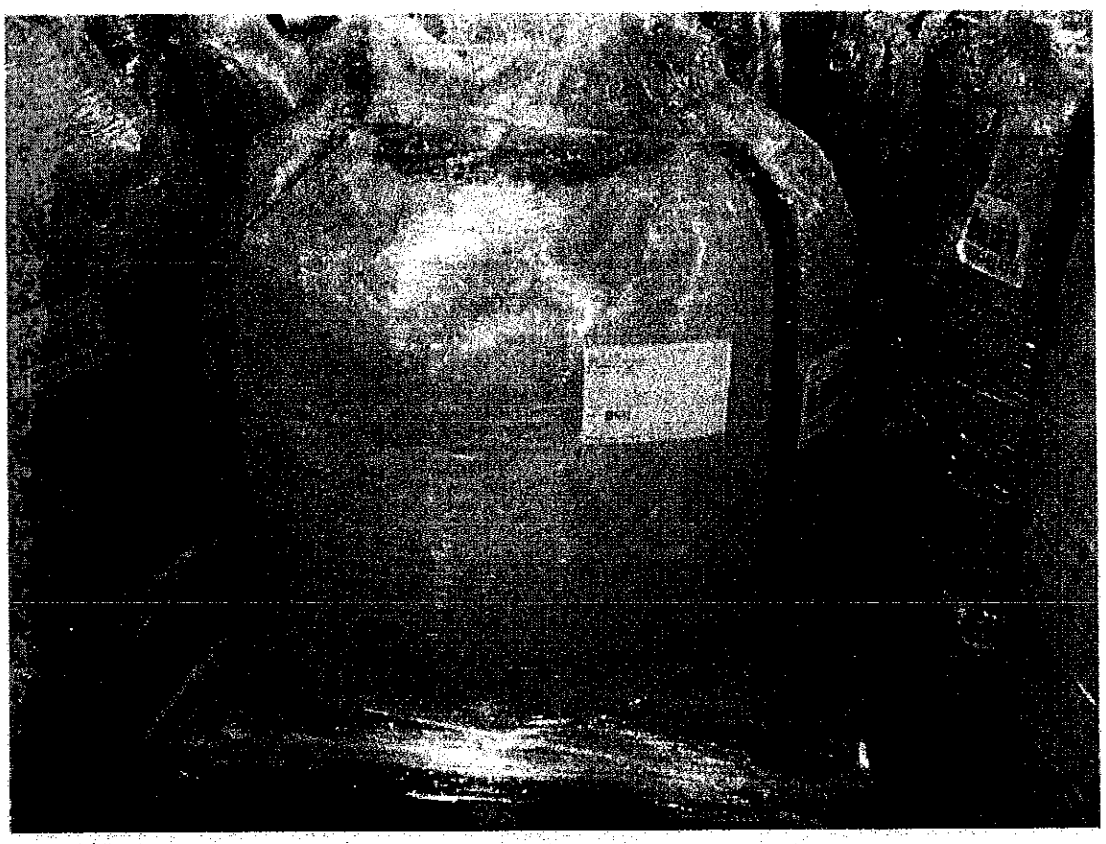
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 65

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:04 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, tote of apparently flammable materials | | |
| Photo ID: DSCF3392 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

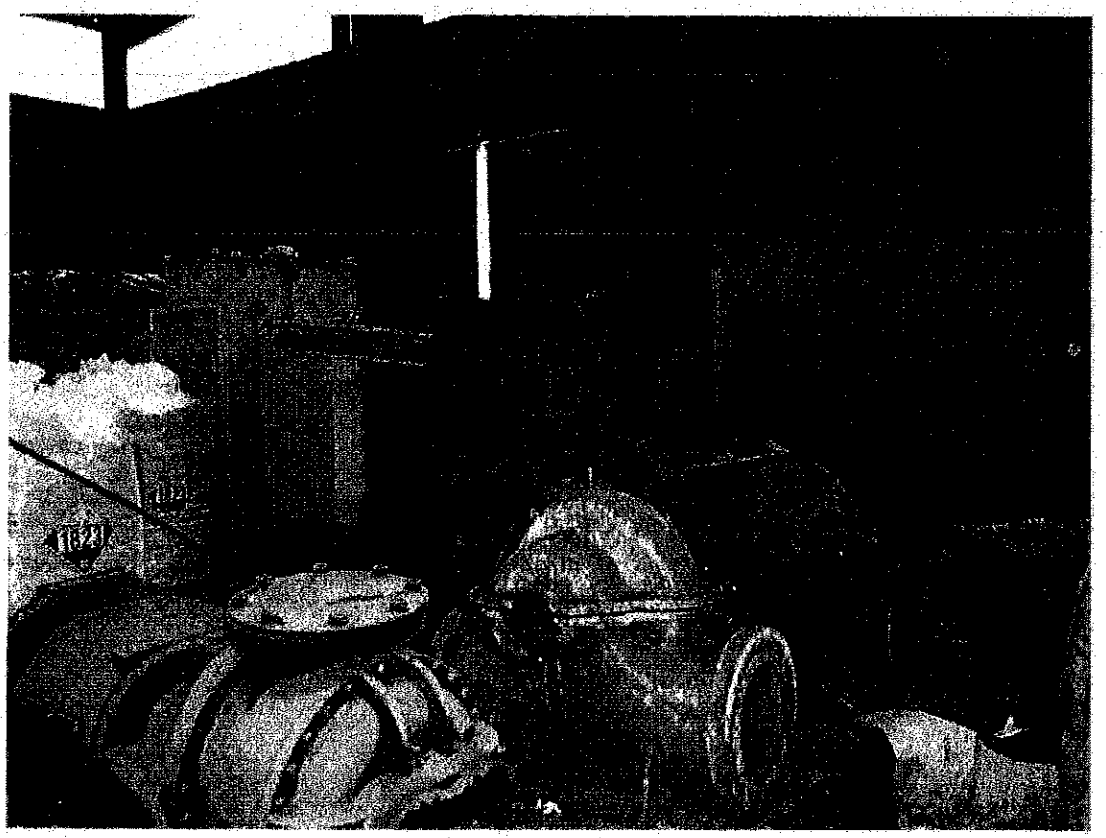
Official Photograph Log
Photo No. 66



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:05 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, one (1) ton bag of product | | |
| Photo ID: DSCF3393 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 67



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:06 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, mechanical parts storage area | | |
| Photo ID: DSCF3394 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 68

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:06 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, Locked storage box containing office files | | |
| Photo ID: DSCF3395 | | |

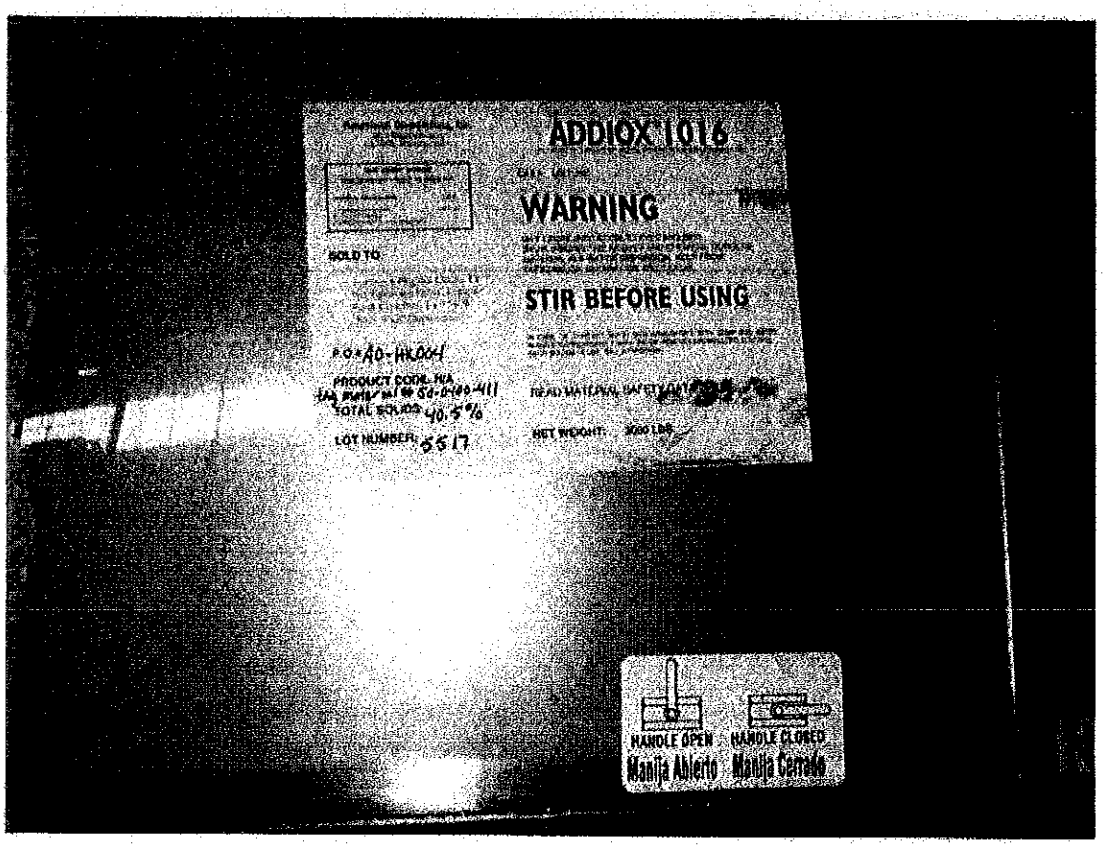
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 69

| | | |
|---|---|---|
| Photographer: Naucy Fagan | Date: 6/16/2010 | Time: 2:07 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, Metal totes | | |
| Photo ID: DSCF3396 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 70




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:08 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chemical Storage Building in PVC area - Product storage, Metal totes, close-up of label with 'ADDIOX 1016' on label | | |
| Photo ID: DSCF3397 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 71

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:17 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 002 | | |
| Photo ID: DSCF3398 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 72

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:18 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 004 - gate closed (see Photo 73) | | |
| Photo ID: DSCF3399 | | |

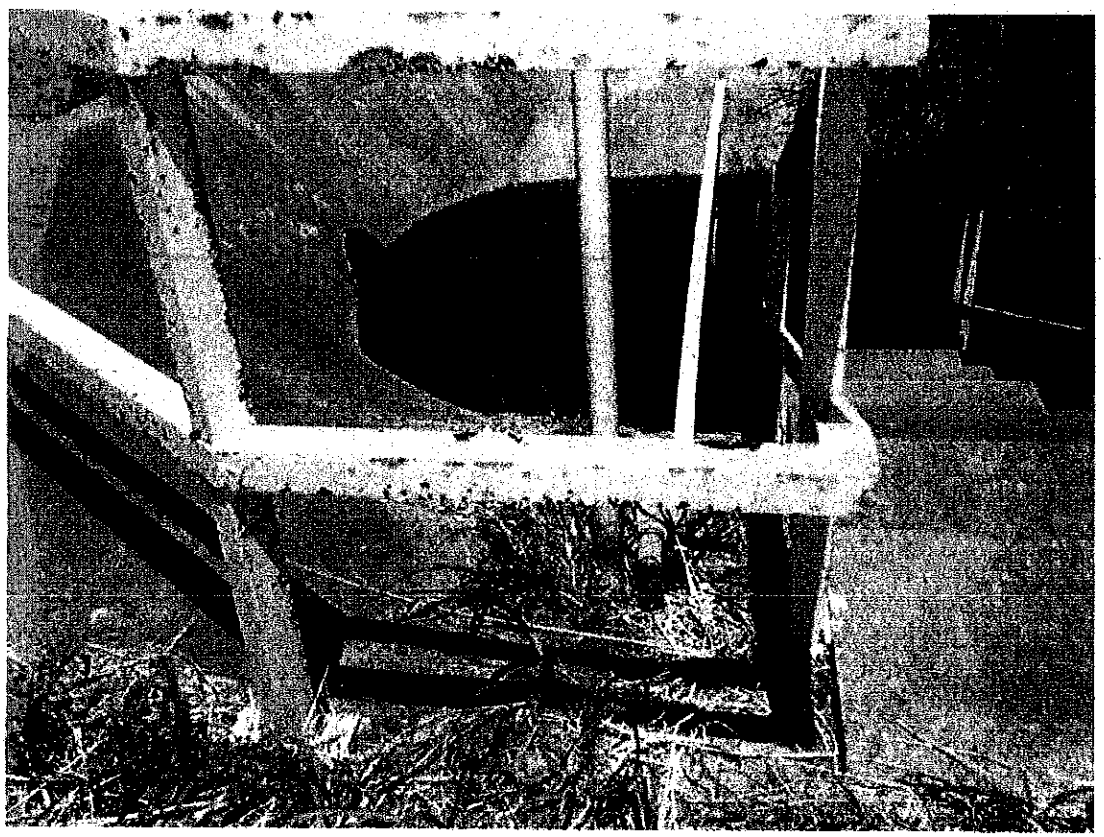
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 73

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:20 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 004 - water very brown; apparent crack in headwall of outfall (see Photo 72) | | |
| Photo ID: DSCF3400 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 74



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:21 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 004 - water very brown (see Photos 75 and 76) | | |
| Photo ID: DSCF3401 | | |

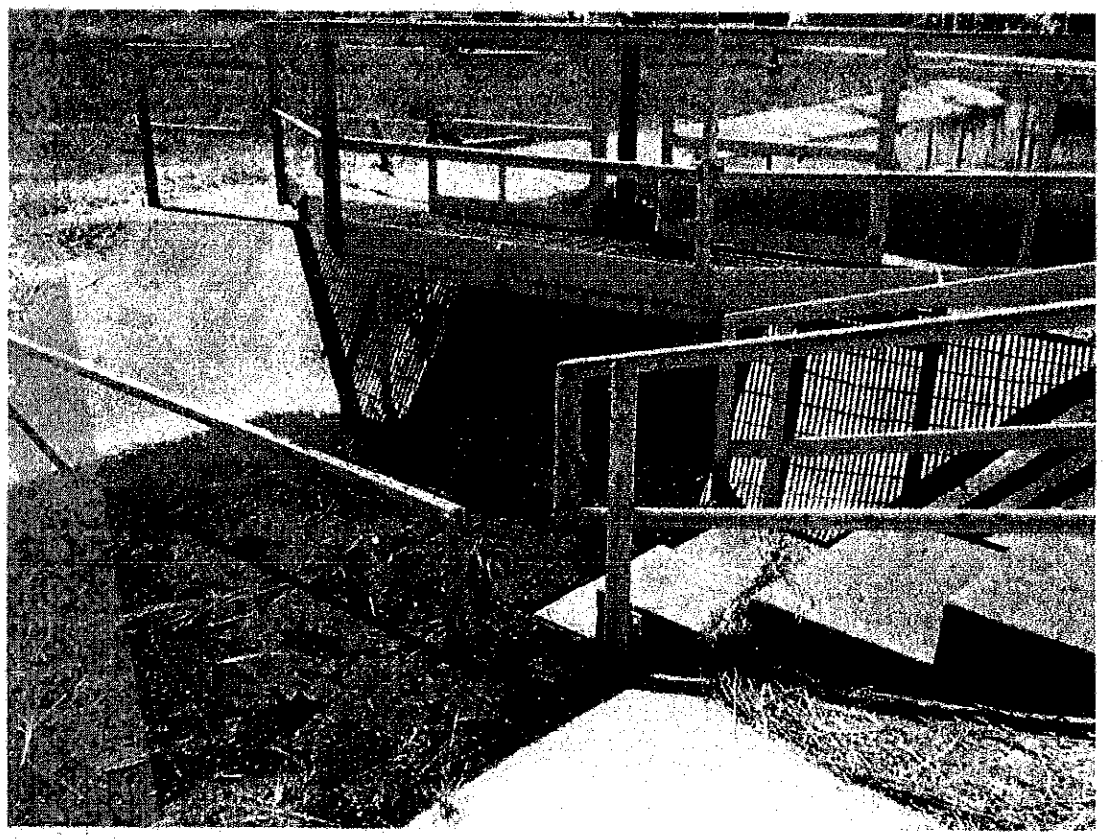
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 75

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:26 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 005 - water present up- and down-stream from the gate (see Photos 74 and 76) | | |
| Photo ID: DSCF3402 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

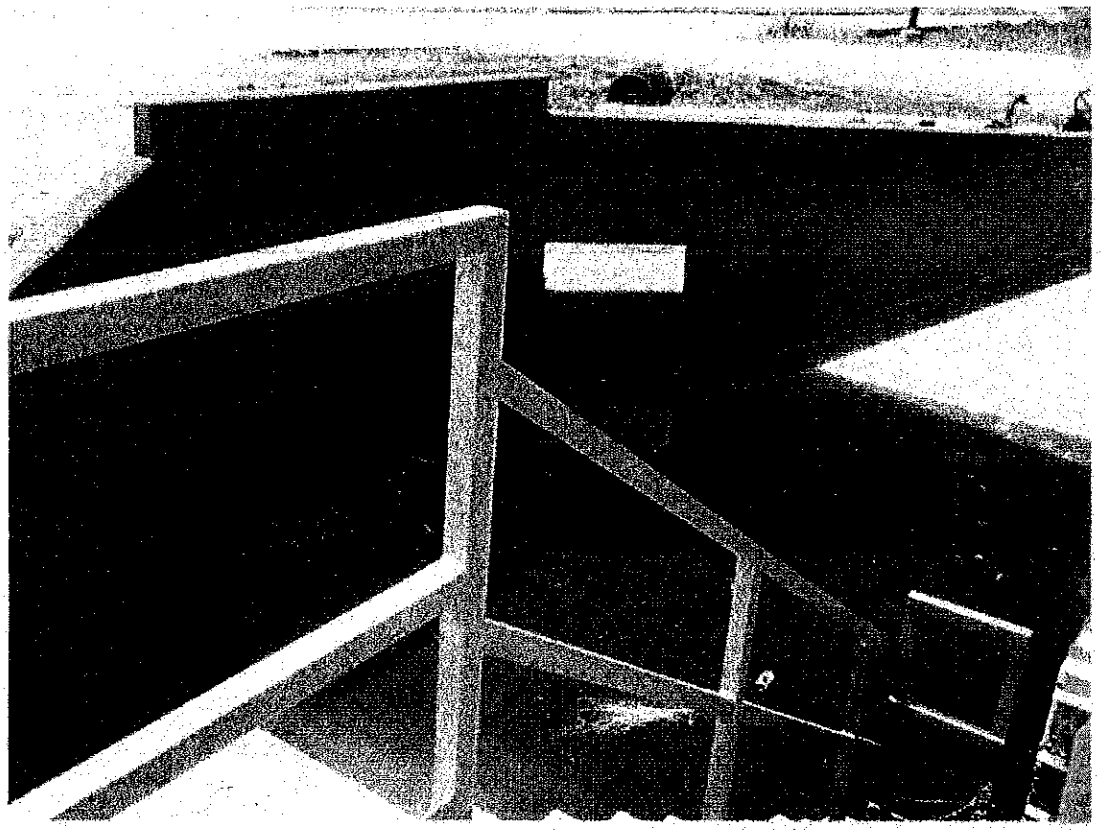
Official Photograph Log
Photo No. 76



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:26 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 005 - water present up- and down-stream from the gate (see Photos 74 and 75) | | |
| Photo ID: DSCF3403 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

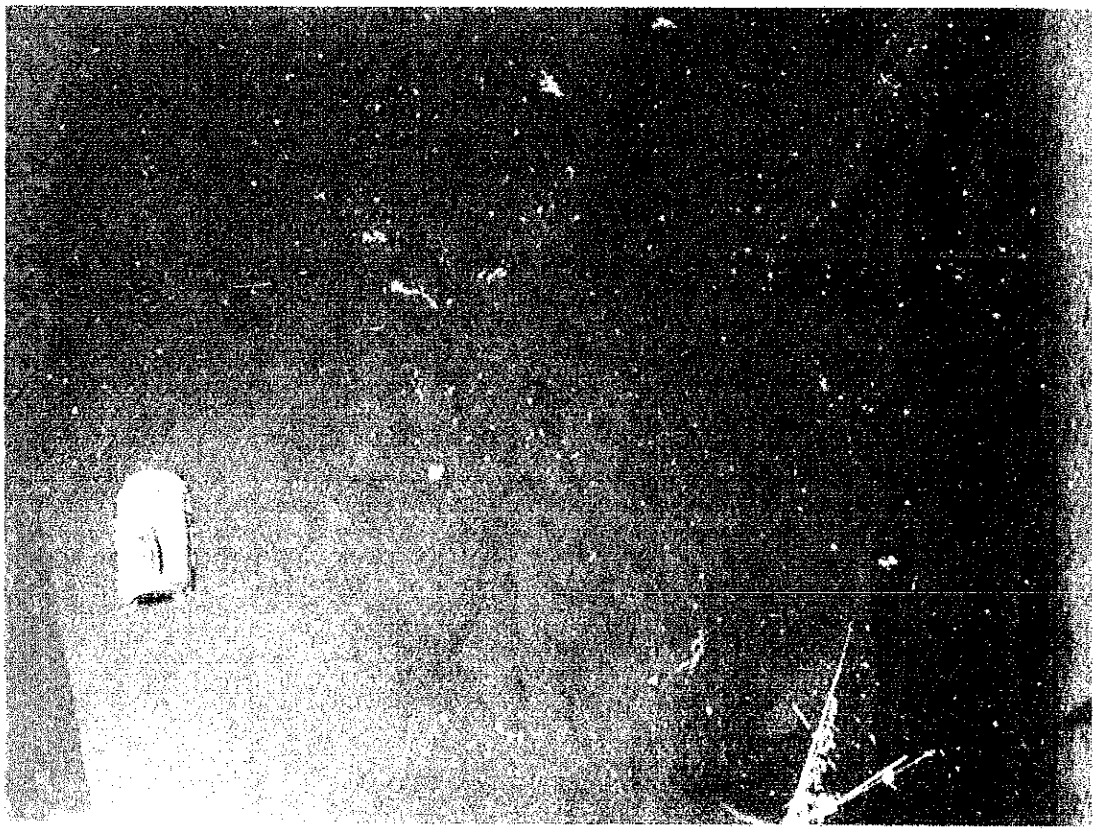
Official Photograph Log
Photo No. 77



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:32 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 | | |
| Photo ID: DSCF3404 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 78



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:32 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - plastic pellets found floating on water surface downstream of gate (see Photo 79) | | |
| Photo ID: DSCF3405 | | |

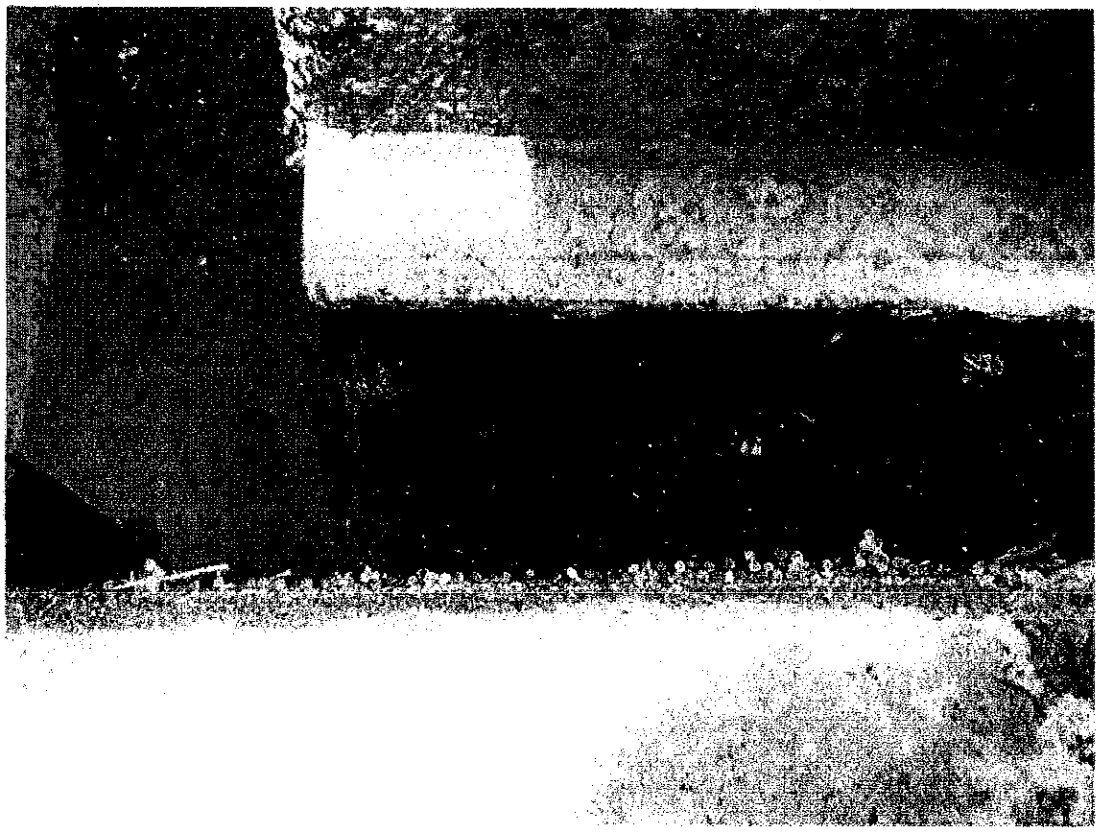
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 79

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:33 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - plastic pellets found floating on water surface downstream of gate (see Photo 78) | | |
| Photo ID: DSCF3406 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

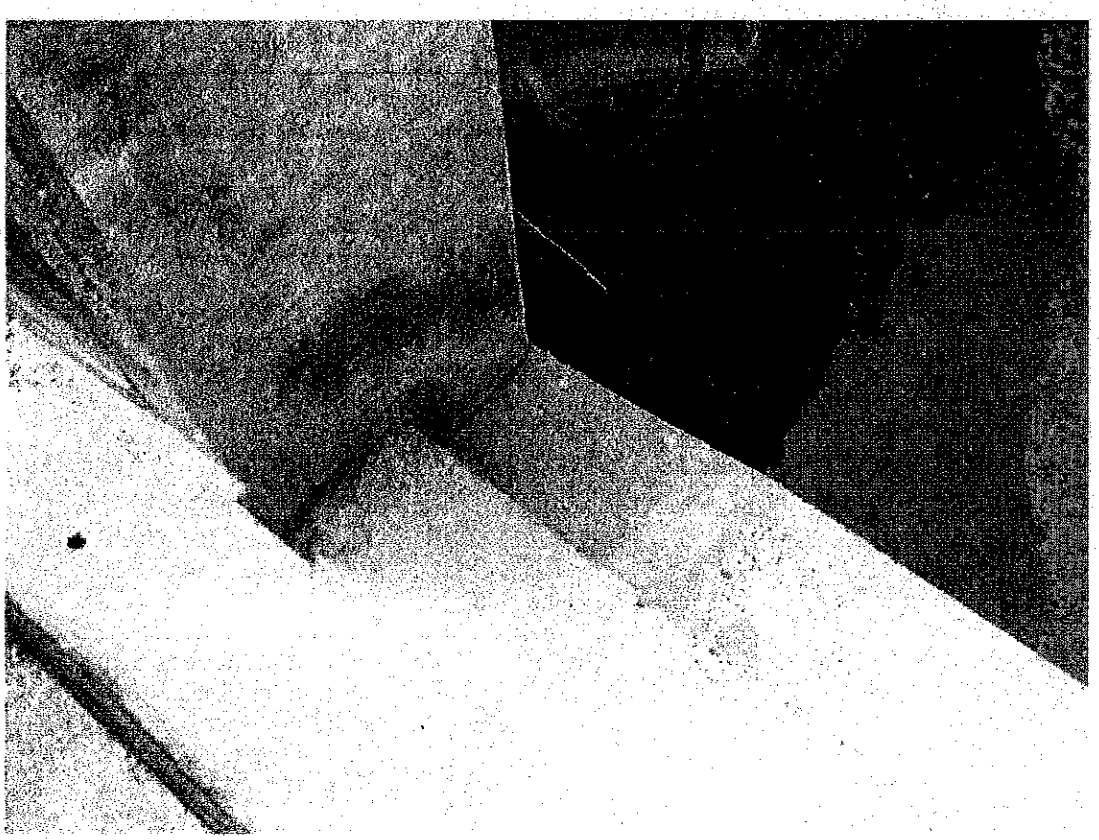
Official Photograph Log
Photo No. 80



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:33 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Close-up of plastic pellets found floating on water surface downstream of gate | | |
| Photo ID: DSCF3407 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 81



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:34 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Plastic pellets on concrete steps from earlier highwtaer event downstream of gate | | |
| Photo ID: DSCF3408 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 82

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 83

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 84

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 85

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 86

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 87

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 88

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

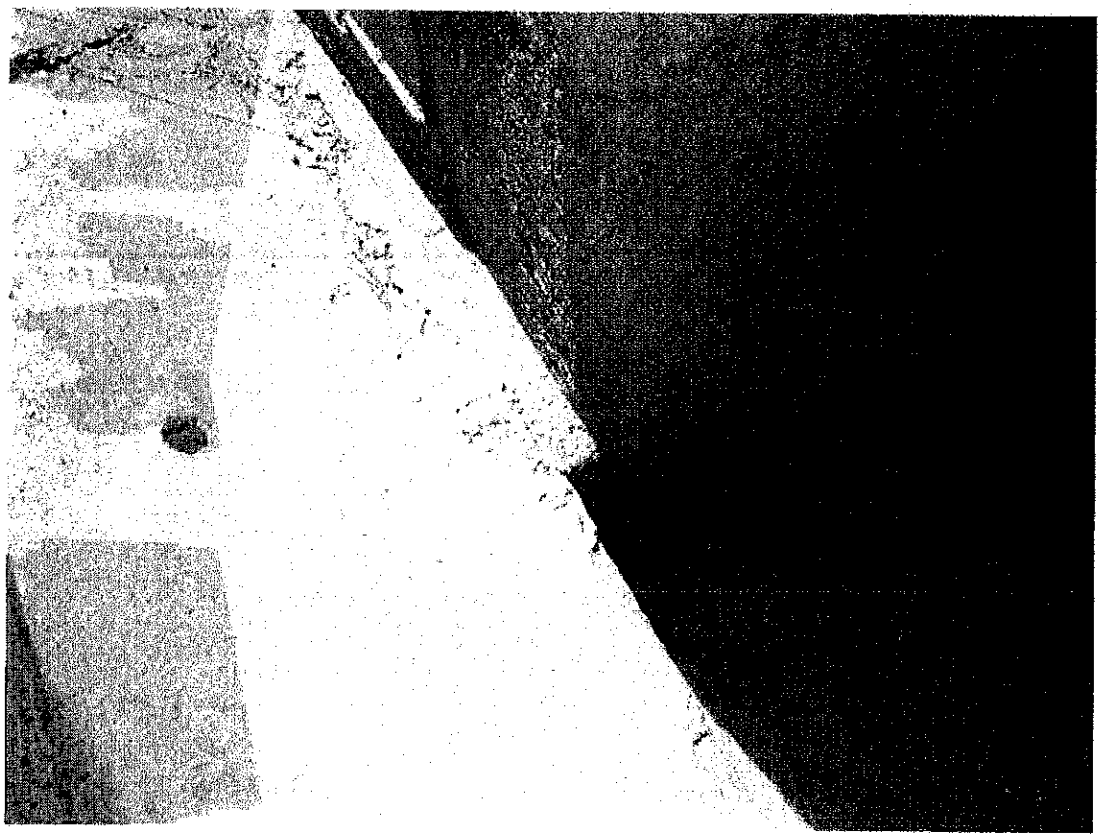
Official Photograph Log
Photo No. 89

No Photograph

| | | |
|---|---|---|
| Photographer: | Date: | Time: |
| City/County: | Direction (facing): | State: |
| Location: Formosa Plastics Corp. | | |
| Subject: No photo; Logbook mis-numbered | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

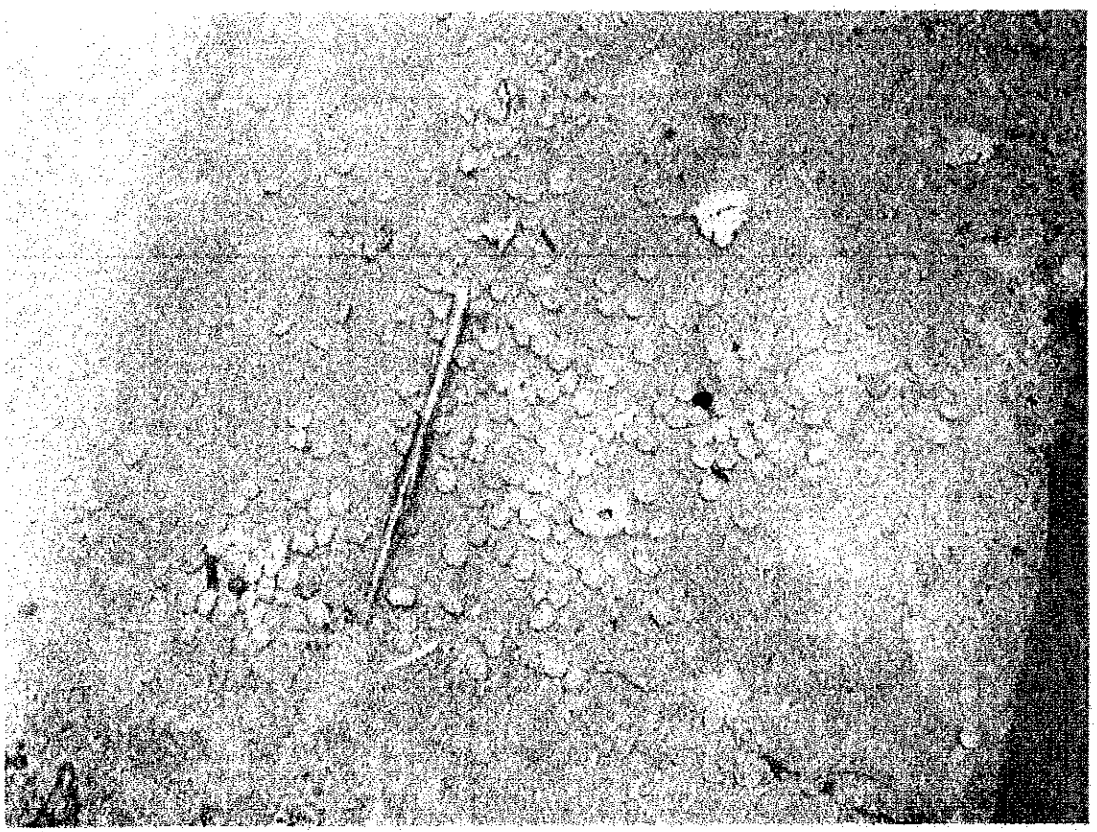
Official Photograph Log
Photo No. 90



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:34 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Close-up of plastic pellets on concrete steps from earlier highwtaer event downstream of gate | | |
| Photo ID: DSCF3409 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

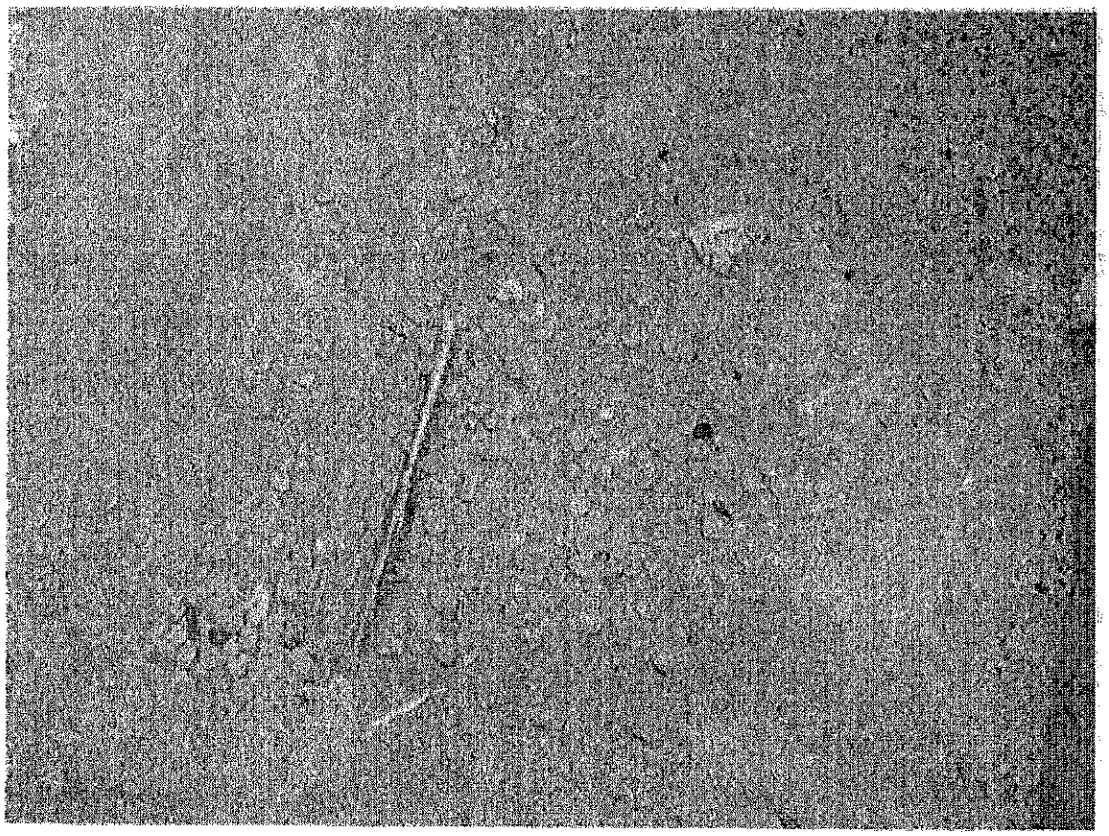
Official Photograph Log
Photo No. 91



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:35 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Close-up of plastic pellets showing various sizes, shapes and forms of plastic residue (white fluff) (see Photo 92) | | |
| Photo ID: DSCF3410 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 92



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:35 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Close-up of plastic pellets showing various sizes, shapes and forms of plastic residue (white fluff) (see Photo 91) | | |
| Photo ID: DSCF3411 | | |

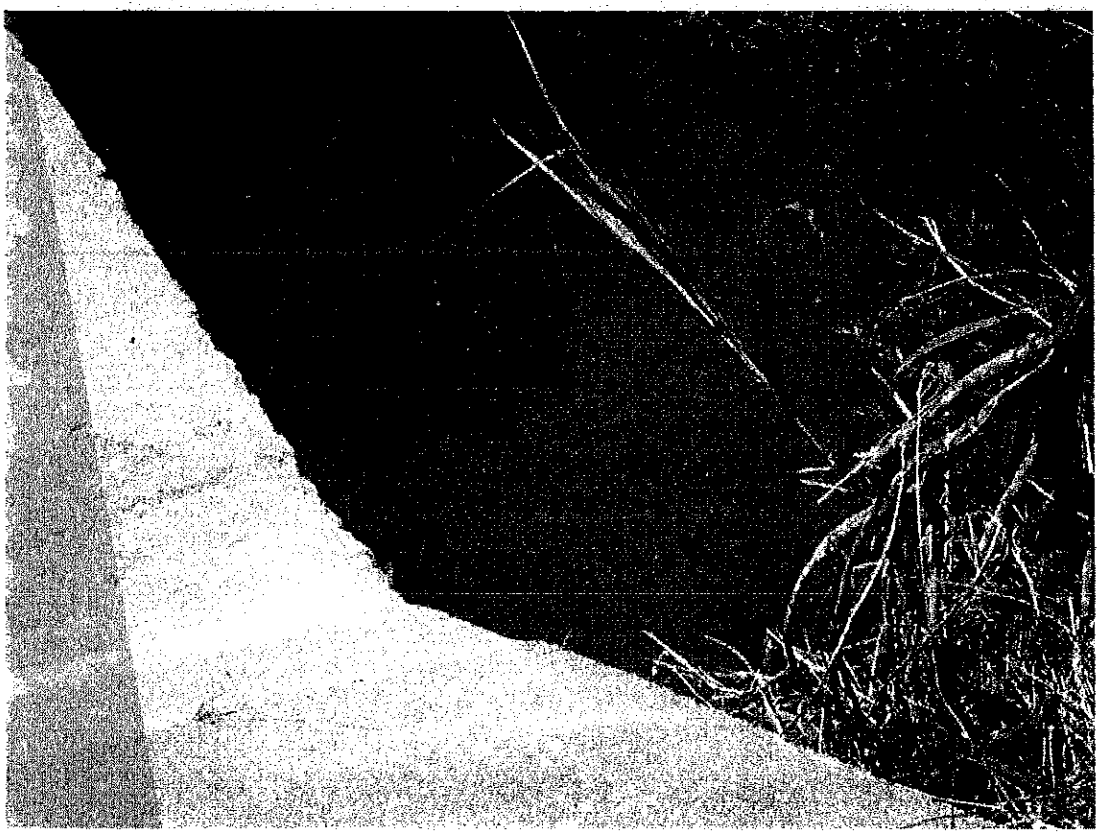
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 93

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:36 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Screen at outfall 006 showing apparent clog of plant matter and plastic debris | | |
| Photo ID: DSCF3412 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

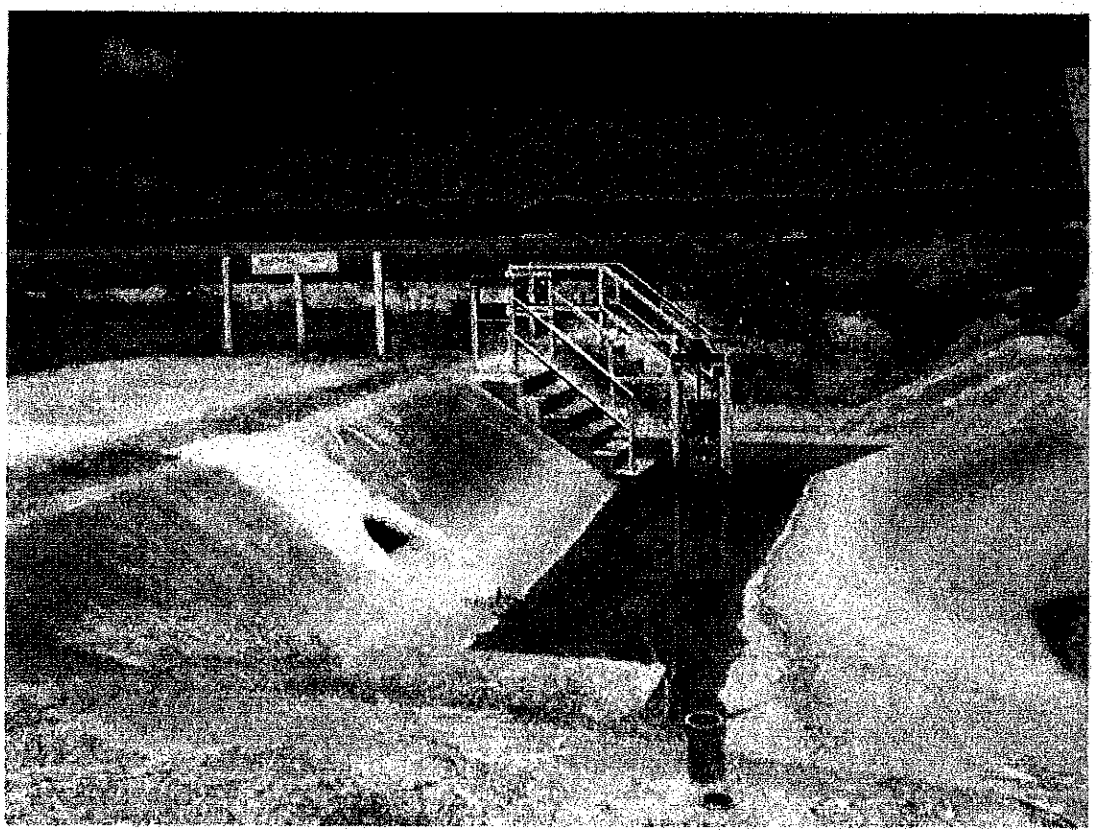
Official Photograph Log
Photo No. 94



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:37 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Pellets floating on creek-side and beyond the concrete apron of of Outfall 006, flowing towards Cox Creek | | |
| Photo ID: DSCF3413 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

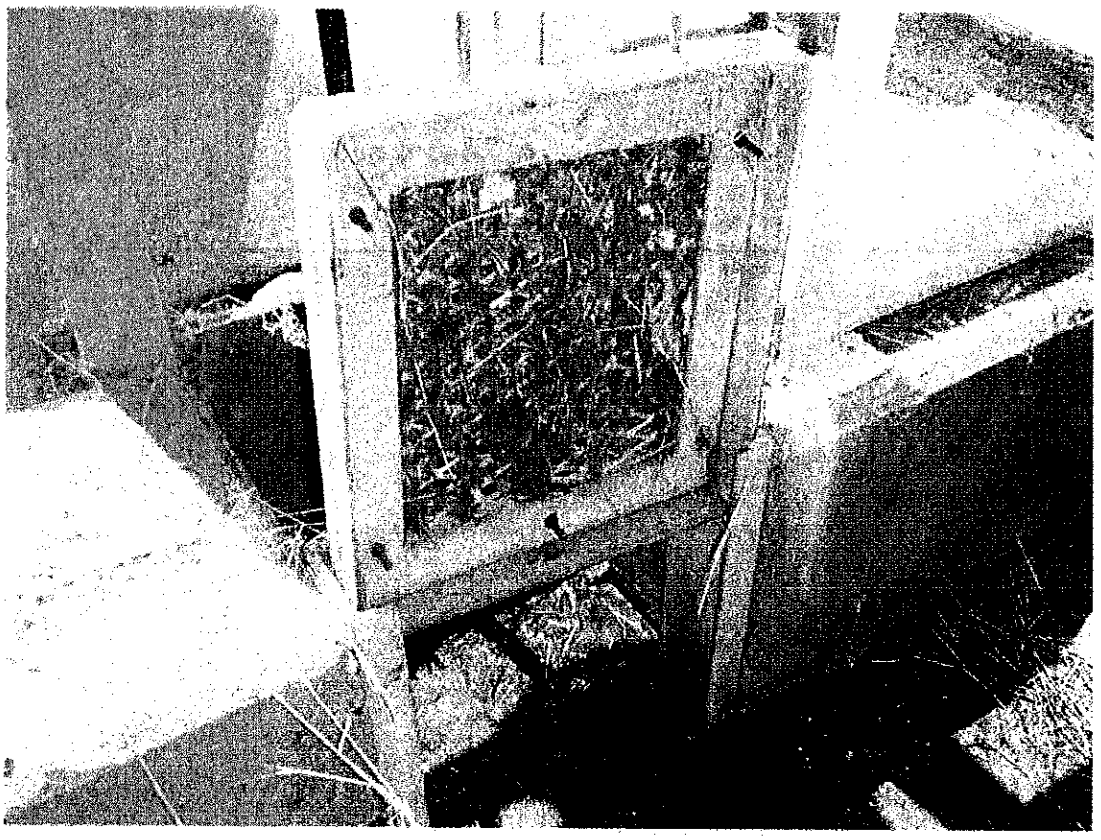
Official Photograph Log
Photo No. 95



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:40 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 007 | | |
| Photo ID: DSCF3414 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

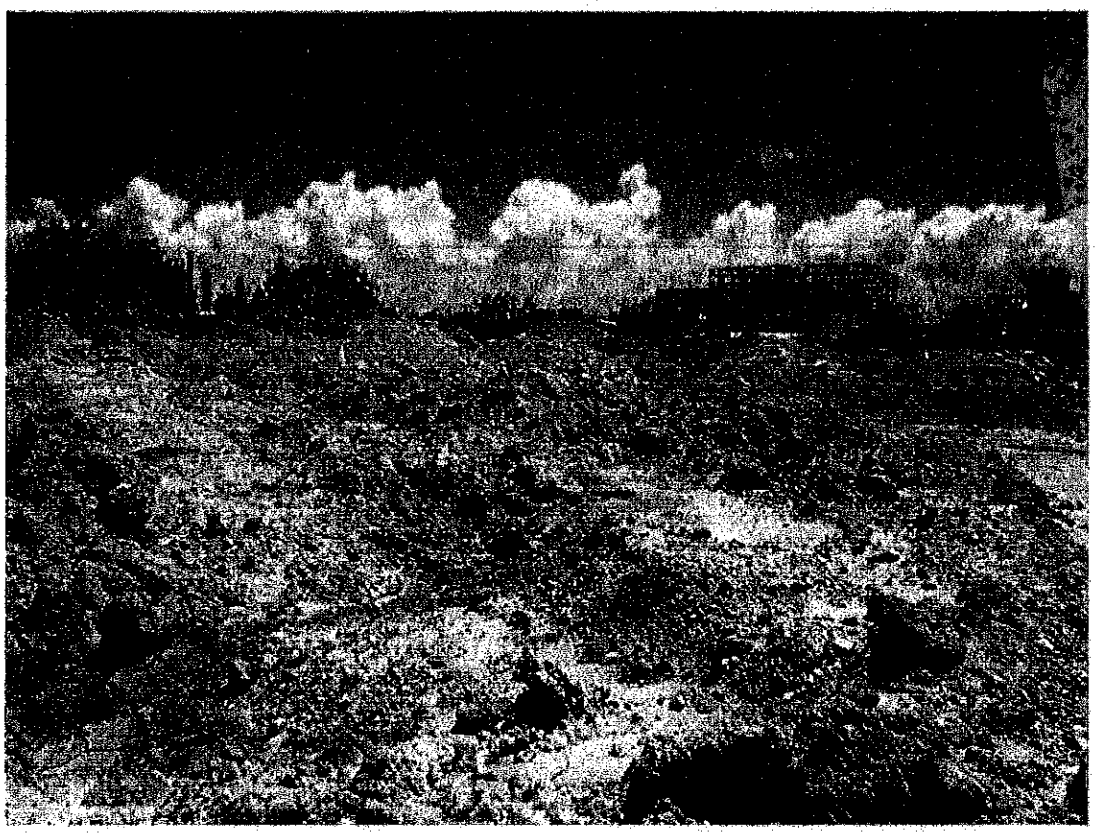
Official Photograph Log
Photo No. 96



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:41 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 007 - Screen downstream of gate | | |
| Photo ID: DSCF3415 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

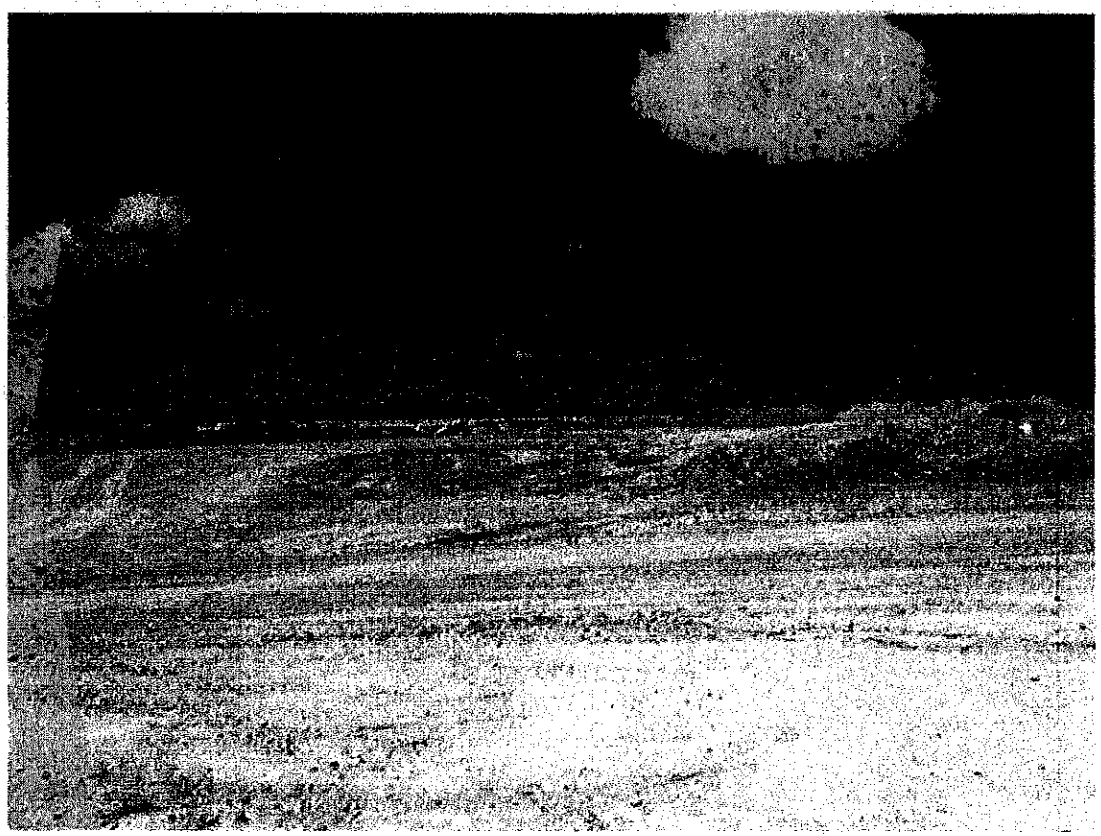
Official Photograph Log
Photo No. 97



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:55 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Soil Staging Pile - Soil staging pile located in far northeast quadrant of FPC, new SVCP plant in background | | |
| Photo ID: DSCF3416 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 98



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 2:55 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Soil Staging Pile - Apparent staging area for excavated soil from new SPVC construction site; visible on Google photographs | | |
| Photo ID: DSCF3417 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 99

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:09 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Ethylene glcyol and polypropylene plants in the background (see Photo 100) | | |
| Photo ID: DSCF3418 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 100

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:09 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 (see Photo 99) | | |
| Photo ID: DSCF3419 | | |

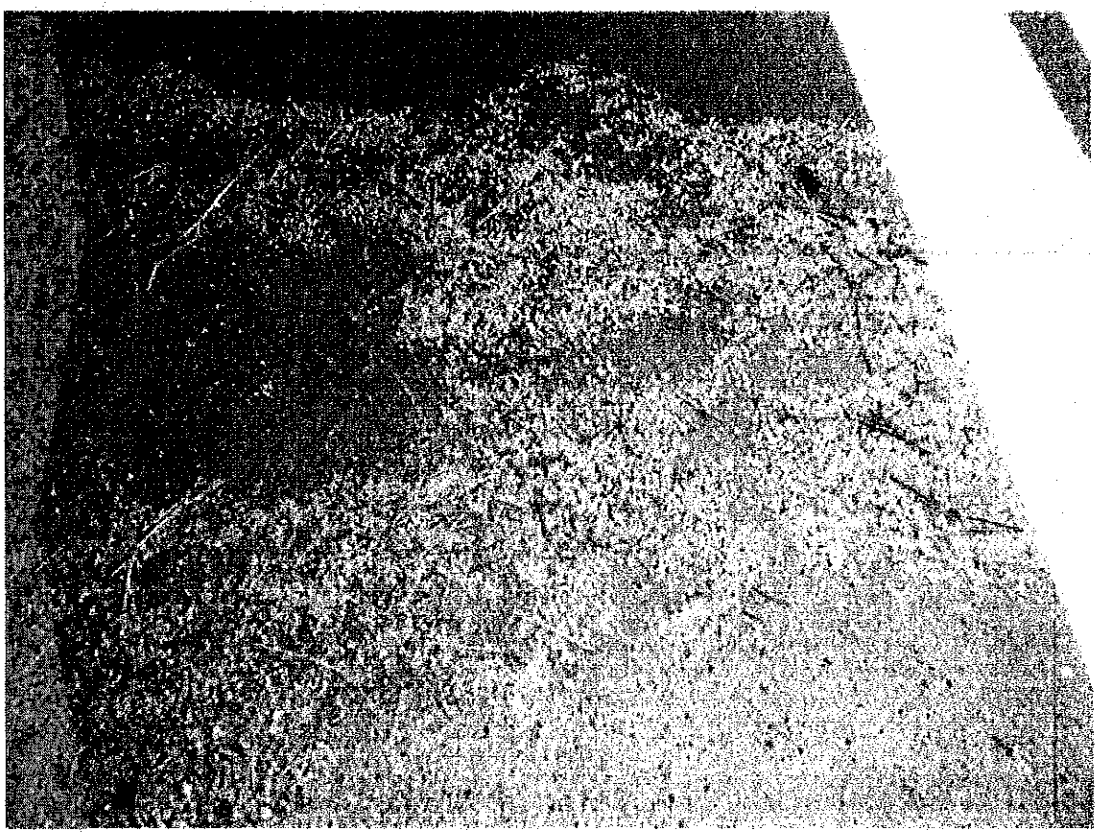
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 101

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:11 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Apparent deposit of plastic pellets on concrete apron from previous high water event | | |
| Photo ID: DSCF3420 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

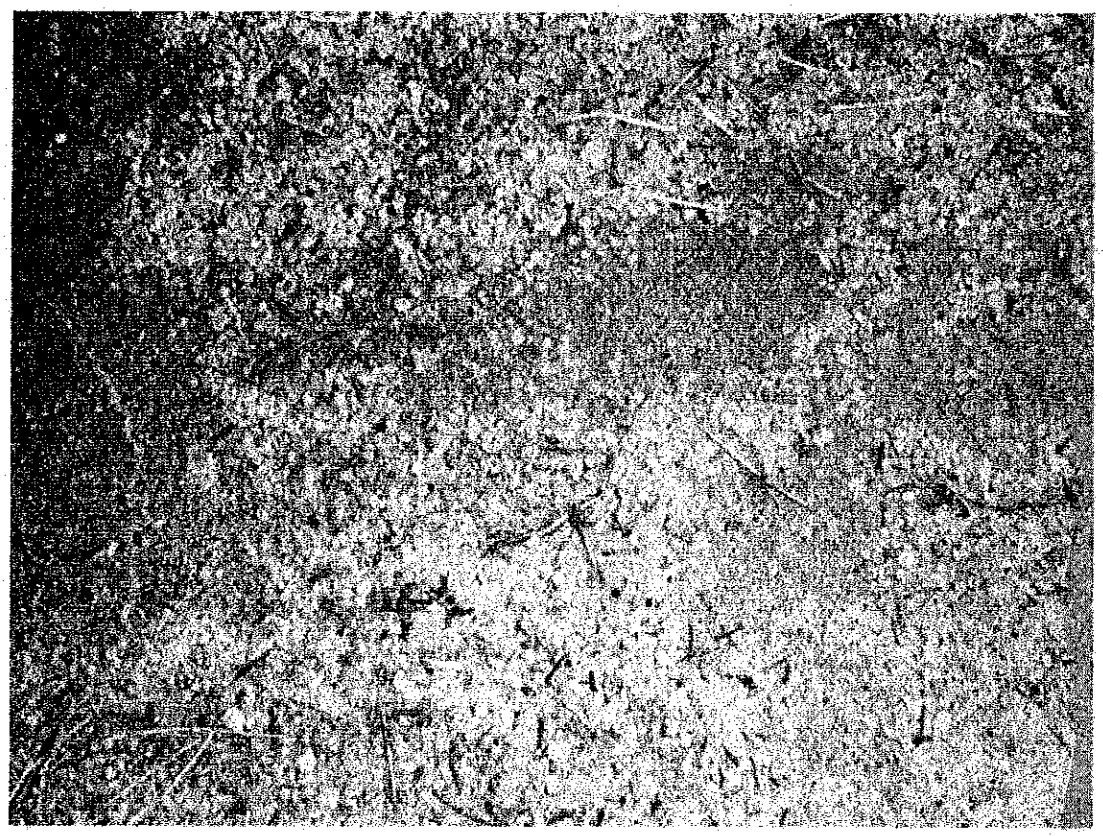
Official Photograph Log
Photo No. 102



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:11 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Close-up of apparent deposit of plastic pellets on concrete apron from previous high water event | | |
| Photo ID: DSCF3421 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 103



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:11 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Close-up of plastic pellets of different shapes and sizes (see Photos 104 and 105) | | |
| Photo ID: DSCF3422 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 104

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:12 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Close-up of plastic pellets of different shapes and sizes (see Photos 103 and 105) | | |
| Photo ID: DSCF3423 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 105

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:13 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Close-up of plastic pellets of different shapes and sizes (see Photos 103 and 104) | | |
| Photo ID: DSCF3424 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 106

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:19 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Feral hog prints in mud downstream from Outfall 008 before the drainage crosses through chain-link fence on east side of property | | |
| Photo ID: DSCF3425 | | |

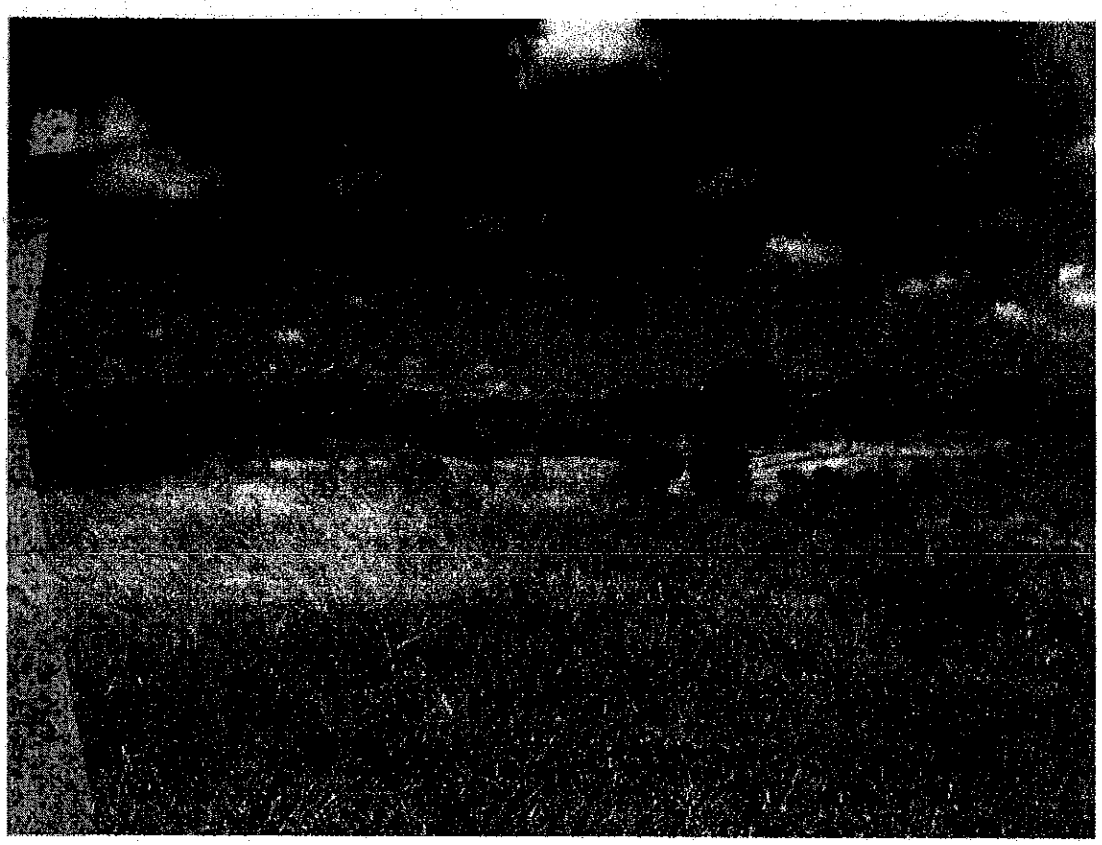
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 107

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:20 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Plastic pellets downstream of Outfall 008 | | |
| Photo ID: DSCF3426 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 108



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:21 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Facing east from Outfall 006 [sic, this should be 008] | | |
| Photo ID: DSCF3427 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 109

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:25 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 008 - Soil staging pile near outfall 006 [sic, this should be 008] | | |
| Photo ID: DSCF3428 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 110

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:25 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Stack of creosote timbers on ground | | |
| Photo ID: DSCF3429 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 111

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:27 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - New creosote timbers on ground and metal parts and railroad spikes in drums; Maintenance building in background | | |
| Photo ID: DSCF3430 | | |

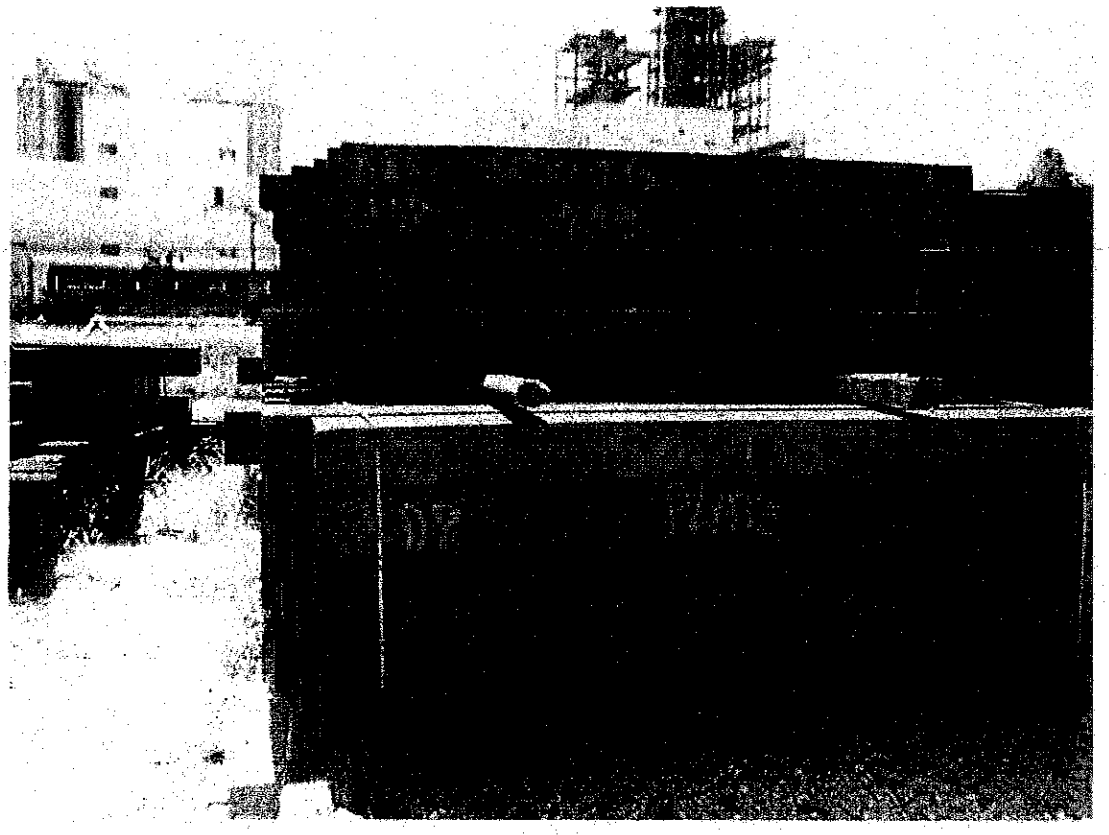
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 112

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:28 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Scrap metals inside red roll-off box that was not tarped or closed at the time of the inspection | | |
| Photo ID: DSCF3431 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 113



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:30 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - New creosote timbers in laydown storage area | | |
| Photo ID: DSCF3432 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 114

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:32 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Corroded red container (boxcar) marked with "oily rags only" near Maintenance Facility | | |
| Photo ID: DSCF3433 | | |

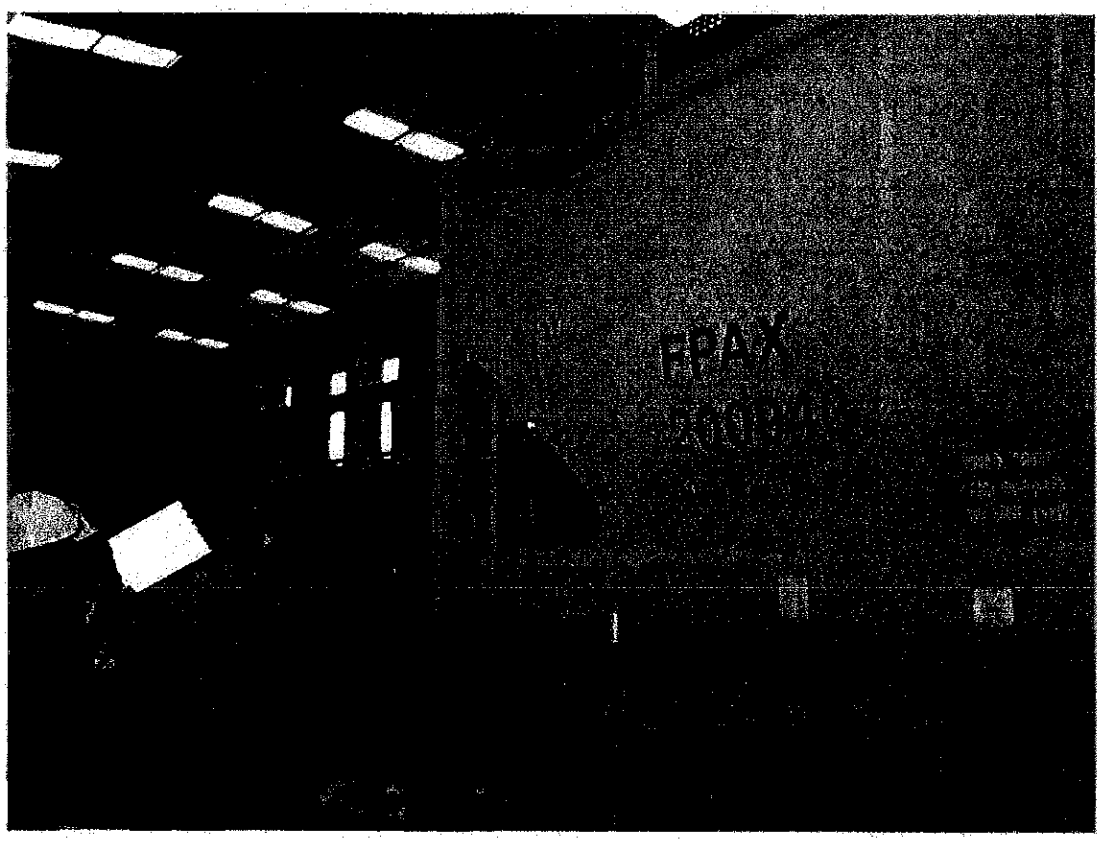
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 115

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:34 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Polypropylene facility in background (Verhalen - EPA) | | |
| Photo ID: DSCF3434 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

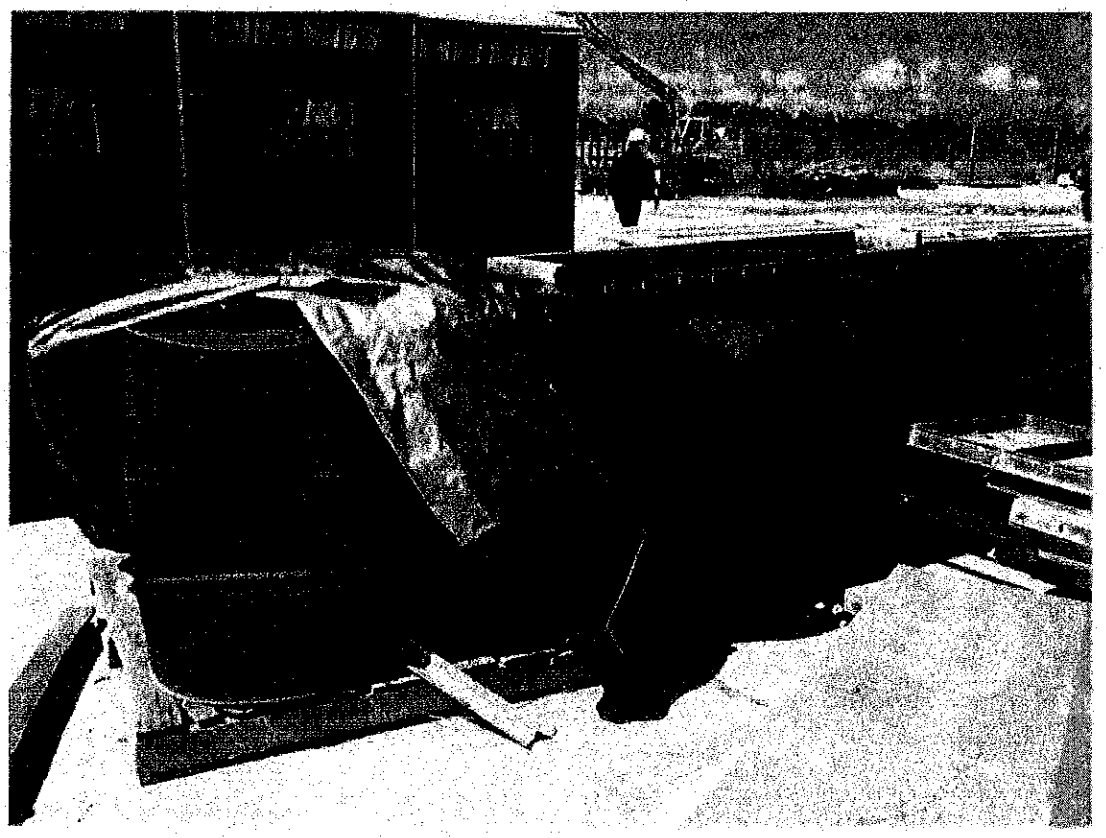
Official Photograph Log
Photo No. 116




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:53 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Inside maintenance bay; damage to top of railcar (Verhalen - EPA, FPC personnel) | | |
| Photo ID: DSCF3435 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

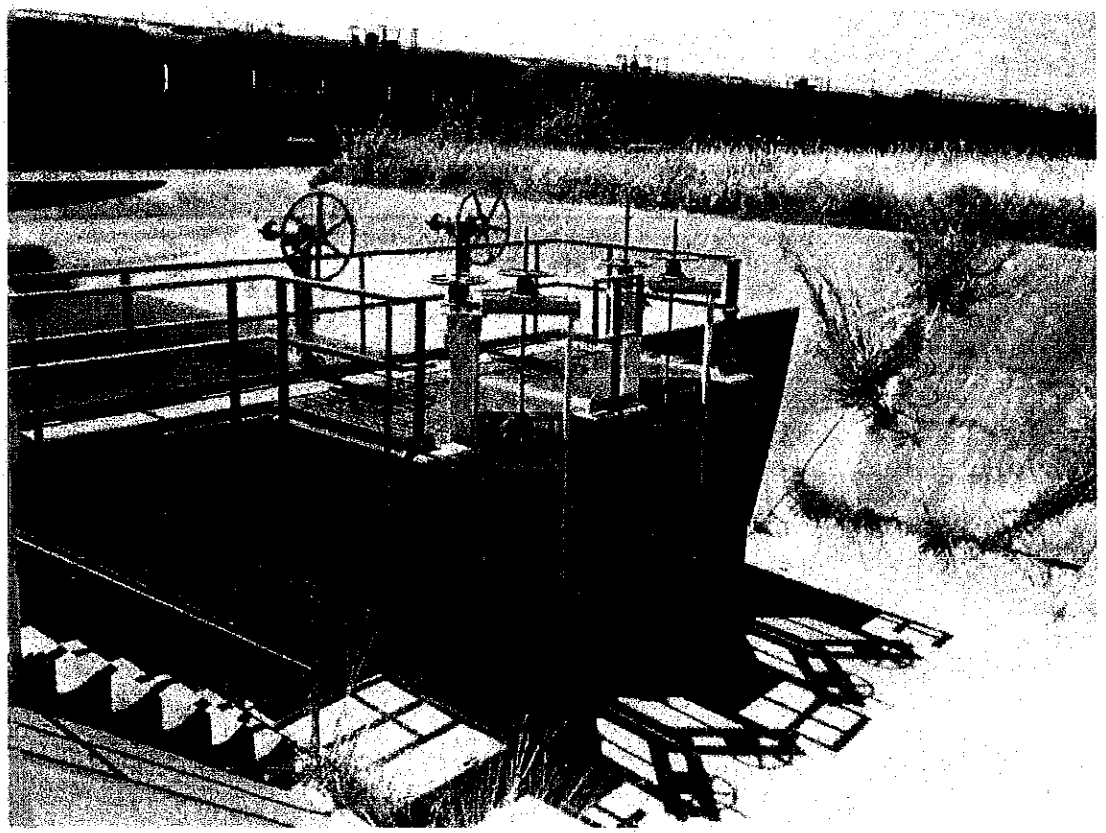
Official Photograph Log
Photo No. 117



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 3:58 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Railcar Repair and Maintenance Facility - Drums of solid asphalt in equipment storage yard (Verhalen - EPA). (NOTE: Drums were appropriately covered prior to photo.) | | |
| Photo ID: DSCF3436 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 118



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:04 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 009 | | |
| Photo ID: DSCF3437 | | |

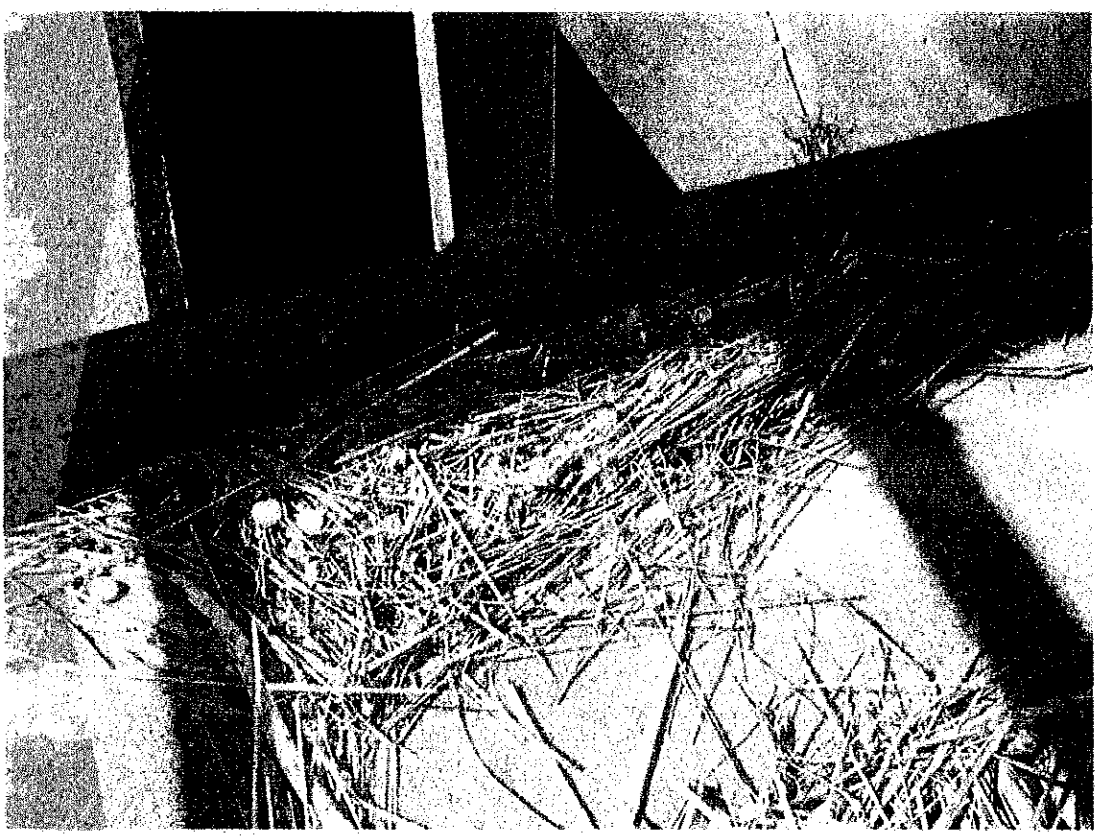
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 119

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:045 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 009 - Plastic pellets (see Photo 120) | | |
| Photo ID: DSCF3438 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

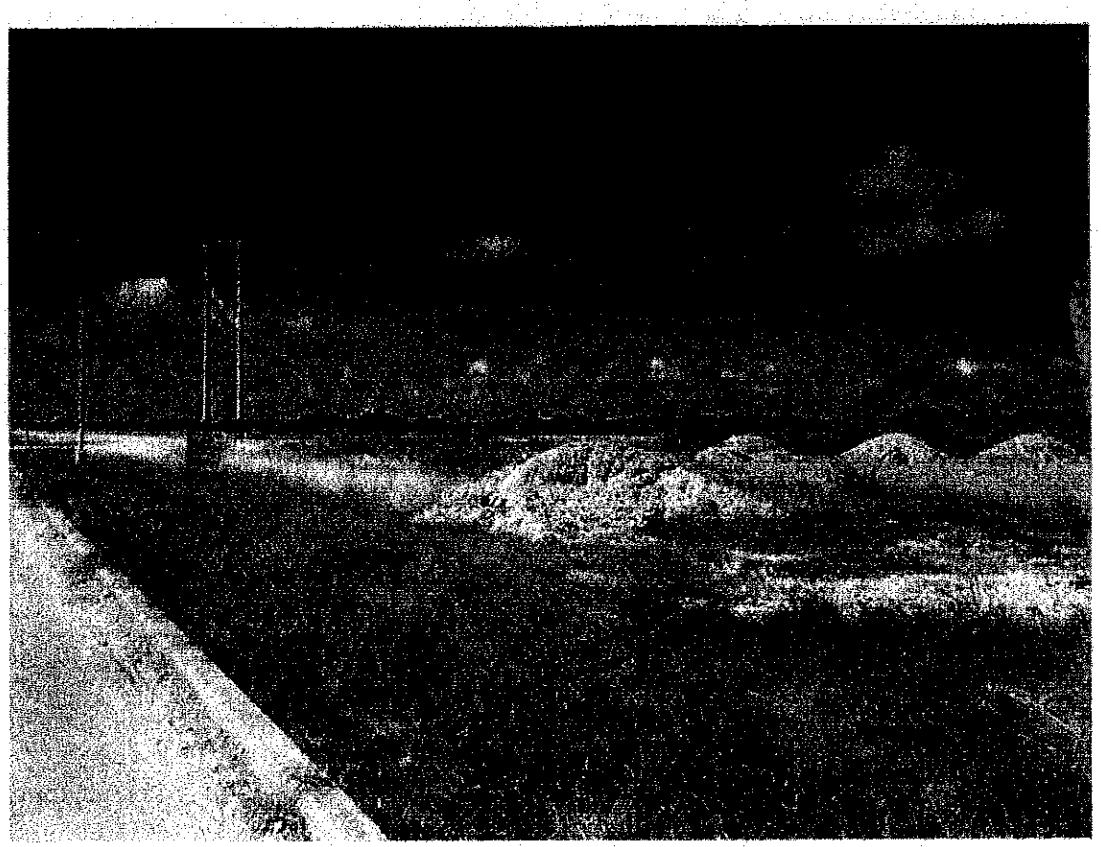
Official Photograph Log
Photo No. 120



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:05 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 009 - Plastic pellets (see Photo 119) | | |
| Photo ID: DSCF3439 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

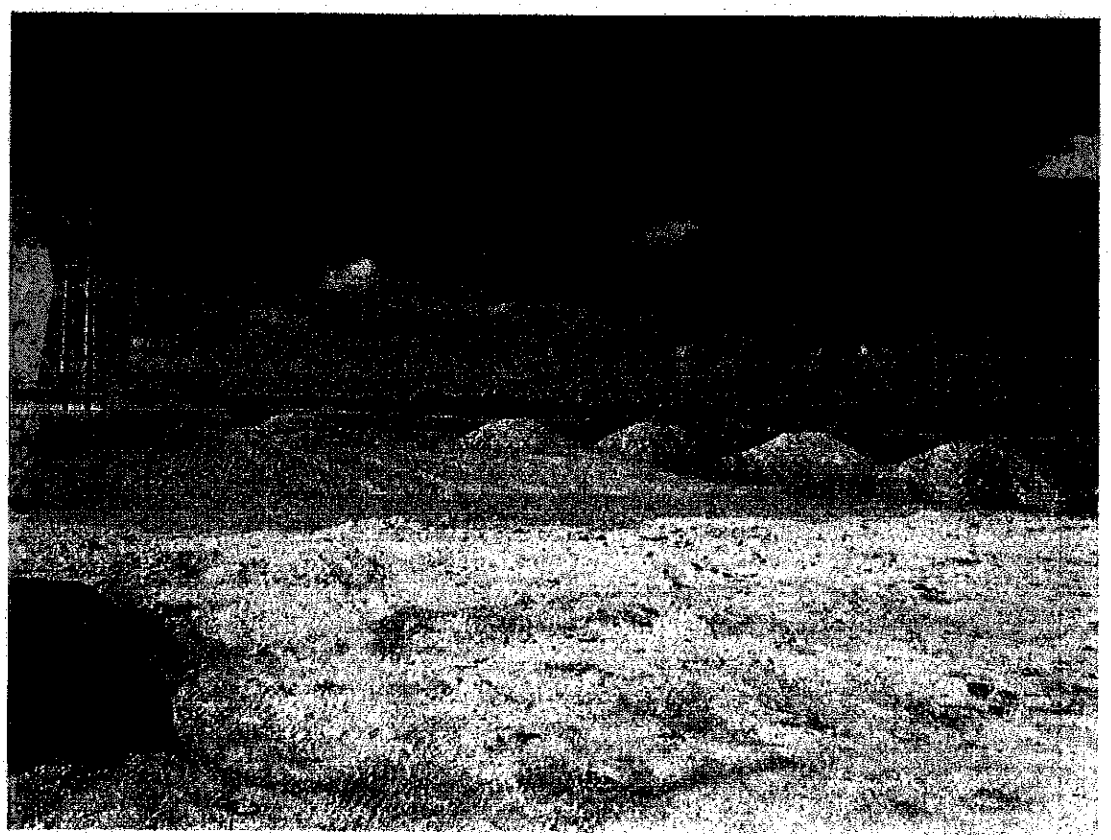
Official Photograph Log
Photo No. 121



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:17 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Soil staging piles with what appears to be black plastic sticking out (see Photos 122 and 123) | | |
| Photo ID: DSCF3440 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 122



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:18 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Soil staging piles with what appears to be black plastic sticking out (see Photos 121 and 123) | | |
| Photo ID: DSCF3441 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 123

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/16/2010 | Time: 4:18 PM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Outfall 006 - Soil staging piles with what appears to be black plastic sticking out (see Photos 121 and 122) | | |
| Photo ID: DSCF3442 | | |

END OF PHOTOGRAPHS
June 16, 2010

# APPENDIX B

## FORMOSA PLASTICS CORPORATION
## Point Comfort, Texas

## Photographs from June 17, 2010 Inspection

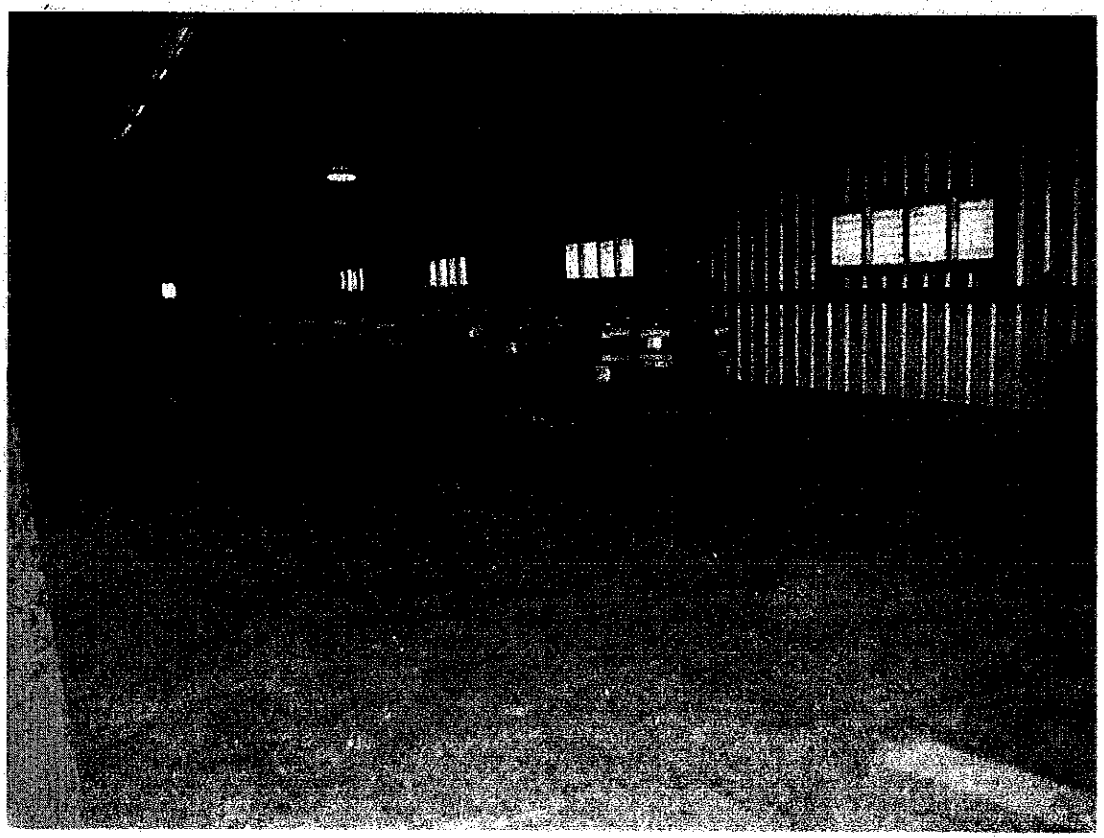
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 1

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 7:10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Watering Alcoa redbeds, located southeast of Formosa's WWTP | | |
| Photo ID: DSCF3458 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

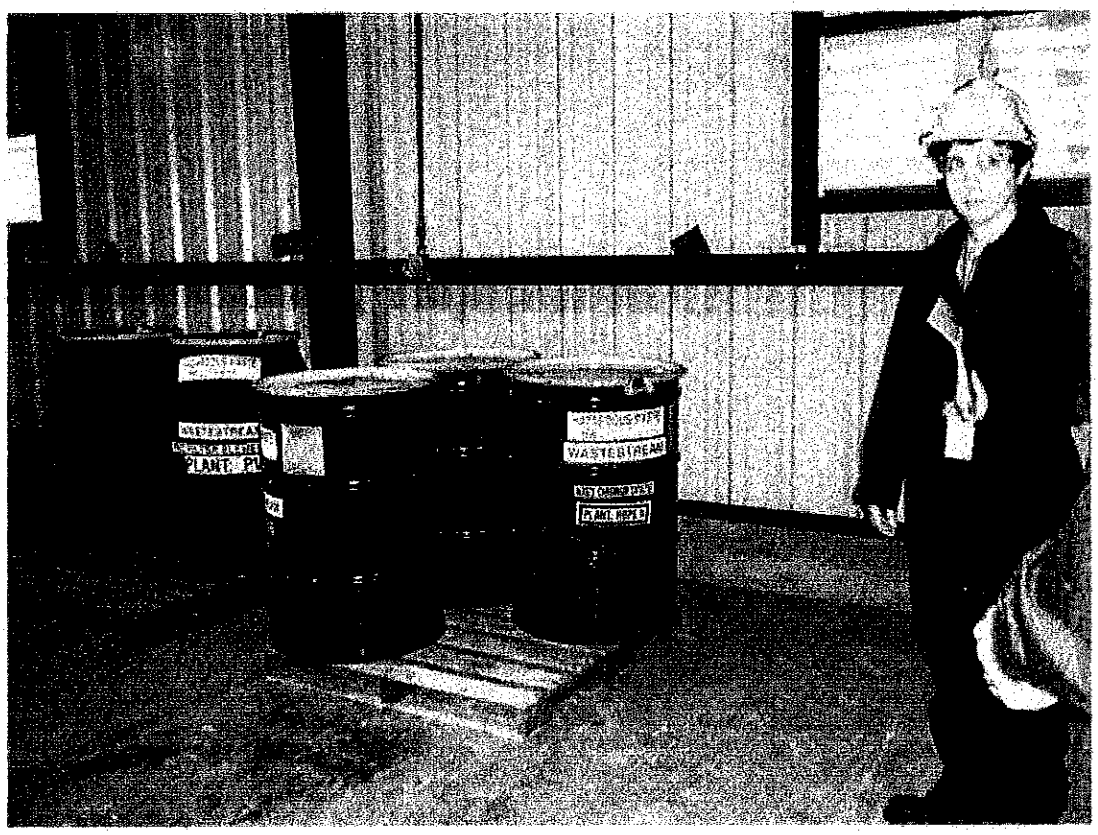
Official Photograph Log
Photo No. 2



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Inside building, drums staged on pallets | | |
| Photo ID: DSCF3459 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

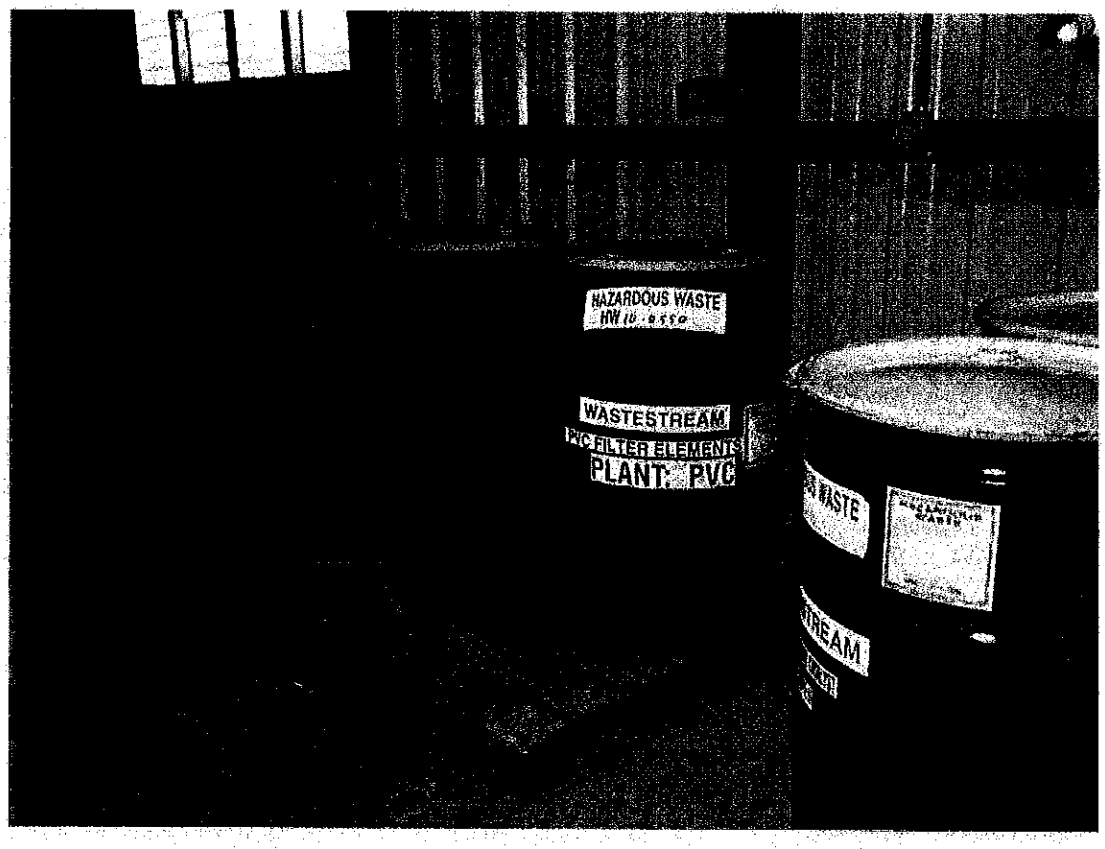
Official Photograph Log
Photo No. 3




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste chromium catalyst (Verhalen - EPA) | | |
| Photo ID: DSCF3460 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 4




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste PVC filter elements | | |
| Photo ID: DSCF3461 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 5

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:01 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste chromium catalyst | | |
| Photo ID: DSCF3462 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 6

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:02 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste rags and gloves from VCM plant | | |
| Photo ID: DSCF3463 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 7

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:02 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste hydrocarbon contaminated rags from VCM plant | | |
| Photo ID: DSCF3464 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 8

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:02 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste oil and debris from Olefins plant | | |
| Photo ID: DSCF3465 | | |

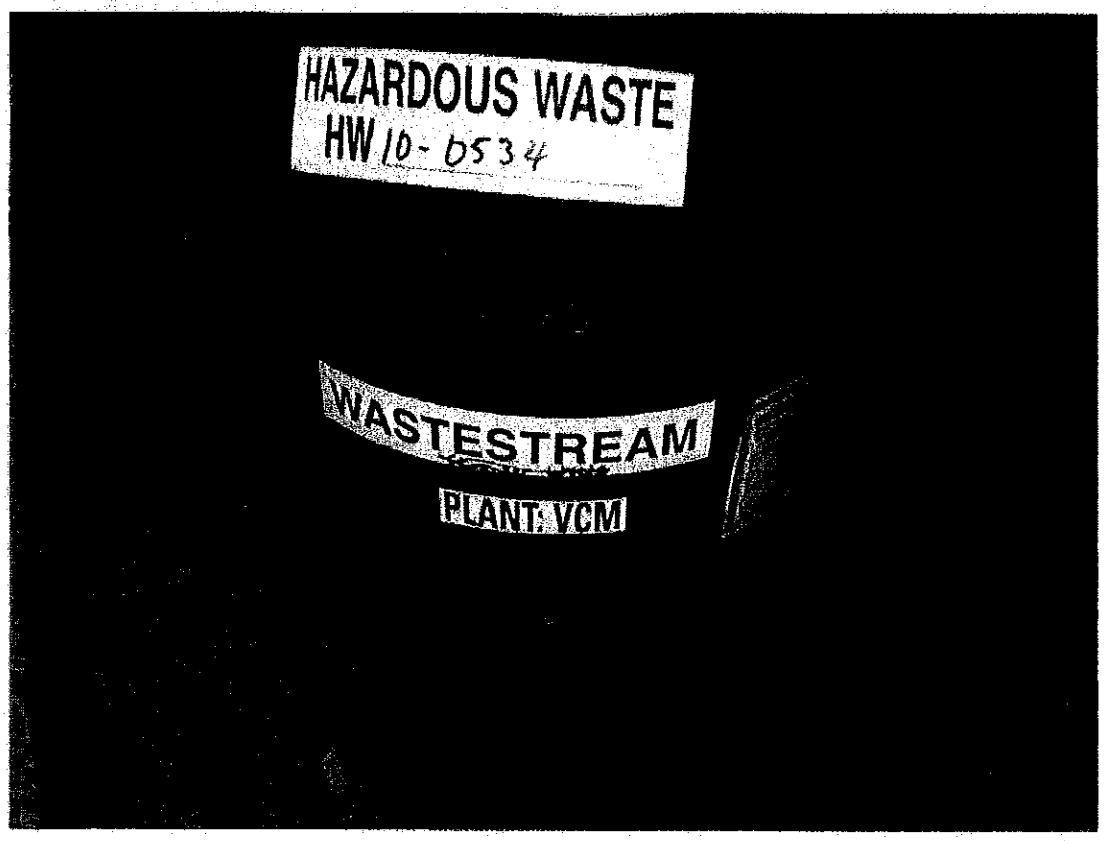
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 9

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:02 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste coke from VCM plant | | |
| Photo ID: DSCF3466 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 10




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:03 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste reboiler scale from VCM plant | | |
| Photo ID: DSCF3467 | | |

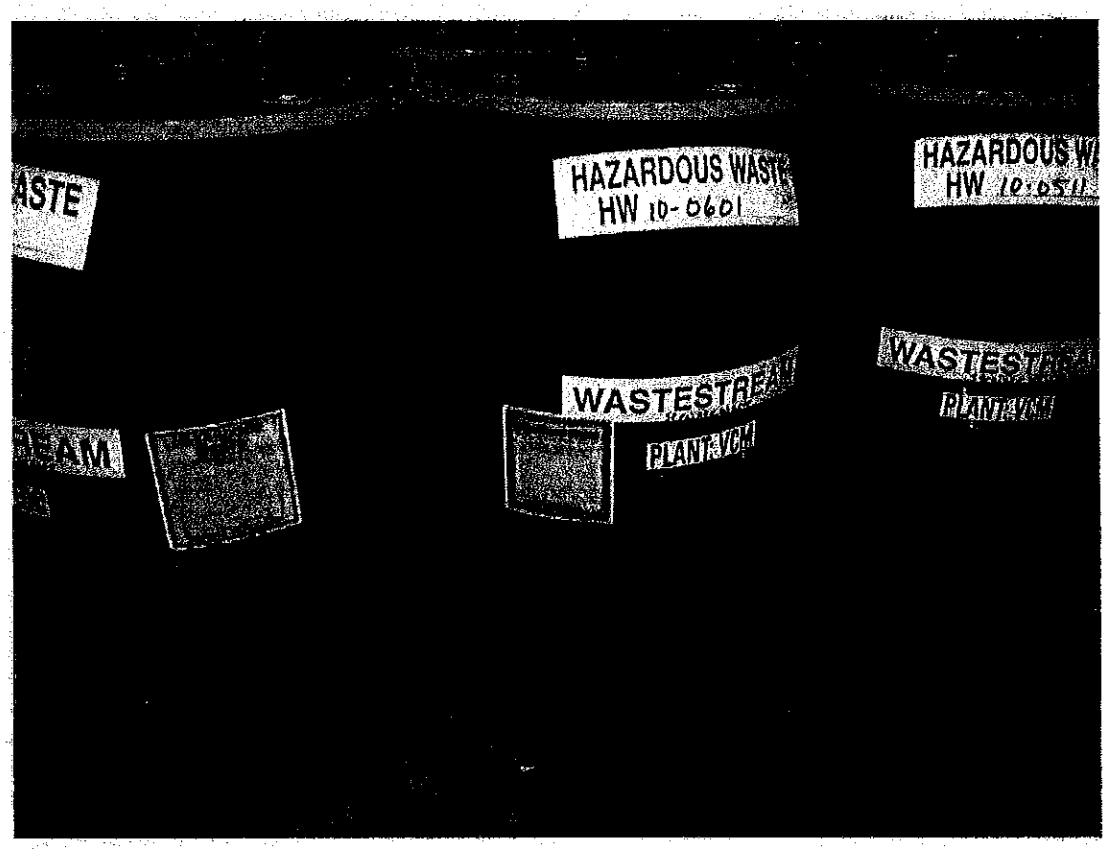
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 11

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:03 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste reboiler scale from VCM plant; accumulation date of 06-10-10 | | |
| Photo ID: DSCF3468 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

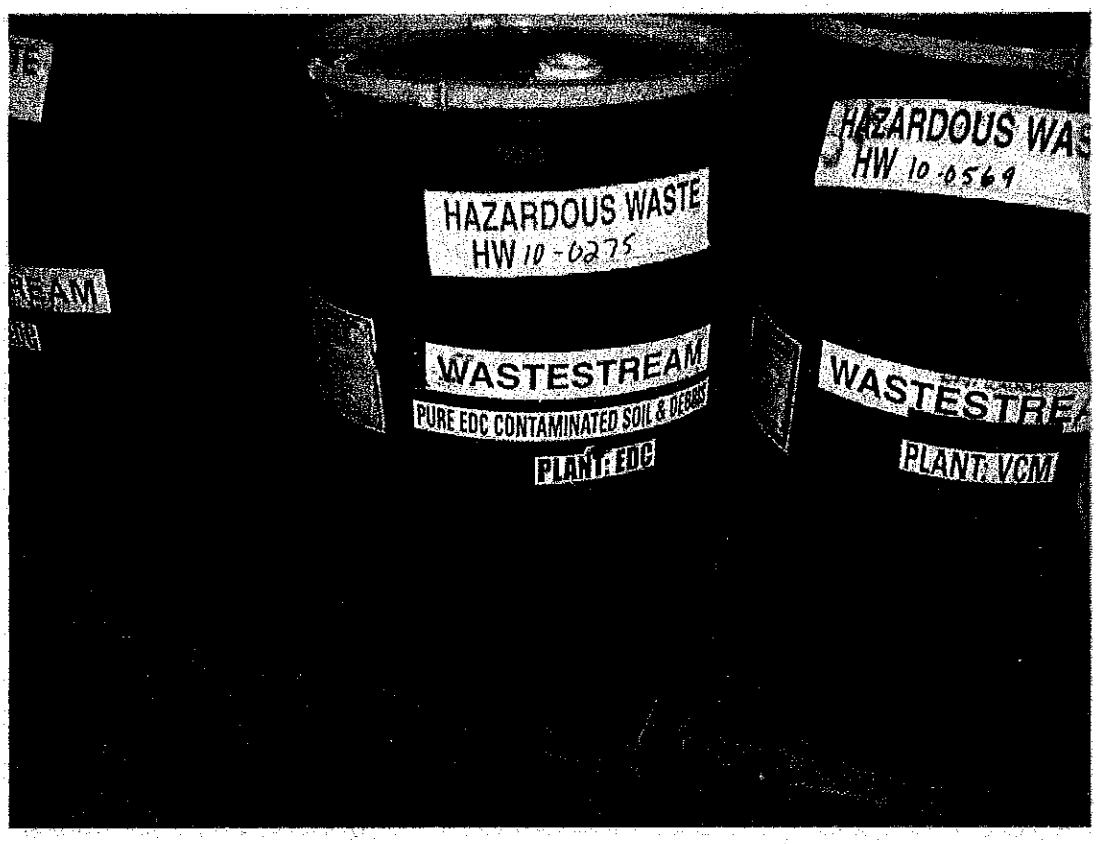
Official Photograph Log
Photo No. 12




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:03 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of strainer waste from VCM plant; accumulation date of 06-16-10 | | |
| Photo ID: DSCF3469 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 13




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:03 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of pure EDC contaminated soil and debris from VCM plant | | |
| Photo ID: DSCF3470 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 14

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:04 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of ECM spent walnut waste from VCM plant | | |
| Photo ID: DSCF3471 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 15

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:04 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of ECM contaminated pigs from VCM plant | | |
| Photo ID: DSCF3472 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 16

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:04 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of heavy process liquids from Olefins plant | | |
| Photo ID: DSCF3473 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 17

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:04 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Lab packs | | |
| Photo ID: DSCF3474 | | |

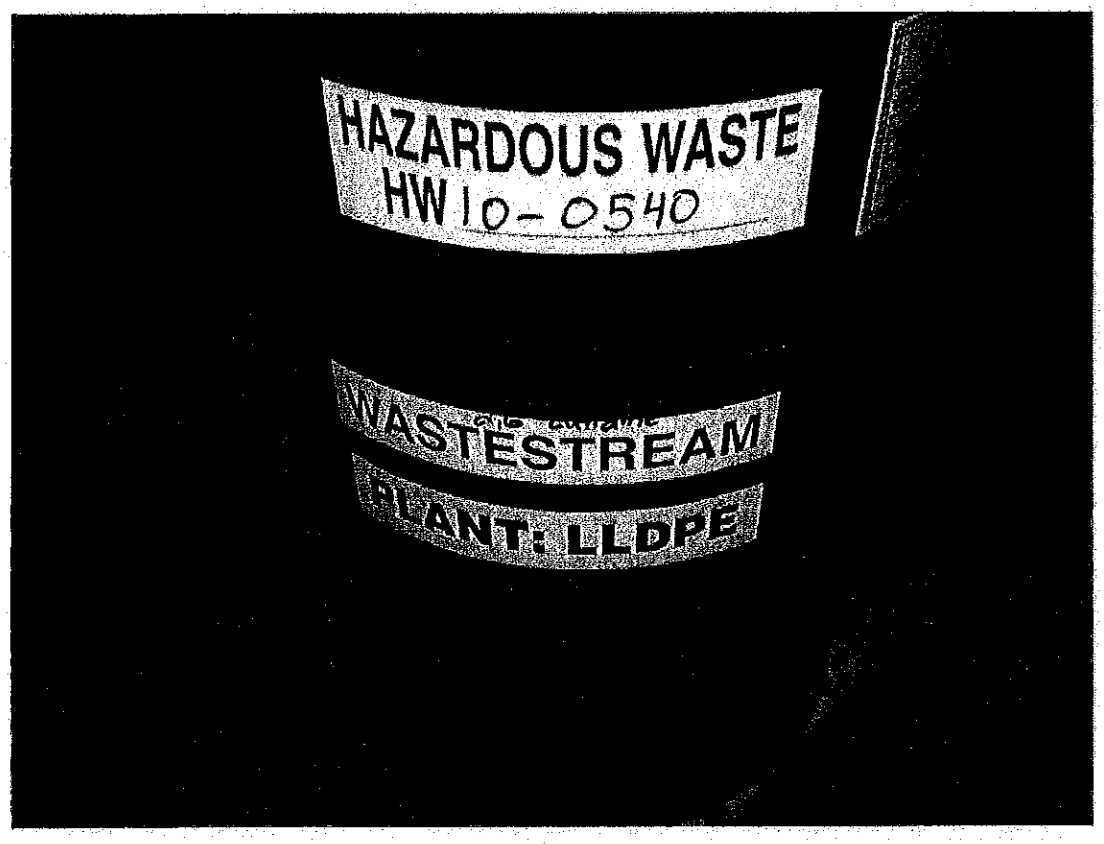
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 18

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:05 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of waste catalyst and hexane from the LLDPE plant | | |
| Photo ID: DSCF3475 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

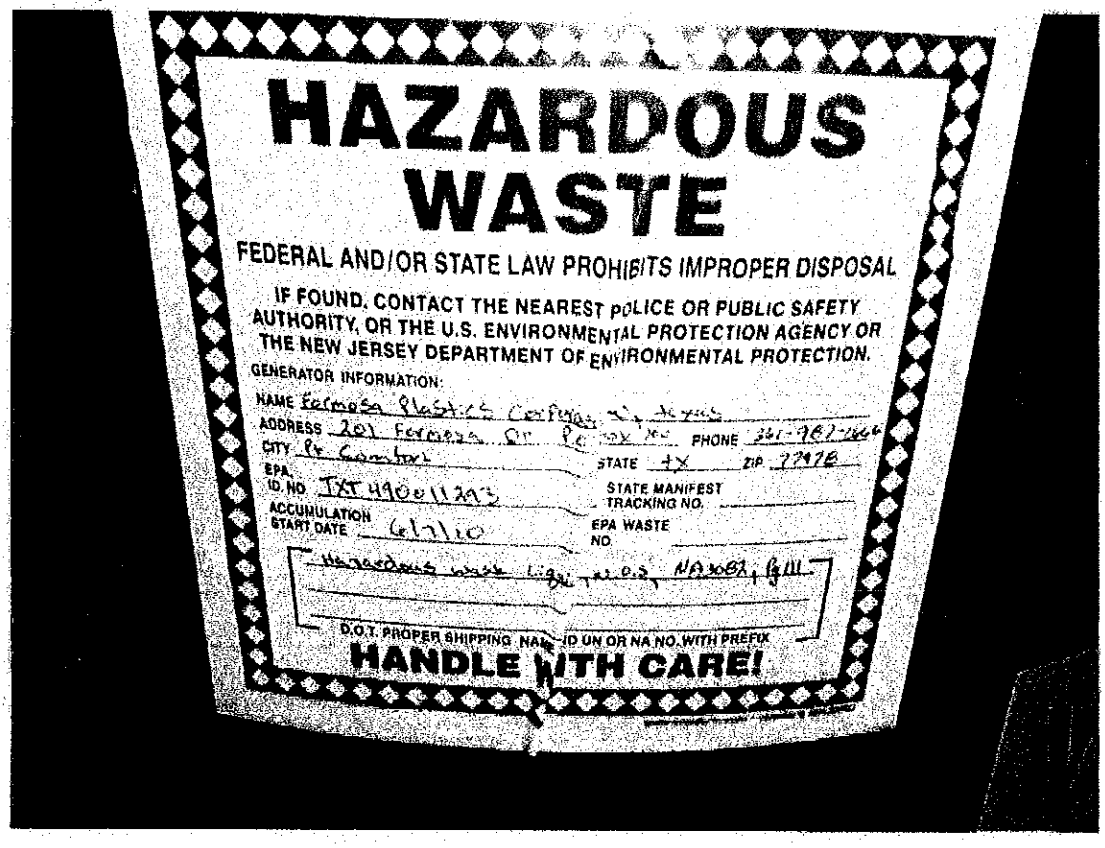
Official Photograph Log
Photo No. 19




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:05 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Drums of 2.6 Lutidine waste from the LLDPE plant | | |
| Photo ID: DSCF3476 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

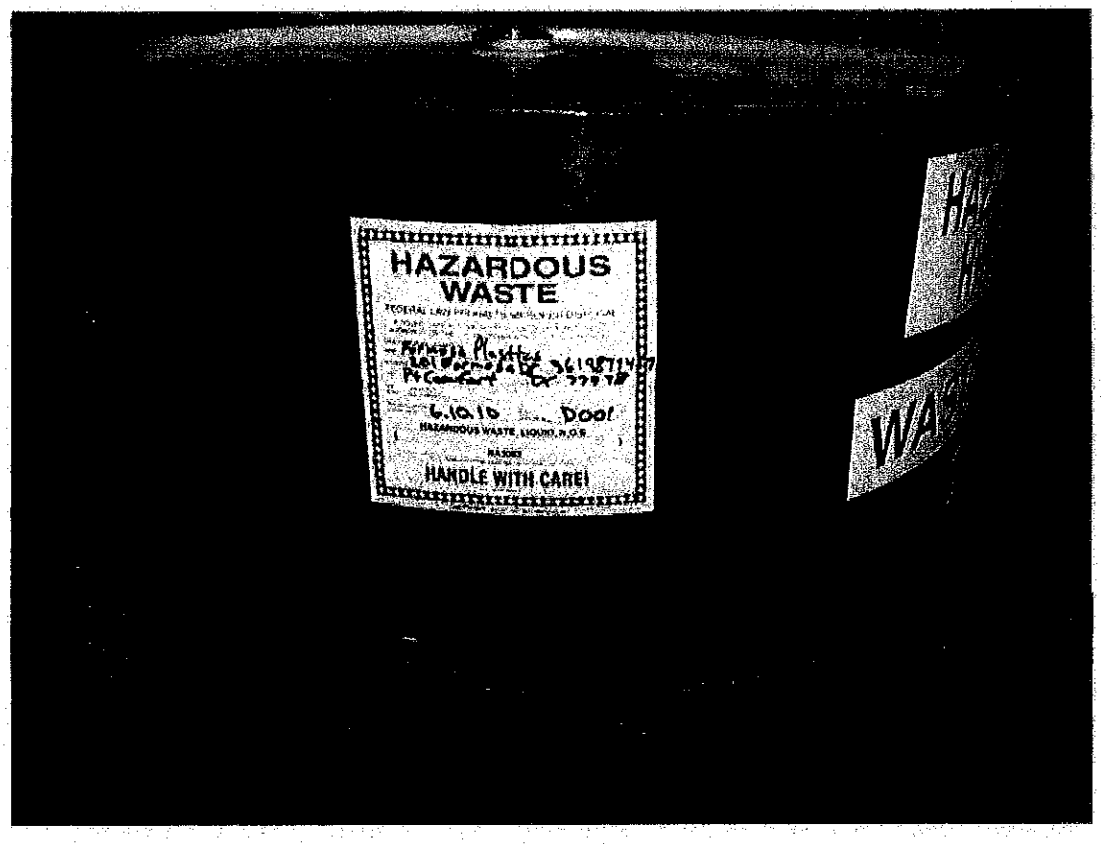
Official Photograph Log
Photo No. 20




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:06 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Hazardous waste label for 'Hazardous Waste Liquid, N.O.S., NA3082, PG III" | | |
| Photo ID: DSCF3477 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

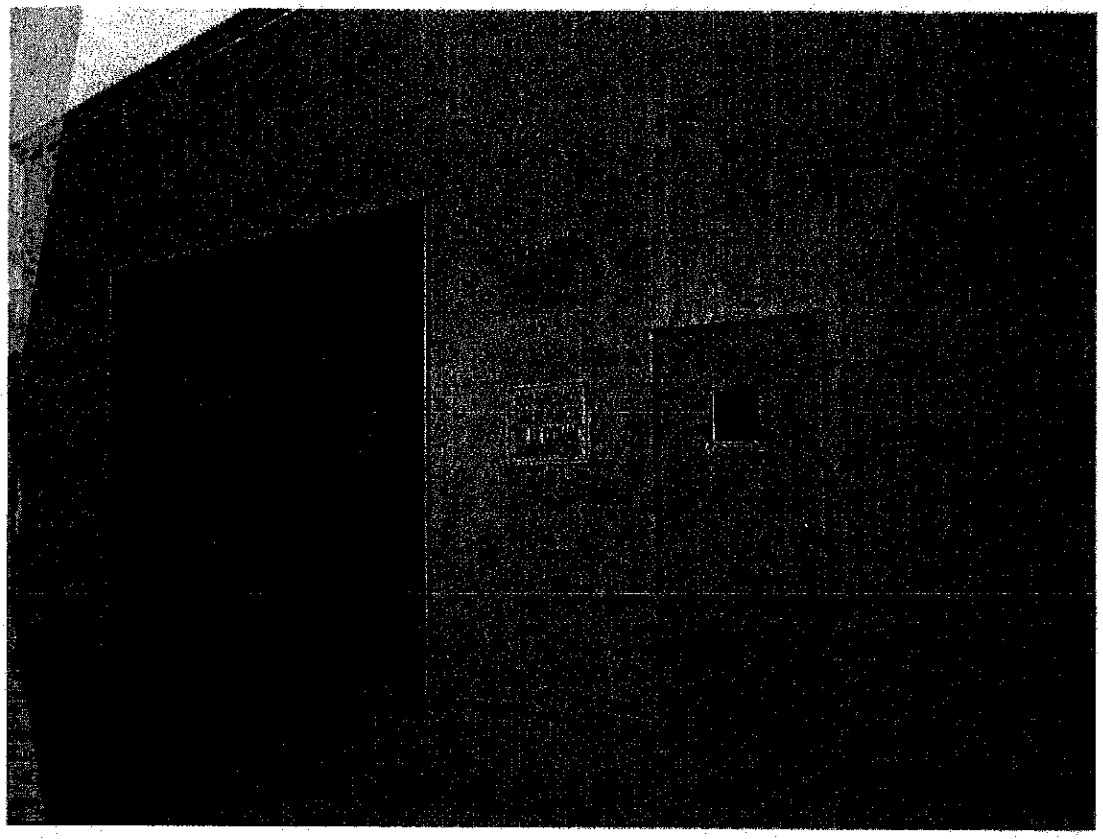
Official Photograph Log
Photo No. 21




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:07 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Hazardous waste label for 'D001, Hazardous Waste Liquid, N.O.S., NA3082," | | |
| Photo ID: DSCF3478 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

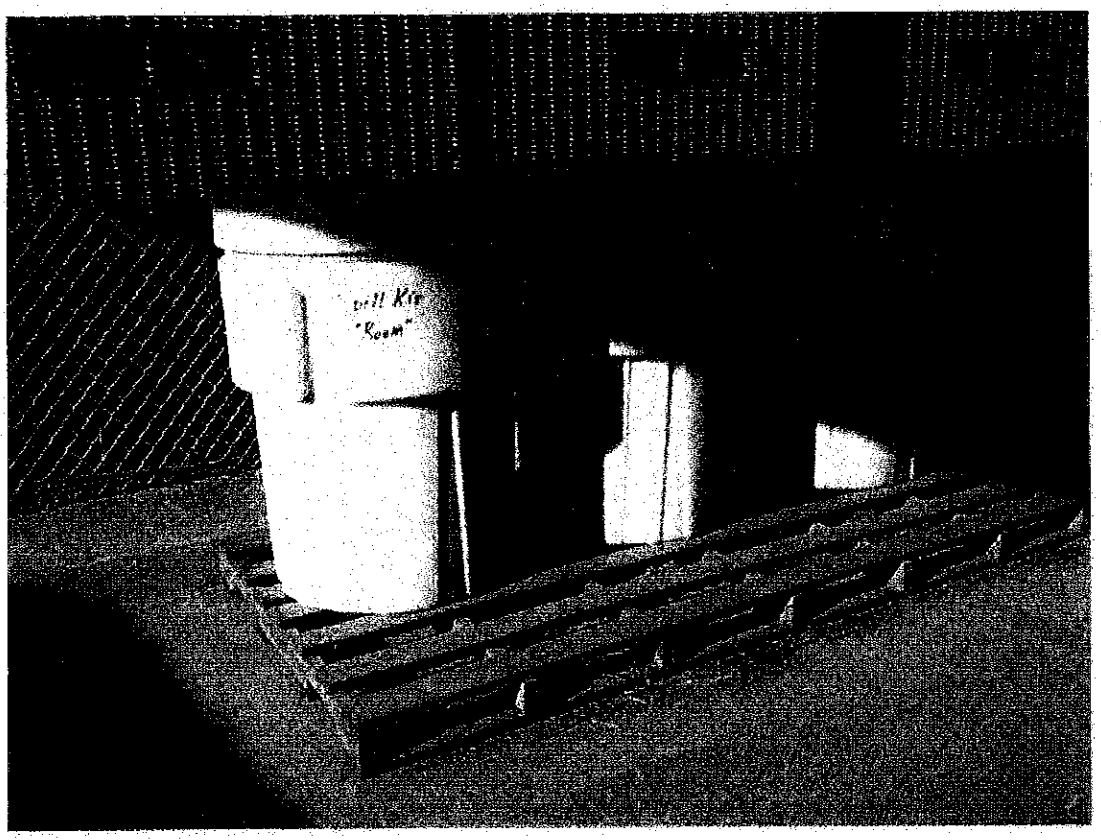
Official Photograph Log
Photo No. 22



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:18 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Hazardous Waste Storage Building - Signage on Hazardous Waste Storage Building | | |
| Photo ID: DSCF3479 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 23



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:19 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Non-Hazardous Waste Storage Yard - Spill response drums stored under roof | | |
| Photo ID: DSCF3480 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 24

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:19 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Non-Hazardous Waste Storage Yard - Inside of storage area for non-hazardous wastes | | |
| Photo ID: DSCF3481 | | |

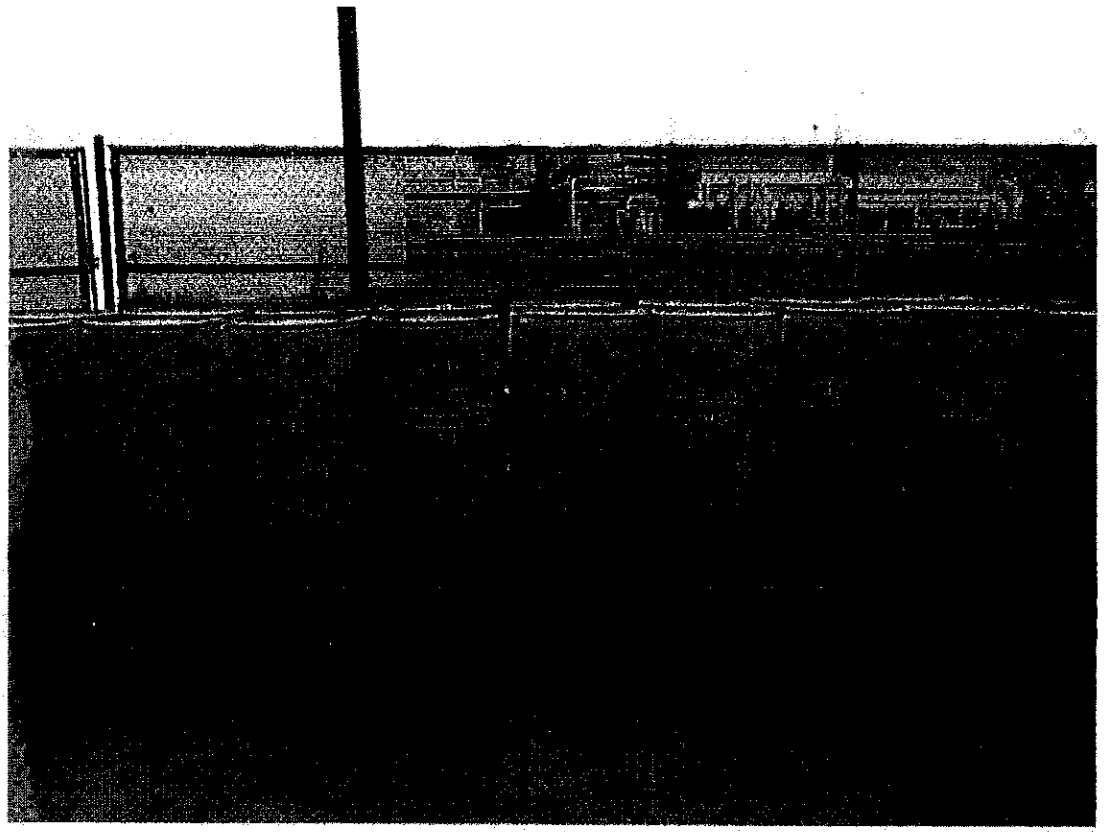
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 25

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:19 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Non-Hazardous Waste Storage Yard - RCRA-empty drums, staged two drums high on pallets inside storage yard | | |
| Photo ID: DSCF3482 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

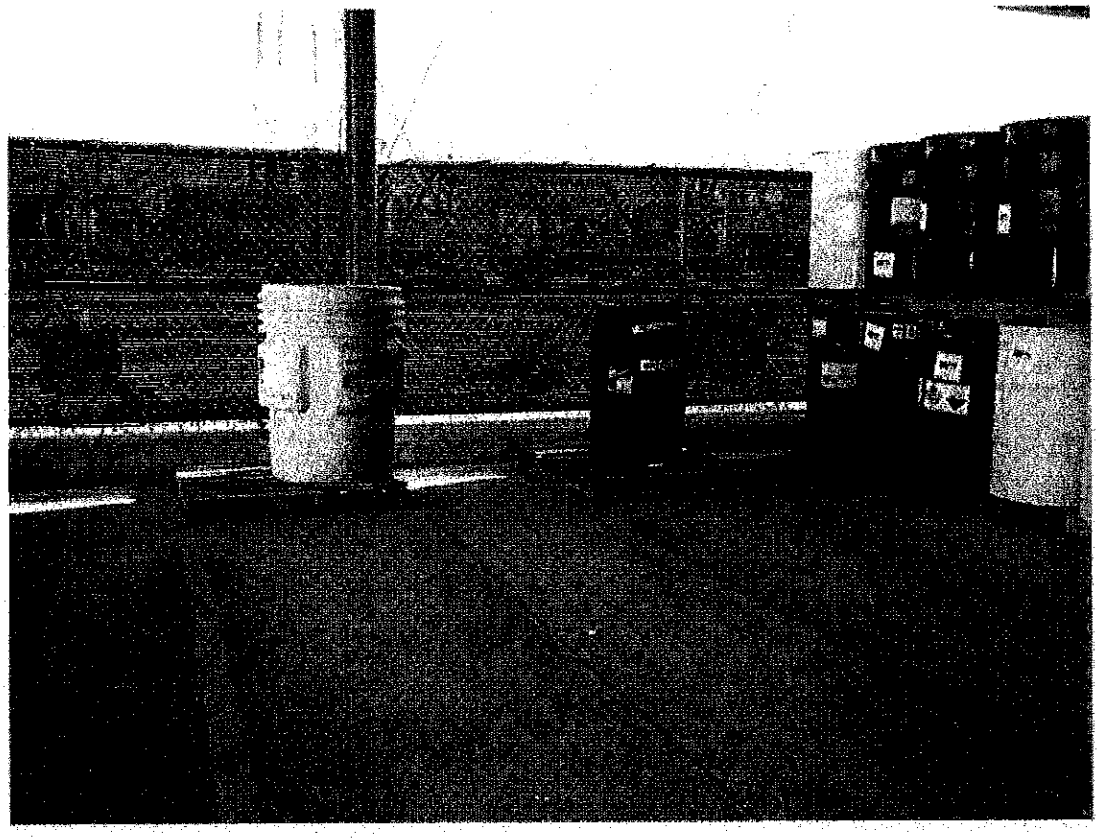
Official Photograph Log
Photo No. 26



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:21 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Non-Hazardous Waste Storage Yard - Non-hazardous waste stored in drums, staged one drum high on pallets | | |
| Photo ID: DSCF3483 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

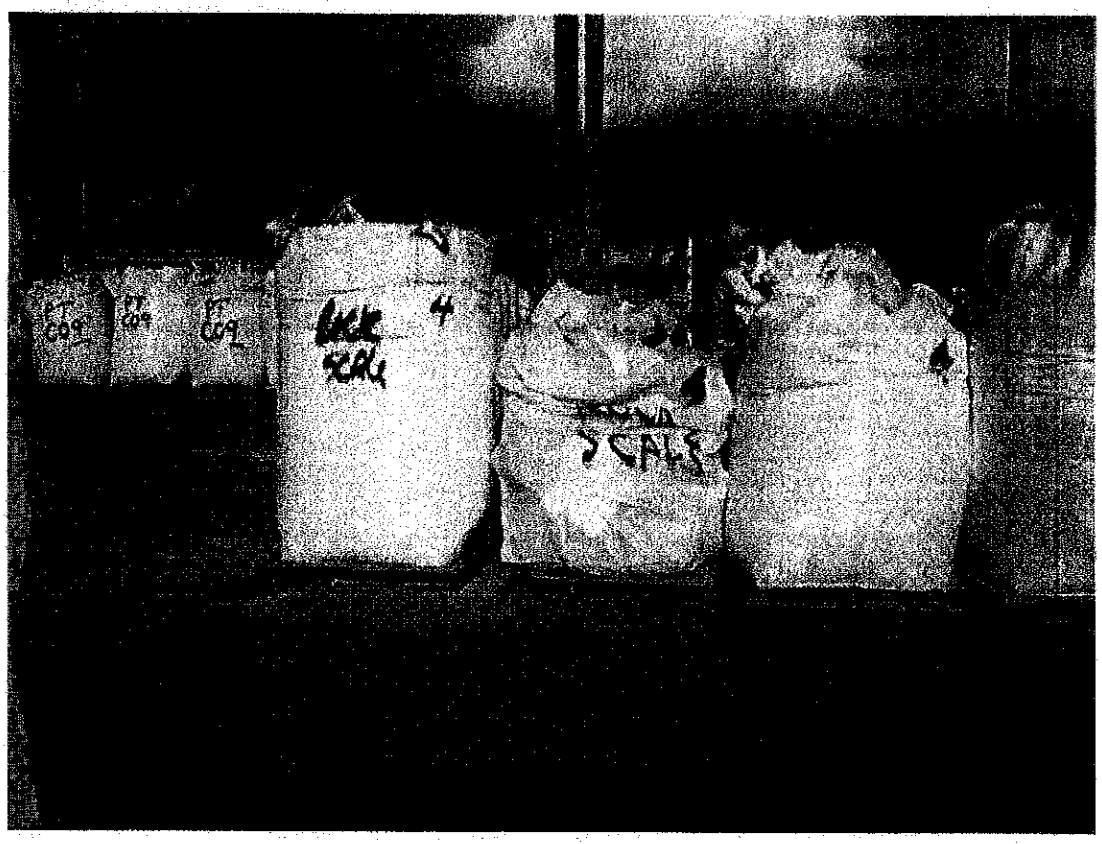
Official Photograph Log
Photo No. 27



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:21 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Non-Hazardous Waste Storage Yard - Lab pack and non-hazardous waste stored in drums, staged one drum high on pallets | | |
| Photo ID: DSCF3484 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 29



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:29 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - One (1) ton sacks marked 'Rock Scale' and 'PT C09 ' | | |
| Photo ID: DSCF3485 | | |

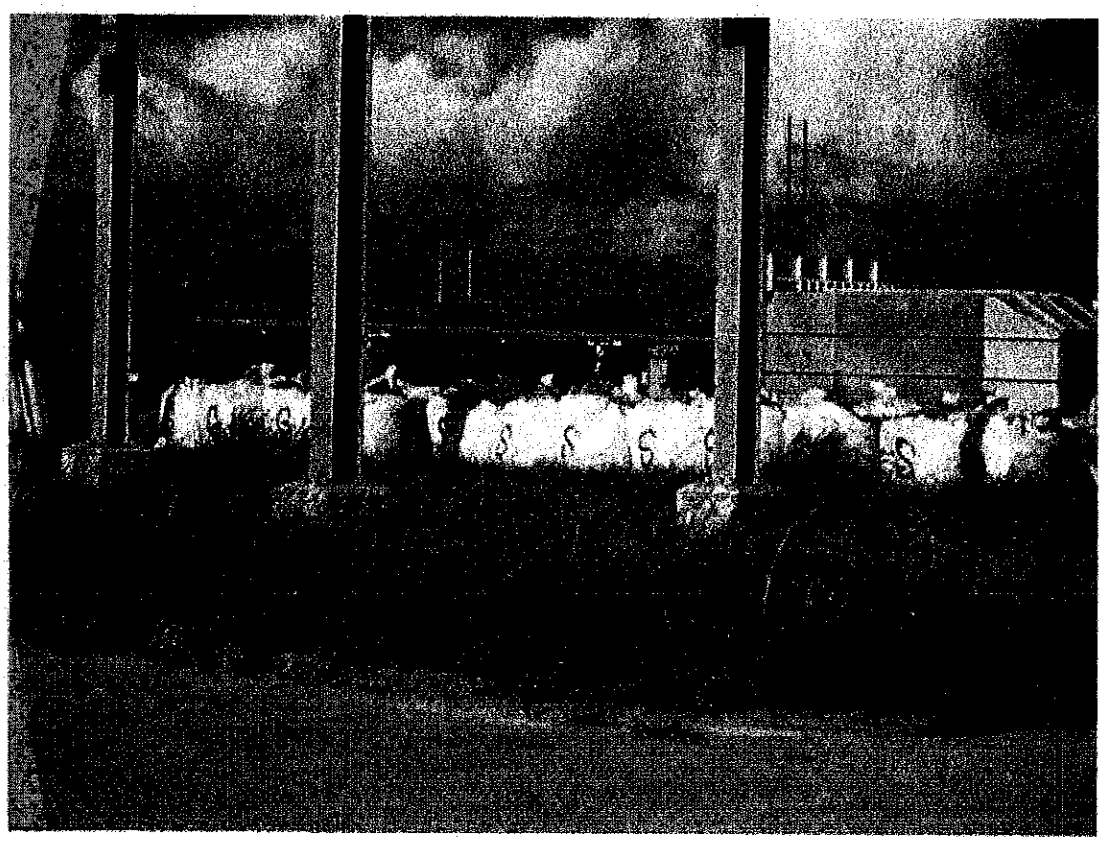
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 30

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:30 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - One (1) ton sacks marked 'PT C09 ' and 'S' | | |
| Photo ID: DSCF3486 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

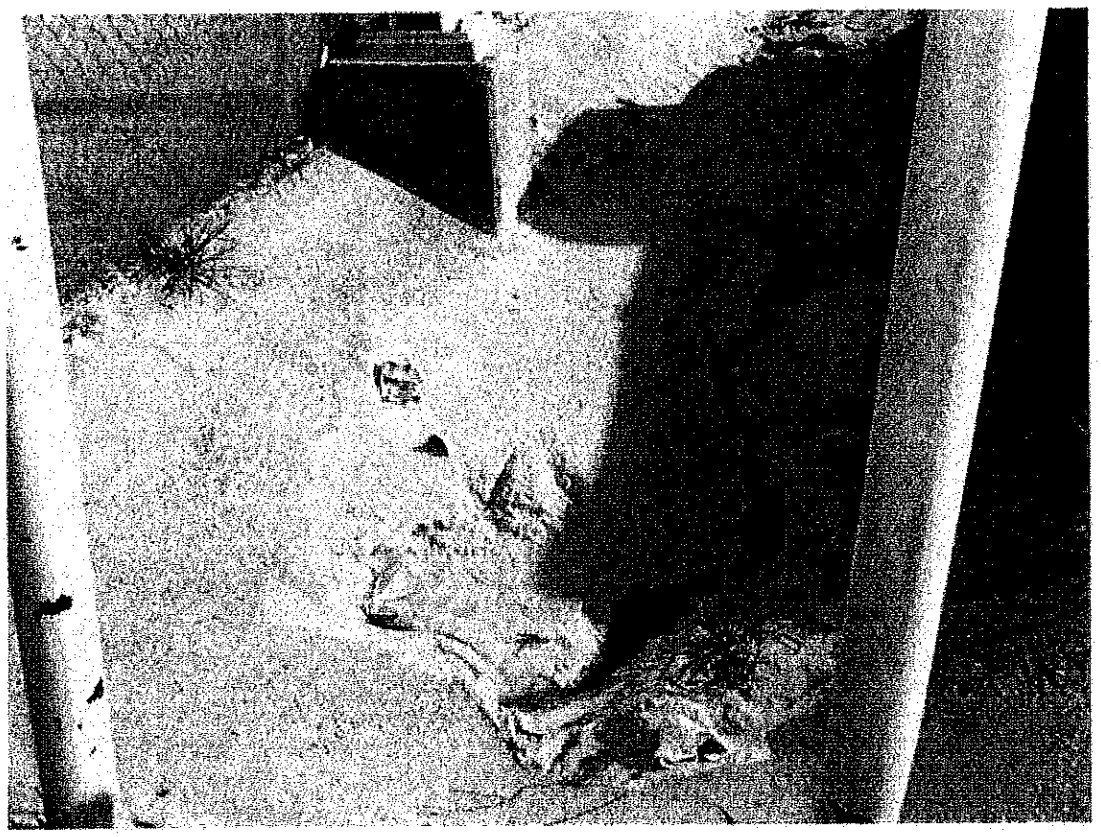
Official Photograph Log
Photo No. 31



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:30 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - One (1) ton sacks marked 'S' and 'G' | | |
| Photo ID: DSCF3487 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

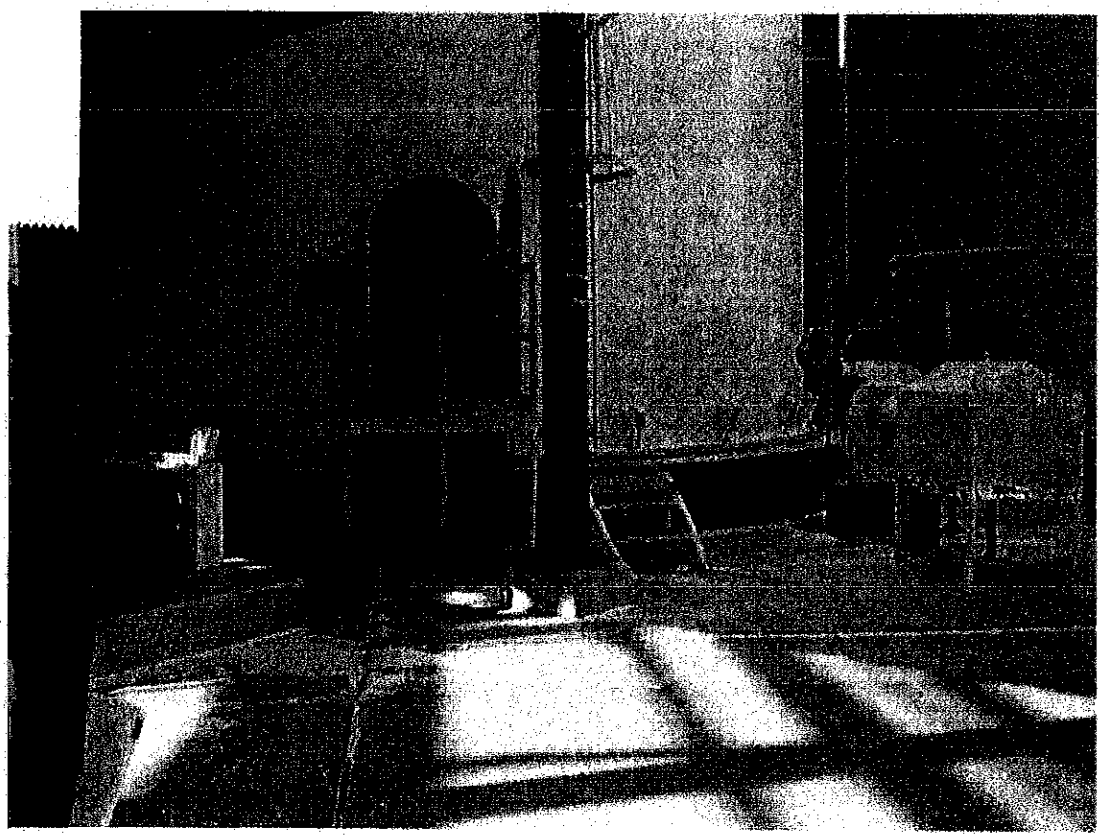
Official Photograph Log
Photo No. 32



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:50 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin (white powder) in storm water drainage ditch near PVC parking area | | |
| Photo ID: DSCF3488 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

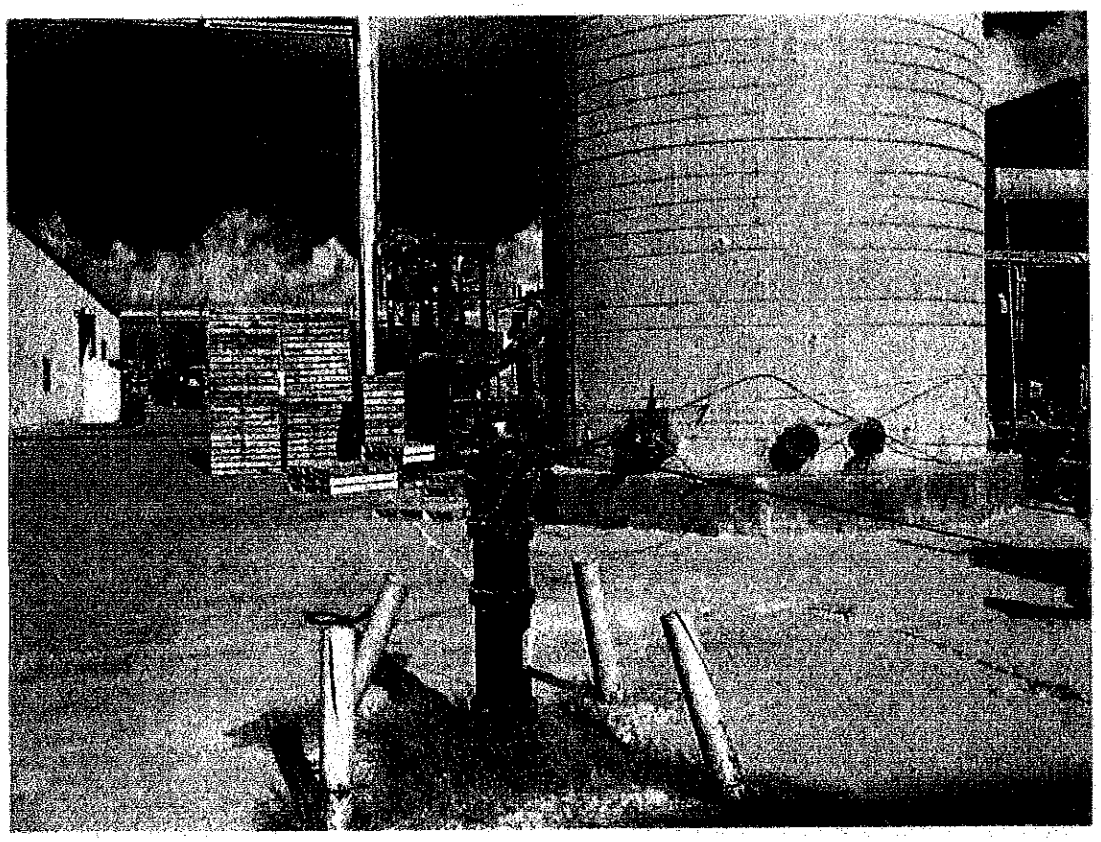
Official Photograph Log
Photo No. 32



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:50 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin (white powder) on concrete pad around silo marked BT-901A | | |
| Photo ID: DSCF3489 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 33



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:50 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Fire water hydrant for VCM plant; PVC resin (white powder) on ground | | |
| Photo ID: DSCF3490 | | |

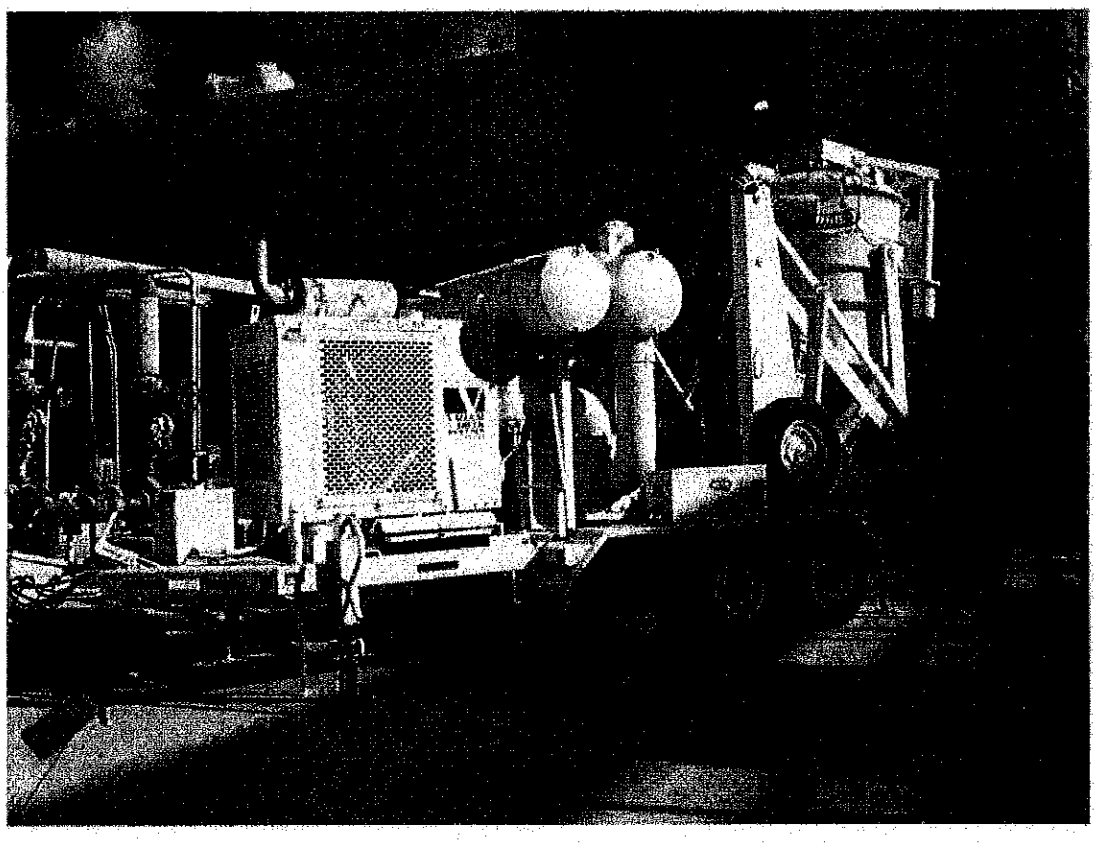
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 34

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:50 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin (white powder) poured into one (1) ton bags | | |
| Photo ID: DSCF3491 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

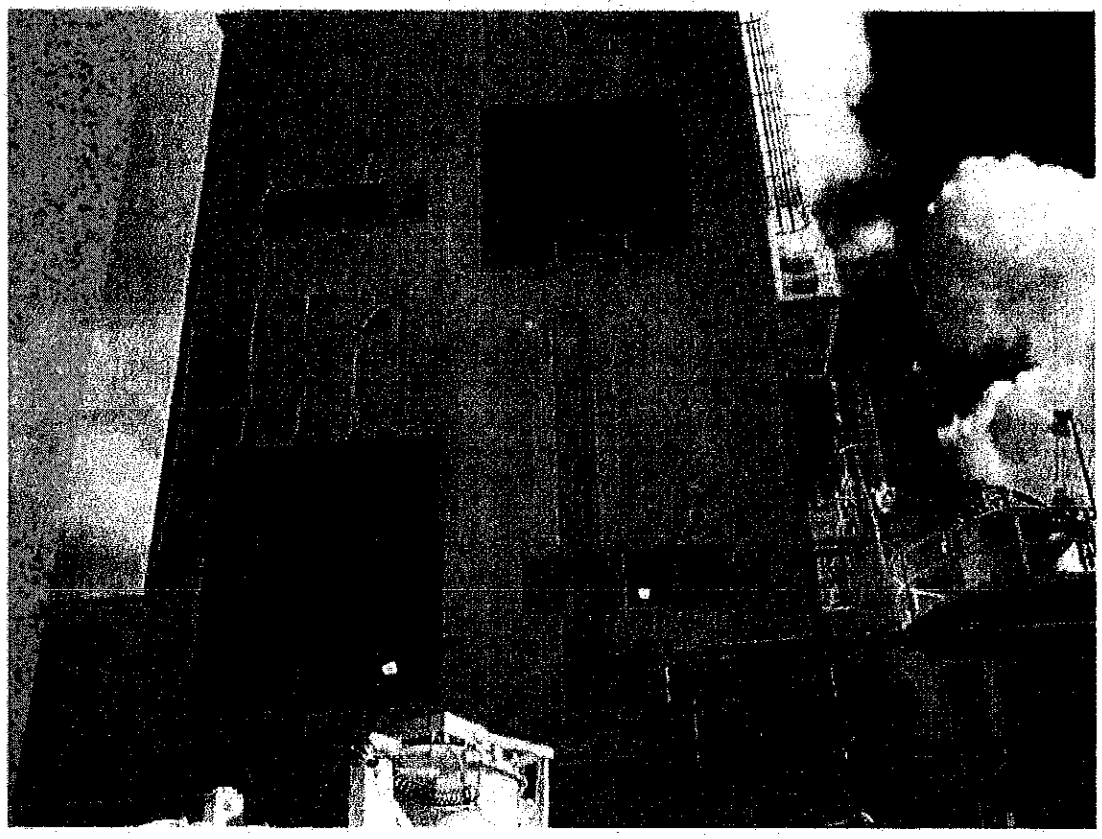
Official Photograph Log
Photo No. 35



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:351AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Vacuum unit located outside PVC bagging area; vacuum is attached to one (1) ton bagging system | | |
| Photo ID: DSCF3492 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

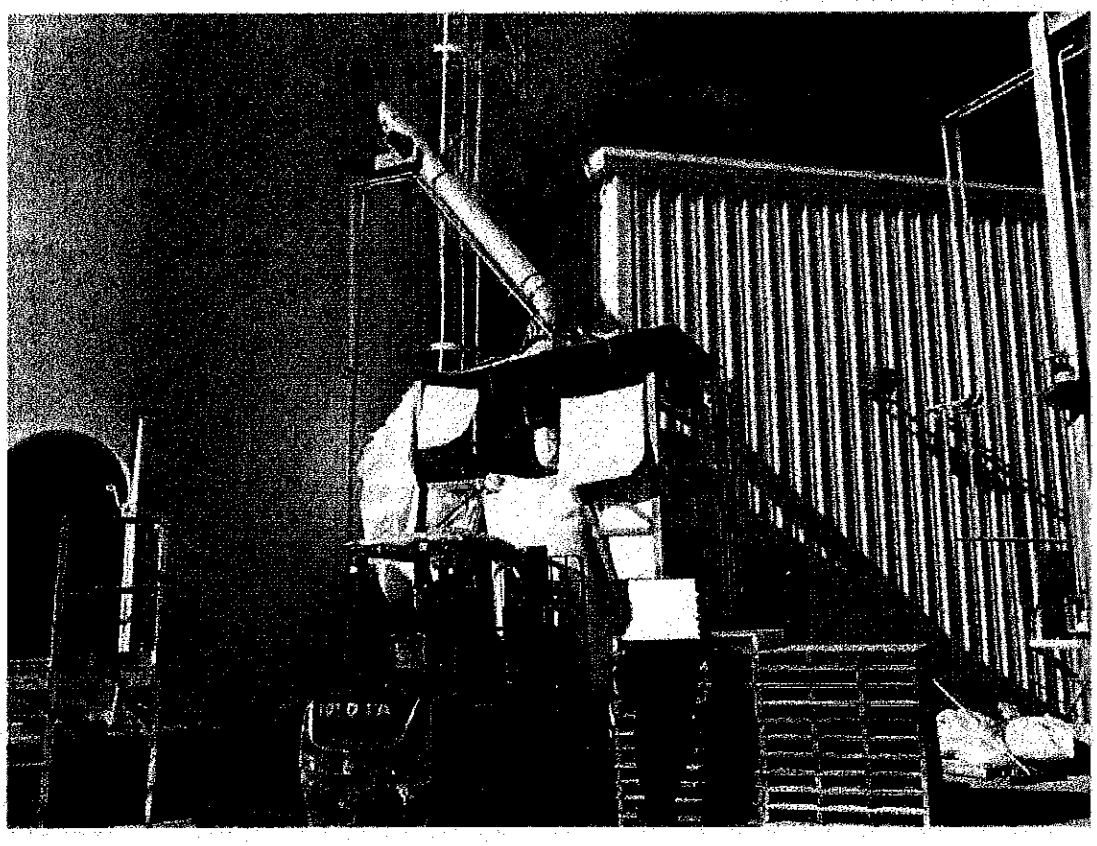
Official Photograph Log
Photo No. 36



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:51 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: VCM Plant - PVC bagging area known as Compound; PVC dust (white poder) observed on windows | | |
| Photo ID: DSCF3493 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 37



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:52 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: VCM Plant - One (1) ton bag of PVC being loaded; will be moved using the forklift | | |
| Photo ID: DSCF3494 | | |

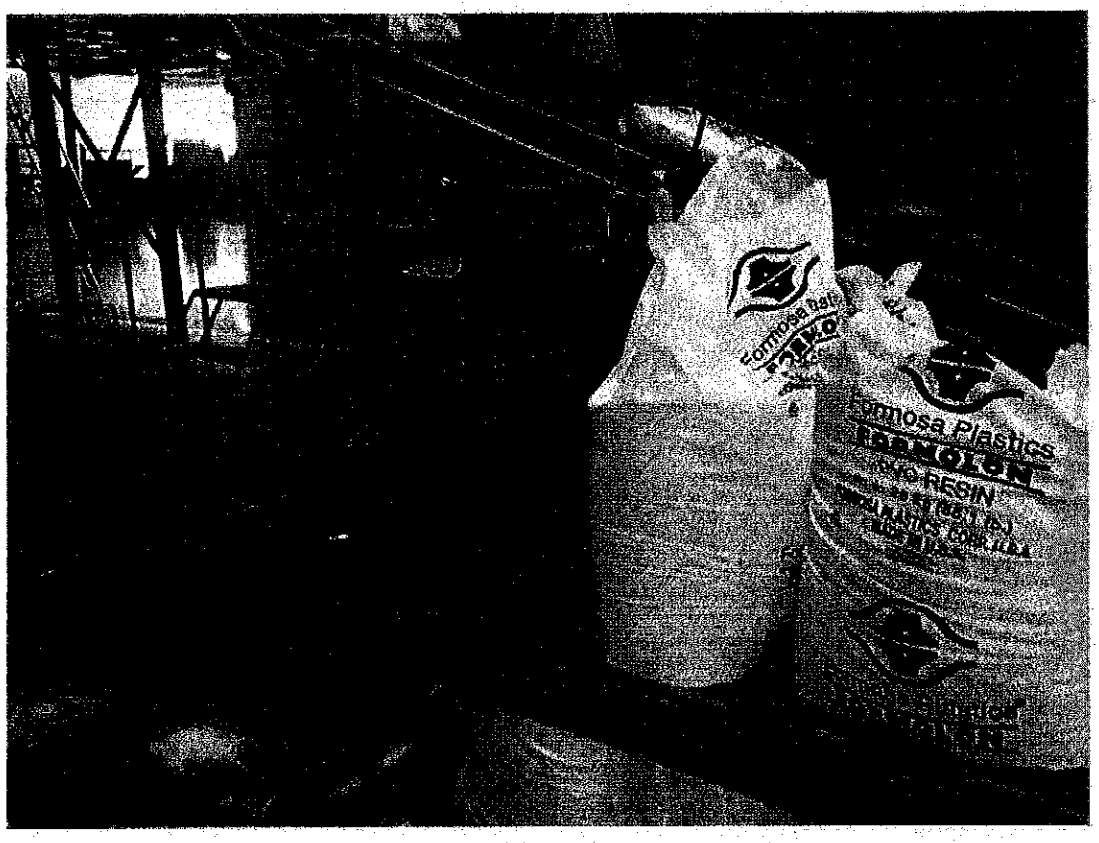
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 38

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:56 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - 50-lb bags of PVC being loaded | | |
| Photo ID: DSCF3495 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 39




| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:56 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Close-up of 25-kg bags of PVC resin labeled as "Formolon;" PVC resin (white powder) visible on floor | | |
| Photo ID: DSCF3496 | | |

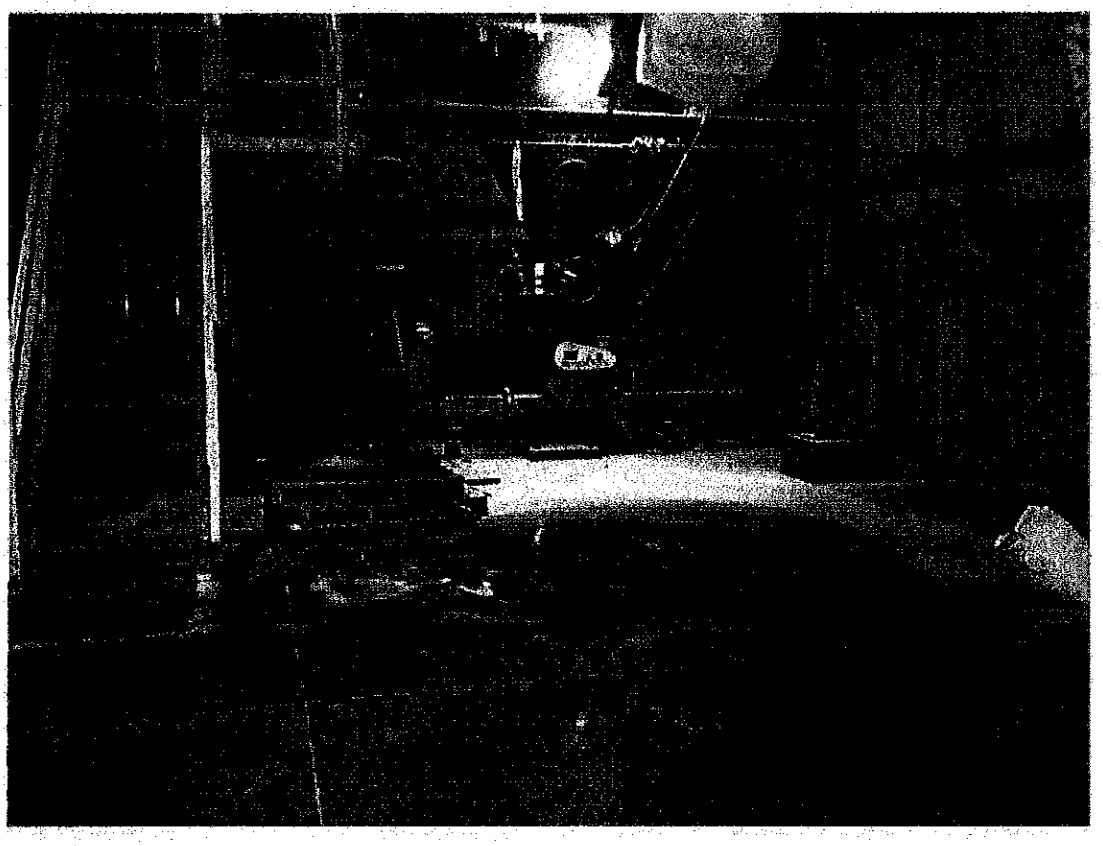
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 40

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:57 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin (white powder) from floor-sweeping collected in bins, packaged, and sold as 'Floor Sweep' | | |
| Photo ID: DSCF3497 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 41



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:57 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin (white powder) on floor in bagging area | | |
| Photo ID: DSCF3498 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 42

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 8:59 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Employee seeping PVC resin (white powder) on floor in PVC bagging area; wearing bandana around his mouth and nose | | |
| Photo ID: DSCF3499 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 43

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Employee in PVC bagging area | | |
| Photo ID: DSCF3500 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 44

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - PVC resin bagging area | | |
| Photo ID: DSCF3501 | | |

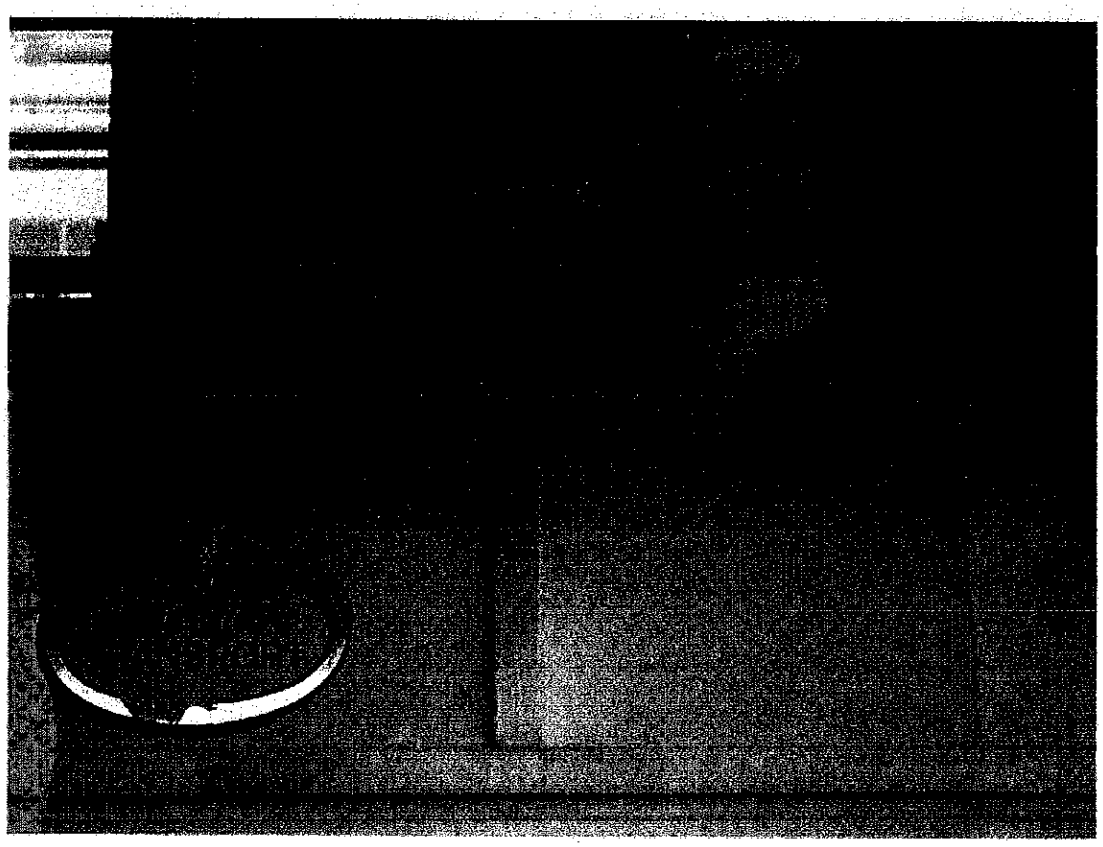
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 45

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:02 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Silo CT802A in PVC resin process area; PVC resin (white powder) observed on ground outside | | |
| Photo ID: DSCF3502 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

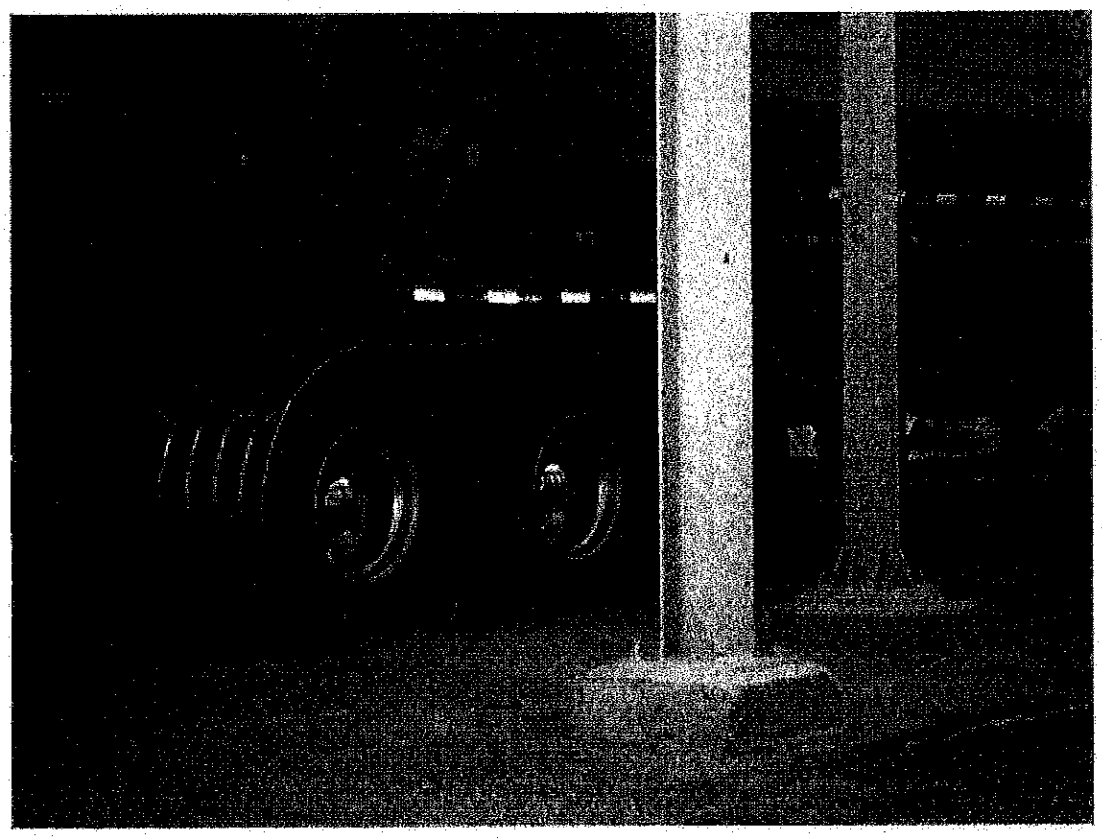
Official Photograph Log
Photo No. 46



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:04 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Resin Rail Car Loading Area - Employee aligning hopper to railcar port; employee was observed with hearing protection but not wearing gloves or breathing protection | | |
| Photo ID: DSCF3503 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

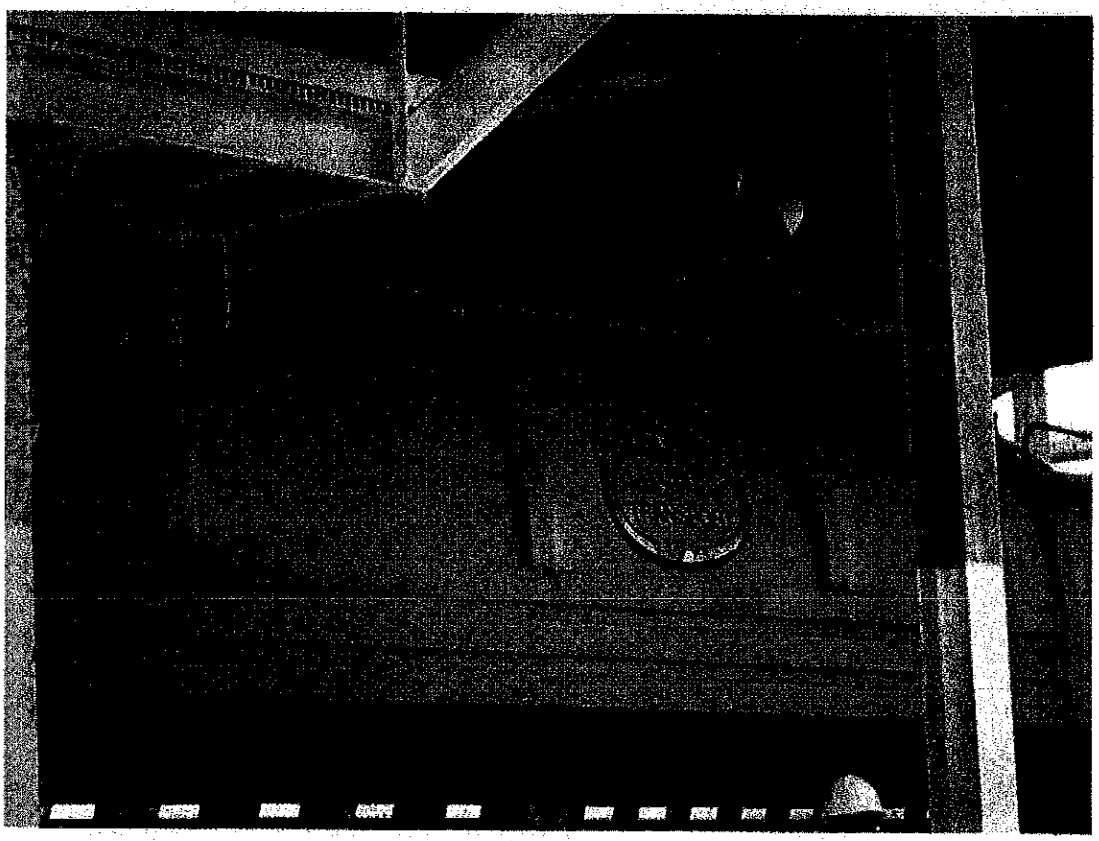
Official Photograph Log
Photo No. 47



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:05 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Resin Truck Loading Area - Tanker truck positioned and stopped (chocked) for loading with PVC resin | | |
| Photo ID: DSCF3504 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 48



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:06 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Resin Rail Car Loading Area - Tanker truck being loading with PVC resin; PVC resin (white powder) on top of tanker | | |
| Photo ID: DSCF3505 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 49

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:08 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastic Corporation | | |
| Subject: PVC Bagging Area: Inside PVC bagging area | | |
| Photo ID: DSCF3506 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 50

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:08 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Compound Area - Workers near one (1) ton bags | | |
| Photo ID: DSCF3507 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 51

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:089 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Compound Area - Hopper marked CT-8 (see Photo 52) | | |
| Photo ID: DSCF3508 | | |

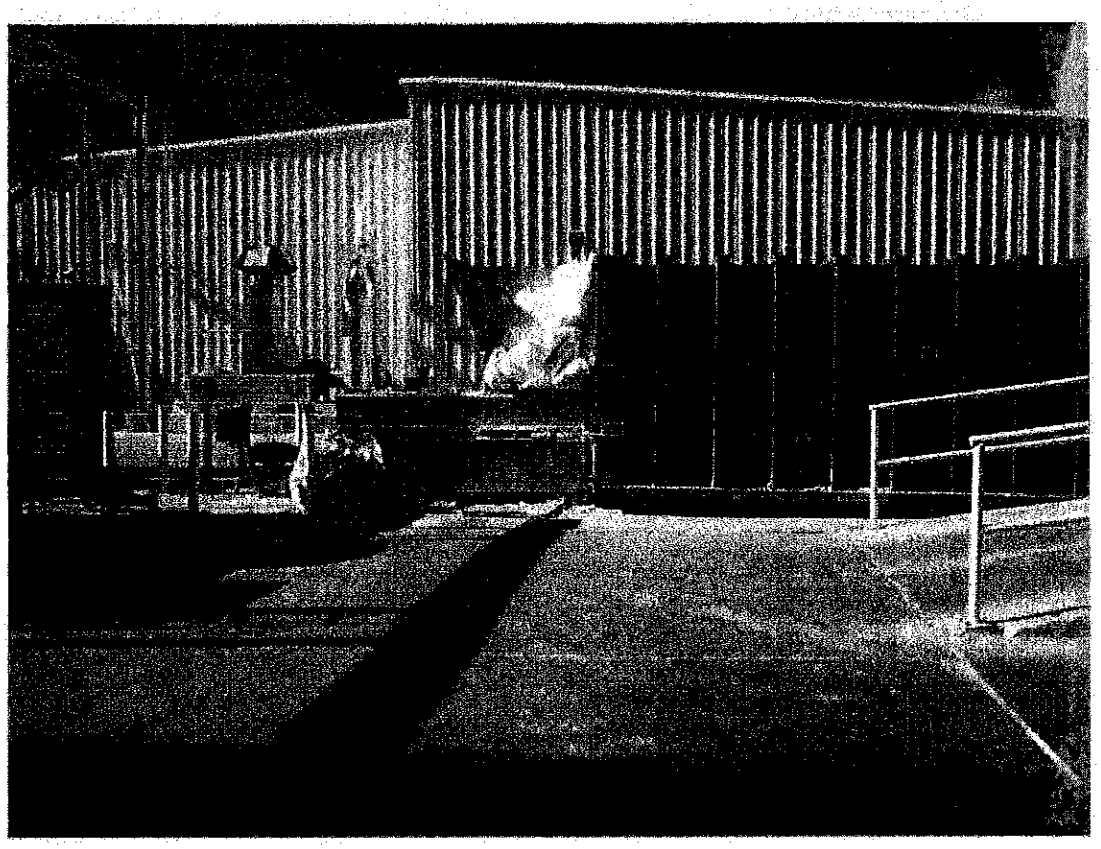
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 52

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:09 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Compound Area - Wide-angle of hopper marked CT-8 (see Photo 51) and bags of stored product in Compound building | | |
| Photo ID: DSCF3509 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 53



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:10 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Compound Area - Roll-off bin outside of PVC Bagging building with waste empty bags | | |
| Photo ID: DSCF3510 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 54

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:11 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): North | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant Area - One (1) ton bag marked "Polyvinyl Chloride contains Vinyl Chloride. Vinyl Chloride is a cancer suspect agent"; PVC resin (white powder) on floor and pallet | | |
| Photo ID: DSCF3511 | | |

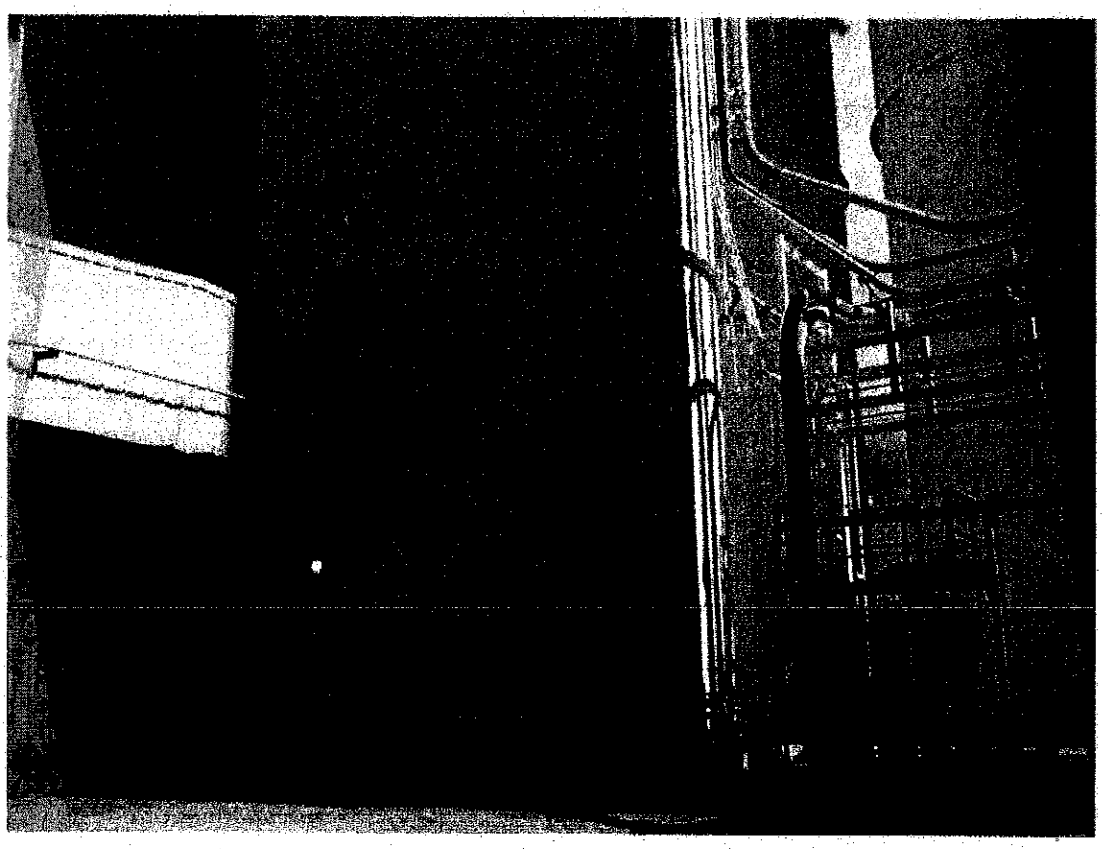
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 55

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:11 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant Area - 25-kg bags of PVC resin marked 'Formolon' | | |
| Photo ID: DSCF3512 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

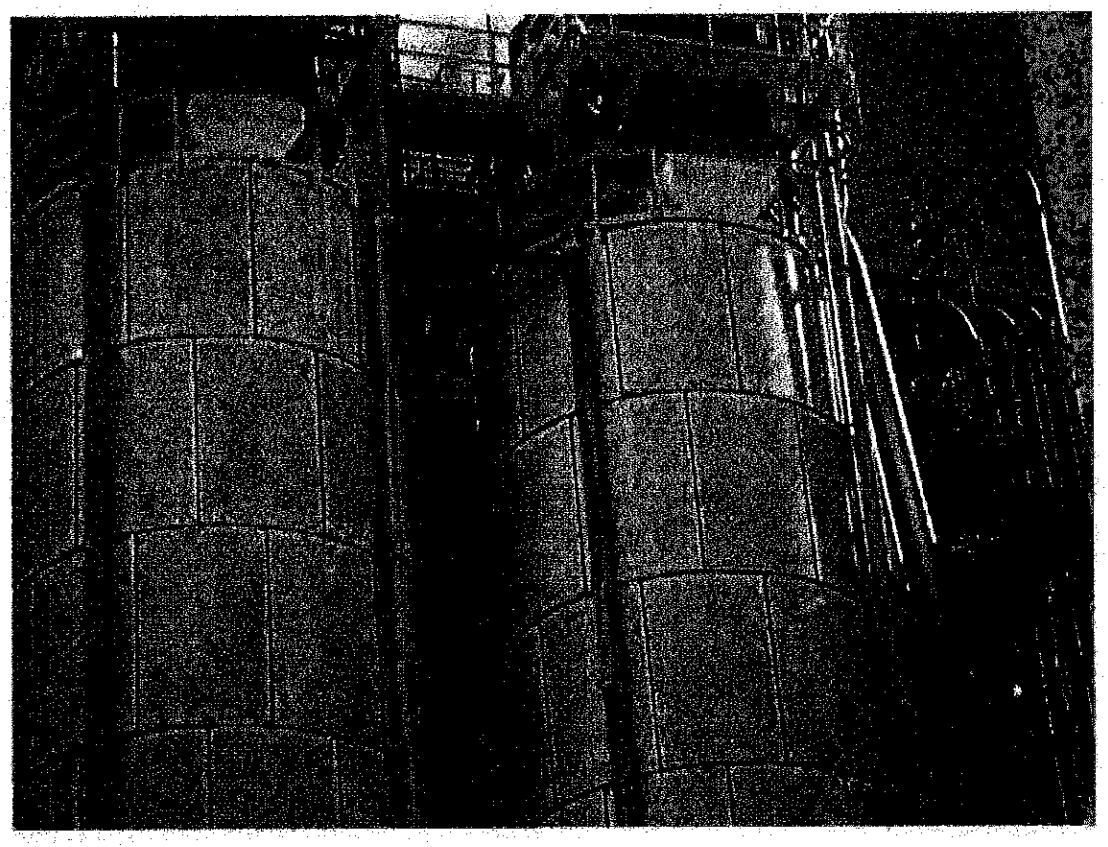
Official Photograph Log
Photo No. 56



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:13 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant Area - Silos in PVC plant (see Photo 57) | | |
| Photo ID: DSCF3513 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

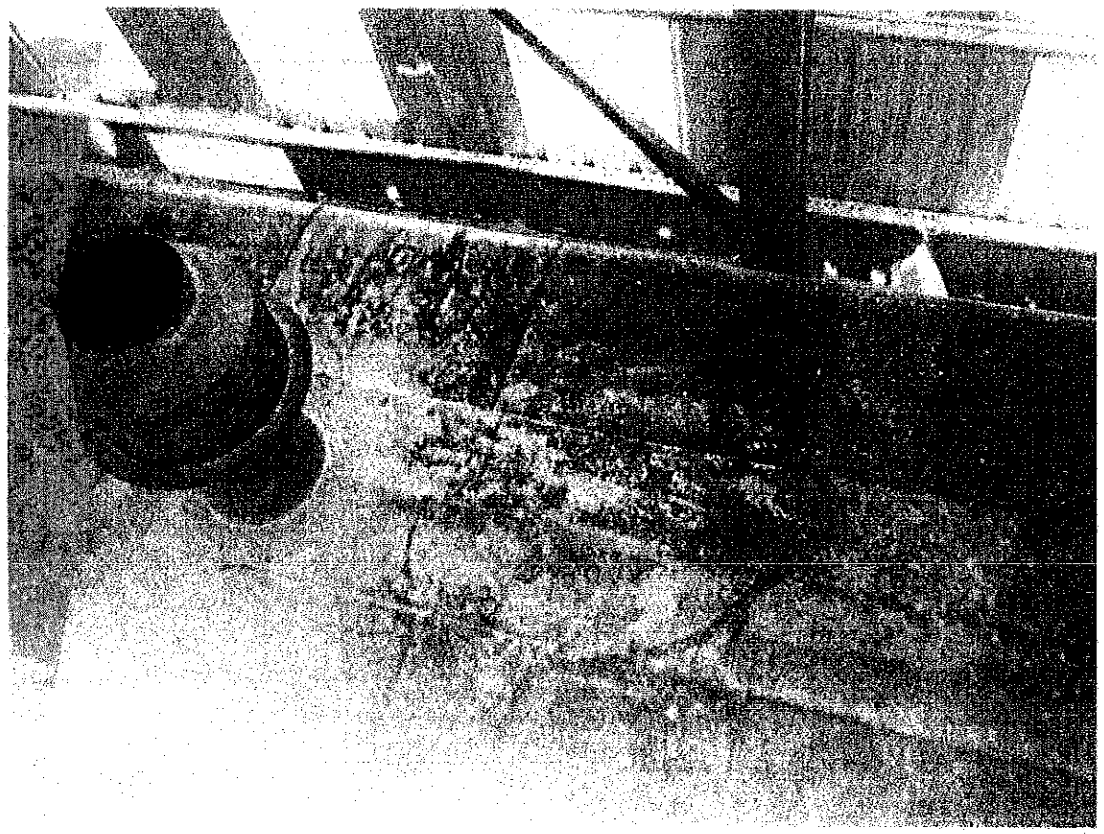
Official Photograph Log
Photo No. 57



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:15 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant Area - Silos in PVC plant (see Photo 56) | | |
| Photo ID: DSCF3514 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

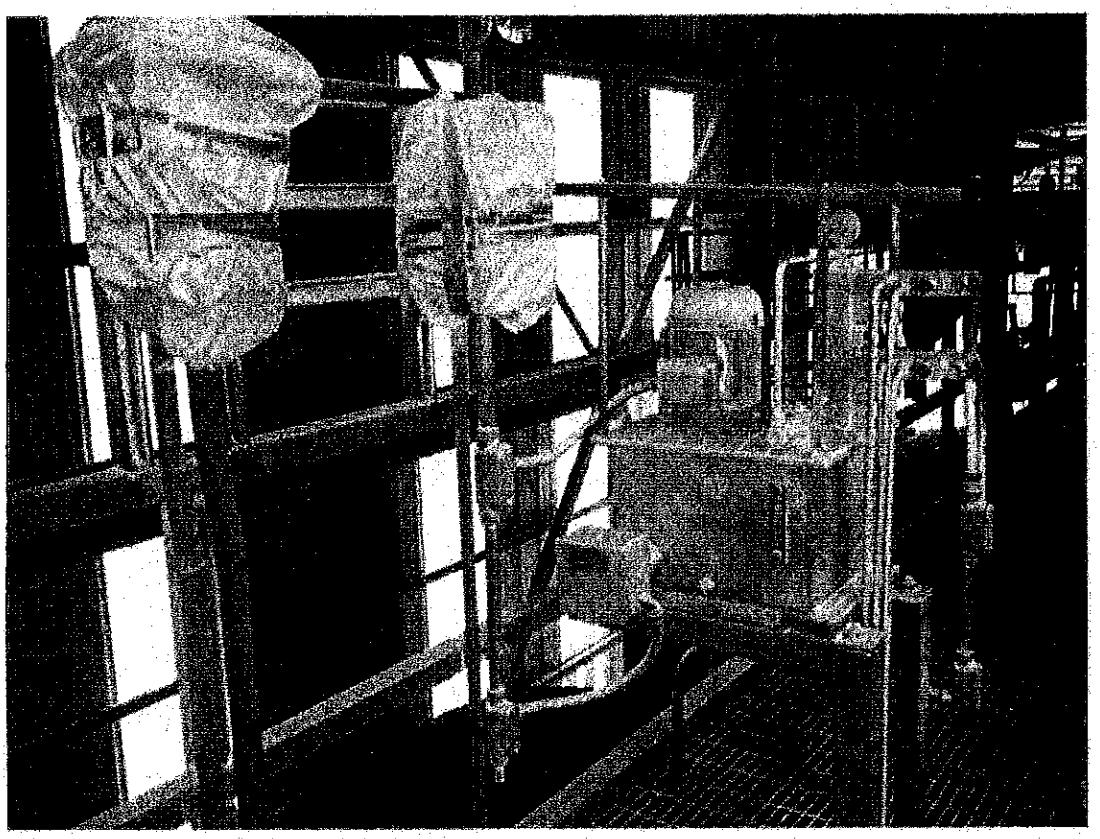
Official Photograph Log
Photo No. 58



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:16 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on top of railcar | | |
| Photo ID: DSCF3515 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

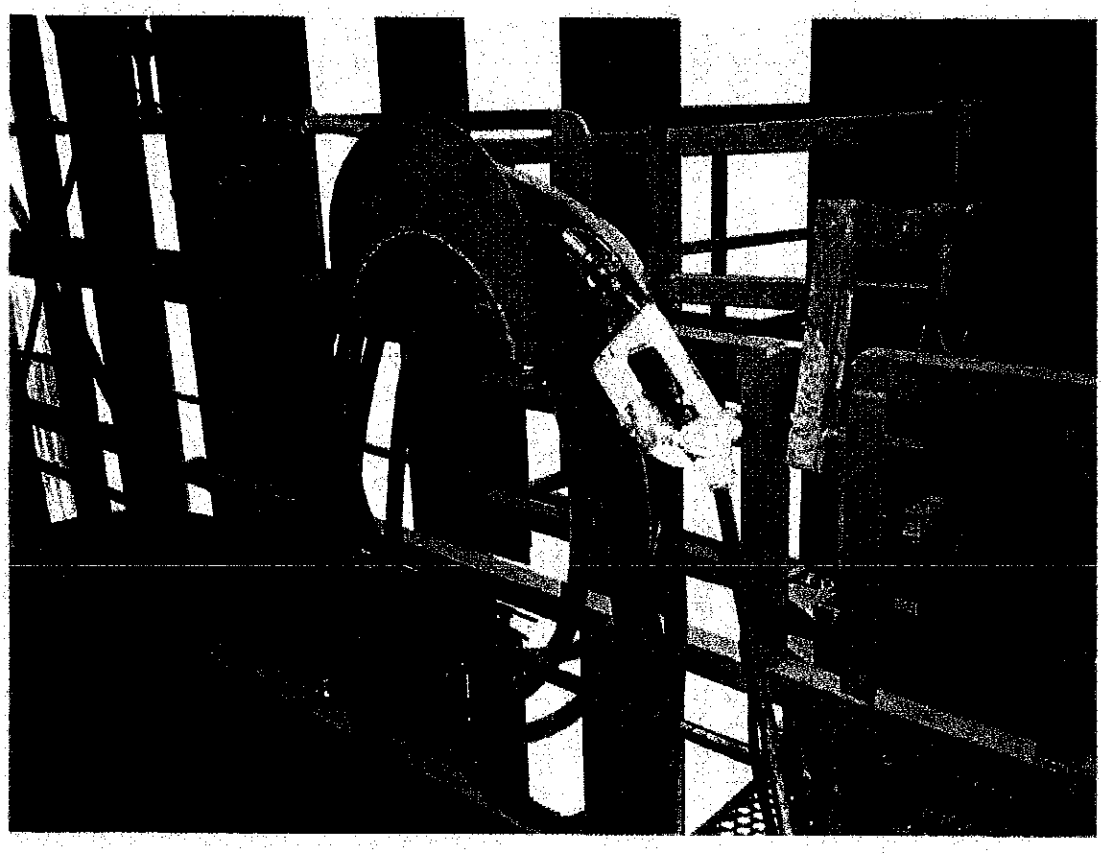
Official Photograph Log
Photo No. 59



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:16 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on mechanical equipment and walkway above railcar loading area (see photos 60-66) | | |
| Photo ID: DSCF3516 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

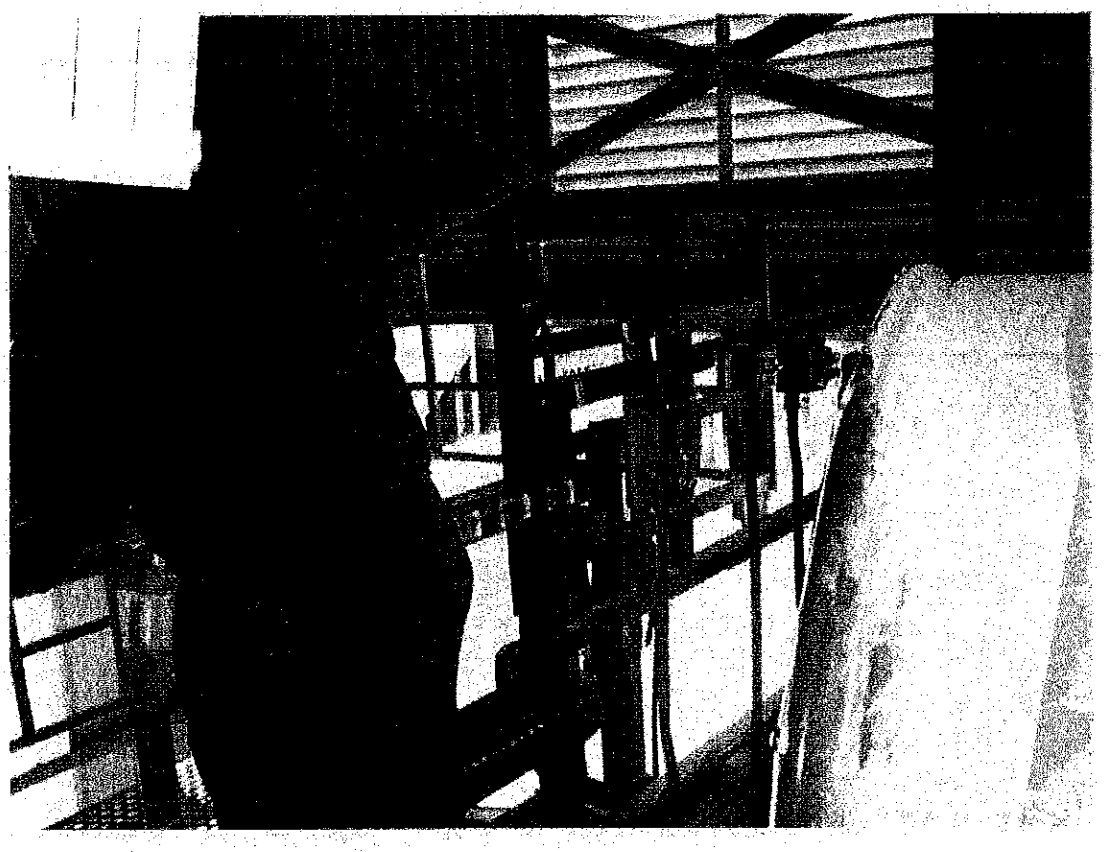
Official Photograph Log
Photo No. 60



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on hose and walkway above railcar loading area (see photos 59, 61-66) | | |
| Photo ID: DSCF3517 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

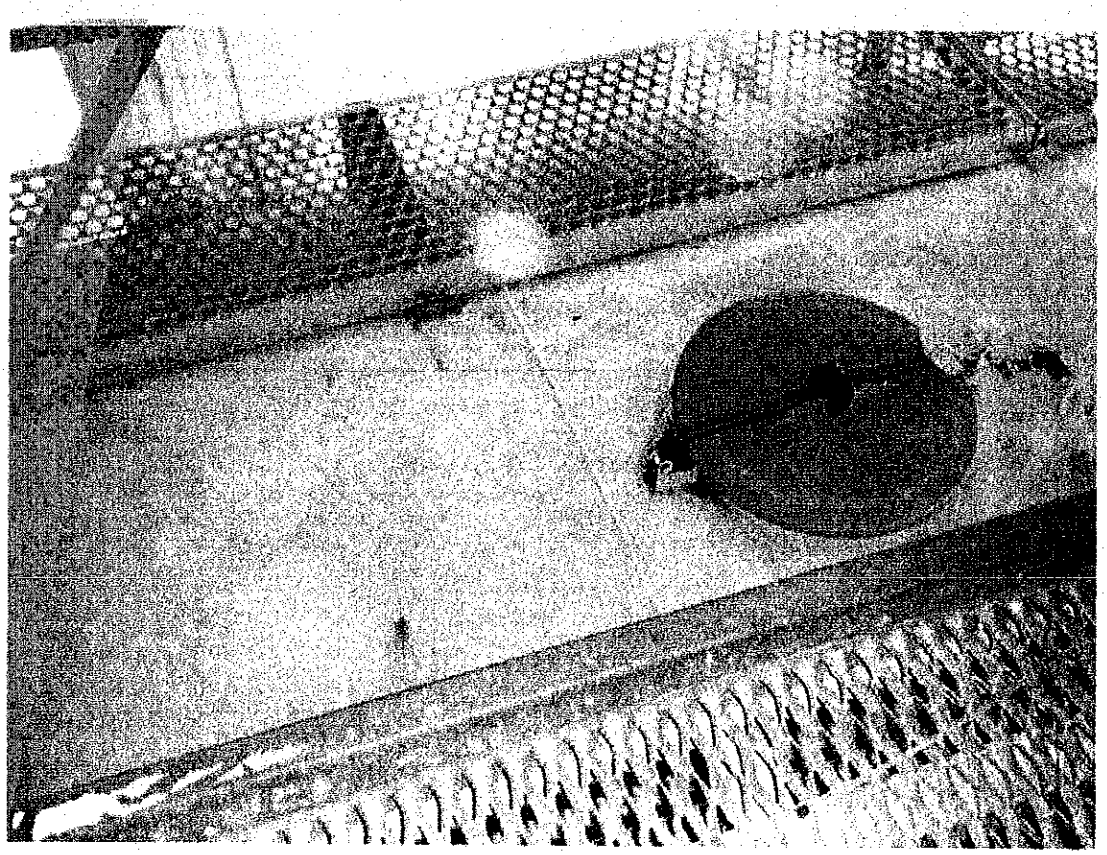
Official Photograph Log
Photo No. 61



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on fan housing and walkway above railcar loading area (see photos 59-60, 62-66) | | |
| Photo ID: DSCF3518 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

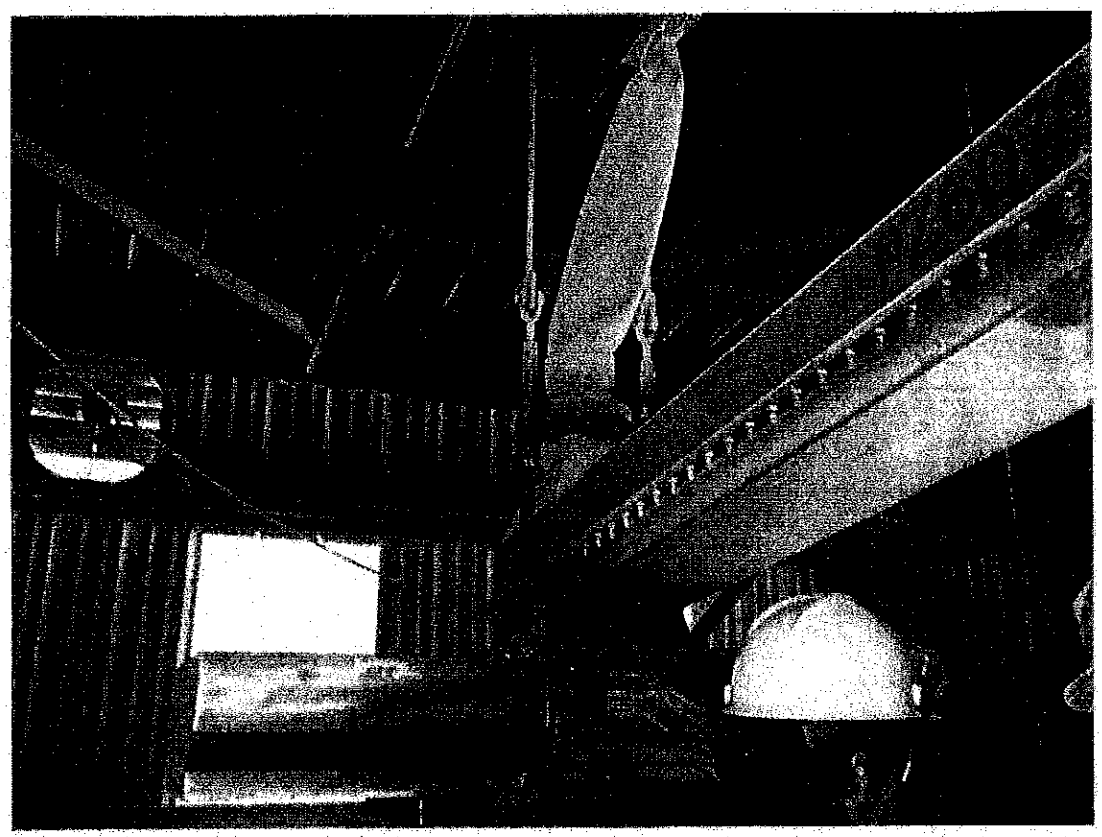
Official Photograph Log
Photo No. 62



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on walkway above railcar loading area (see photos 59-61, 63-66) | | |
| Photo ID: DSCF3519 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

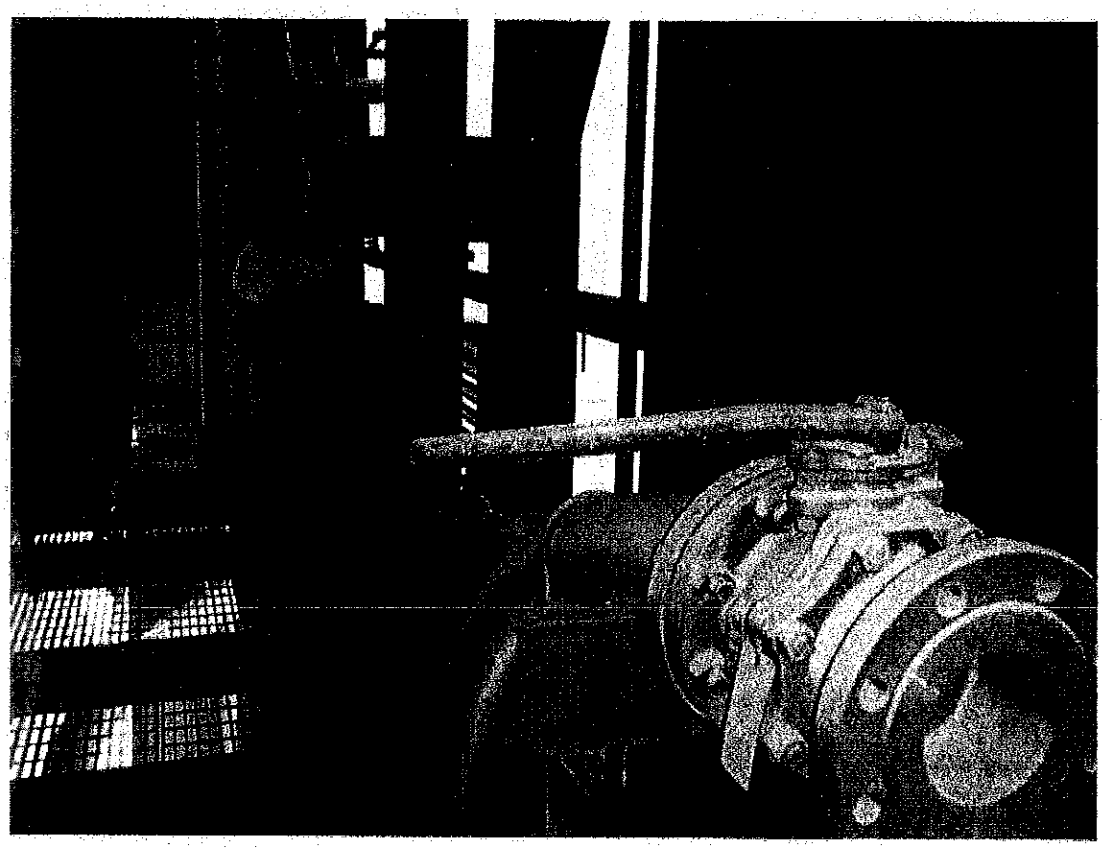
Official Photograph Log
Photo No. 63



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Up | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on building structure above railcar loading area; loading chute overhead (see photos 59-62, 64-66) | | |
| Photo ID: DSCF3520 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 64



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on equipment above railcar loading area (see photos 59-63, 65-66) | | |
| Photo ID: DSCF3521 | | |

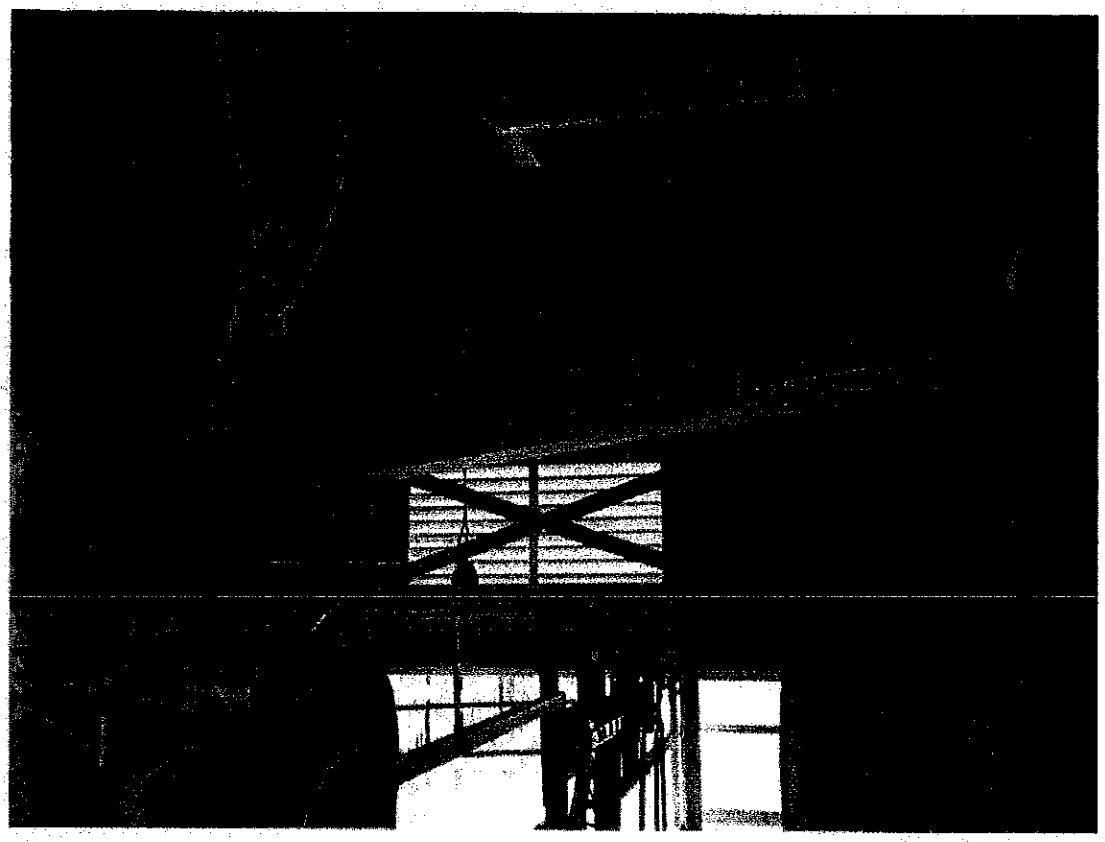
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 65

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:17 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on handrail above railcar loading area and floor in background (see photos 59-64, 66) | | |
| Photo ID: DSCF3522 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 66



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:18 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on hose storage above railcar loading area; loading chute in foreground (see photos 59-65) | | |
| Photo ID: DSCF3523 | | |

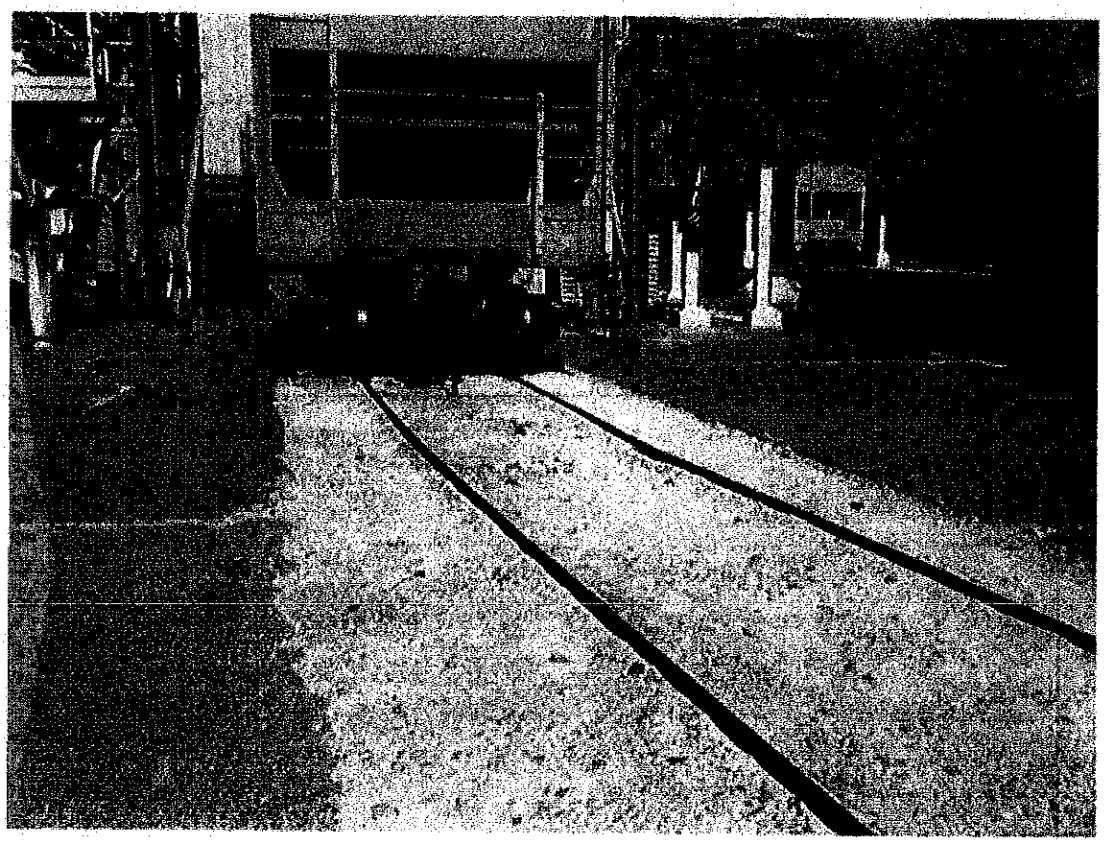
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 67

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: NA | Time: AM |
| City/County: | Direction (facing): NA | State: |
| Location: | | |
| Subject: Photograph not collected (log misnumbered) | | |
| Photo ID: | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

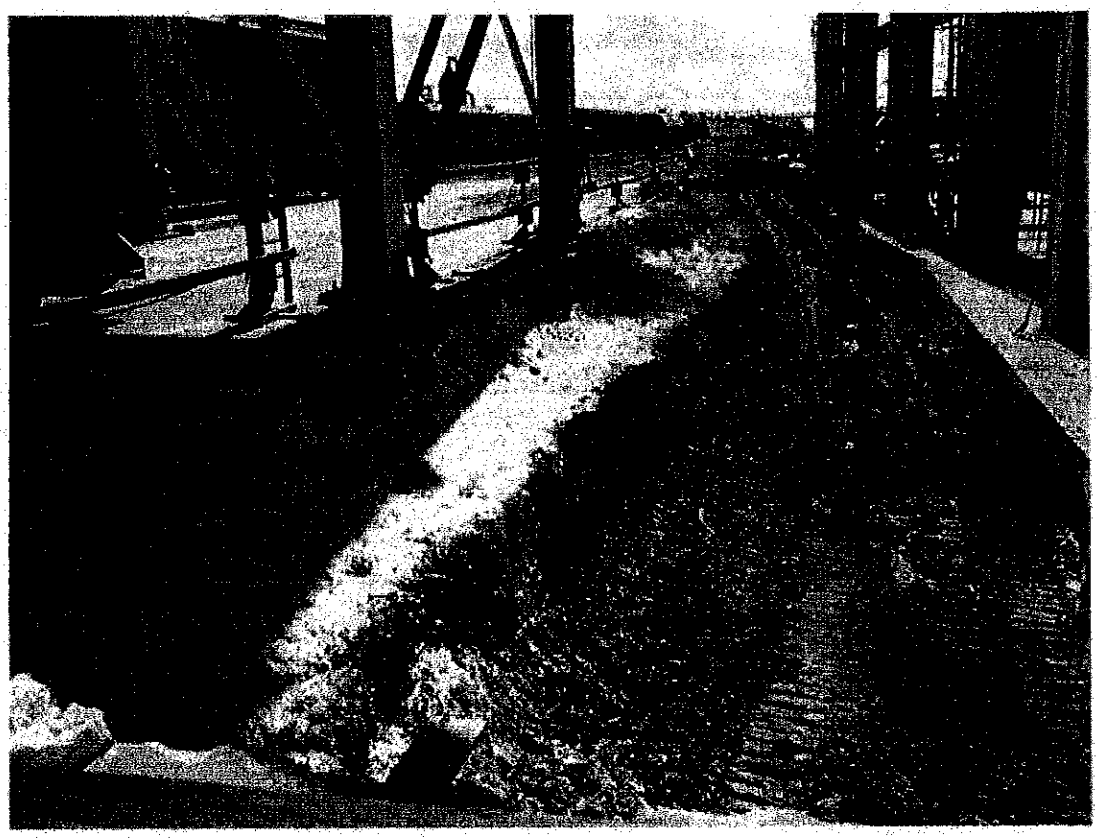
Official Photograph Log
Photo No. 68



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:20 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Railcar Loading Area - PVC dust (white powder) on ground beside railroad spur outside PVC Railcar Loading Area | | |
| Photo ID: DSCF3524 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 69



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:20 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Process Area - PVC dust (white powder) on ground in excavation at construction area for new PVC loading silos (see Photos 70 and 71) | | |
| Photo ID: DSCF3525 | | |

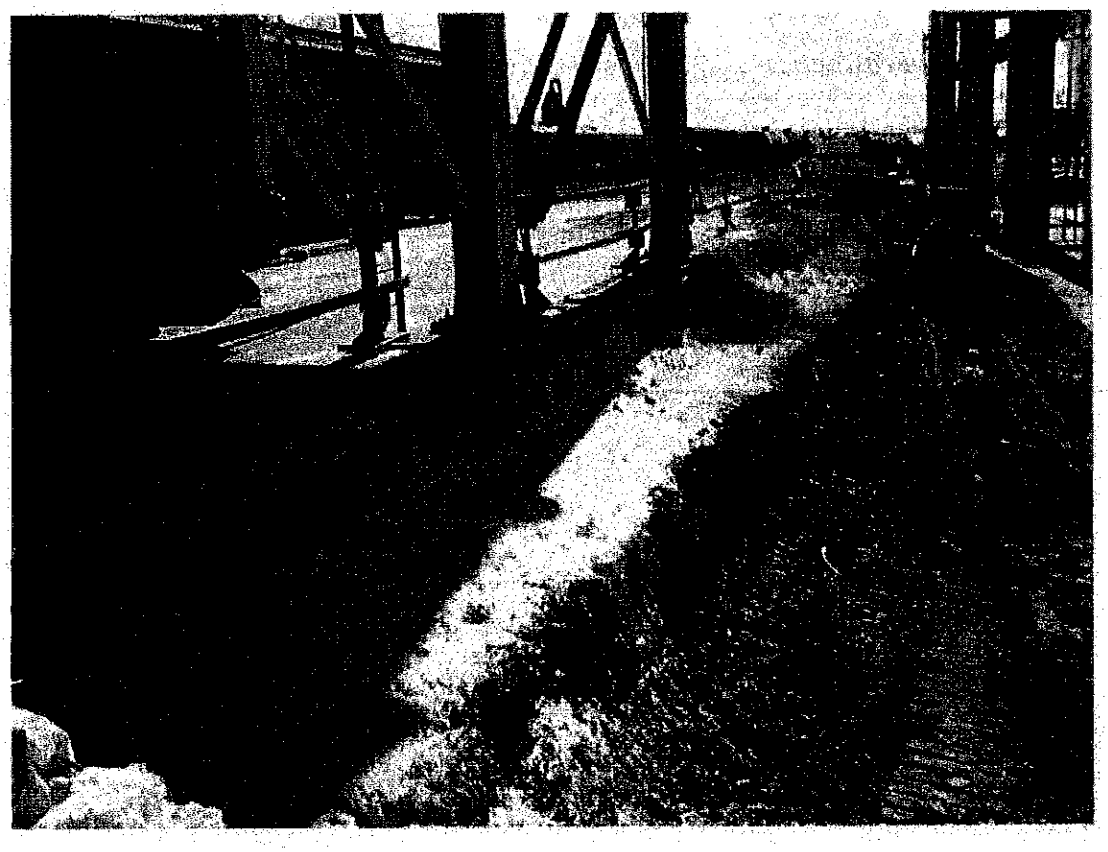
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 70

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:20 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Process Area - PVC dust (white powder) on ground in excavation at construction area for new PVC loading silos (see Photos 69 and 71) | | |
| Photo ID: DSCF3526 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 71



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:20 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Process Area - PVC dust (white powder) on ground in excavation at construction area for new PVC loading silos (see Photos 69 and 70) | | |
| Photo ID: DSCF3527 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 72

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:25 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): West | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Bagging Area - Hose from vacuum truck seen in Photo 35 discharging into storm water drainage ditch | | |
| Photo ID: DSCF3528 | | |

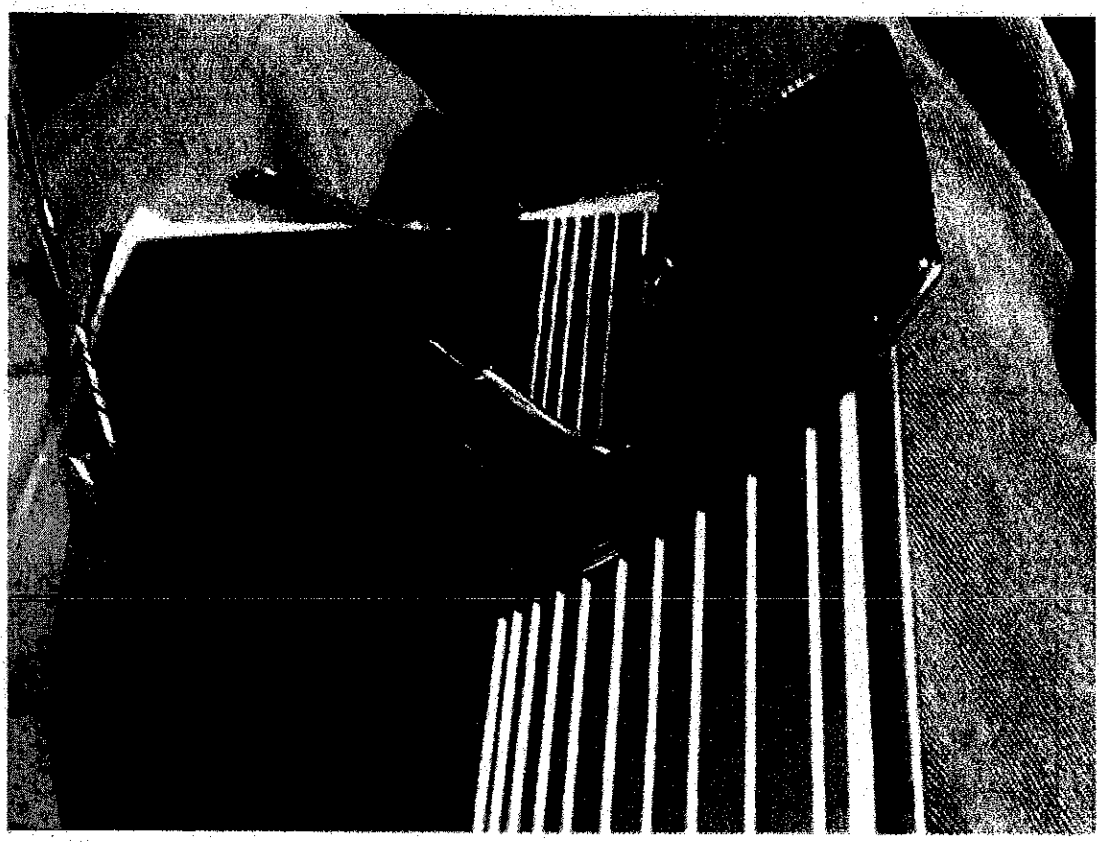
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 73

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:26 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC Plant - Structures in PVC area showing signs of corrosion | | |
| Photo ID: DSCF3529 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

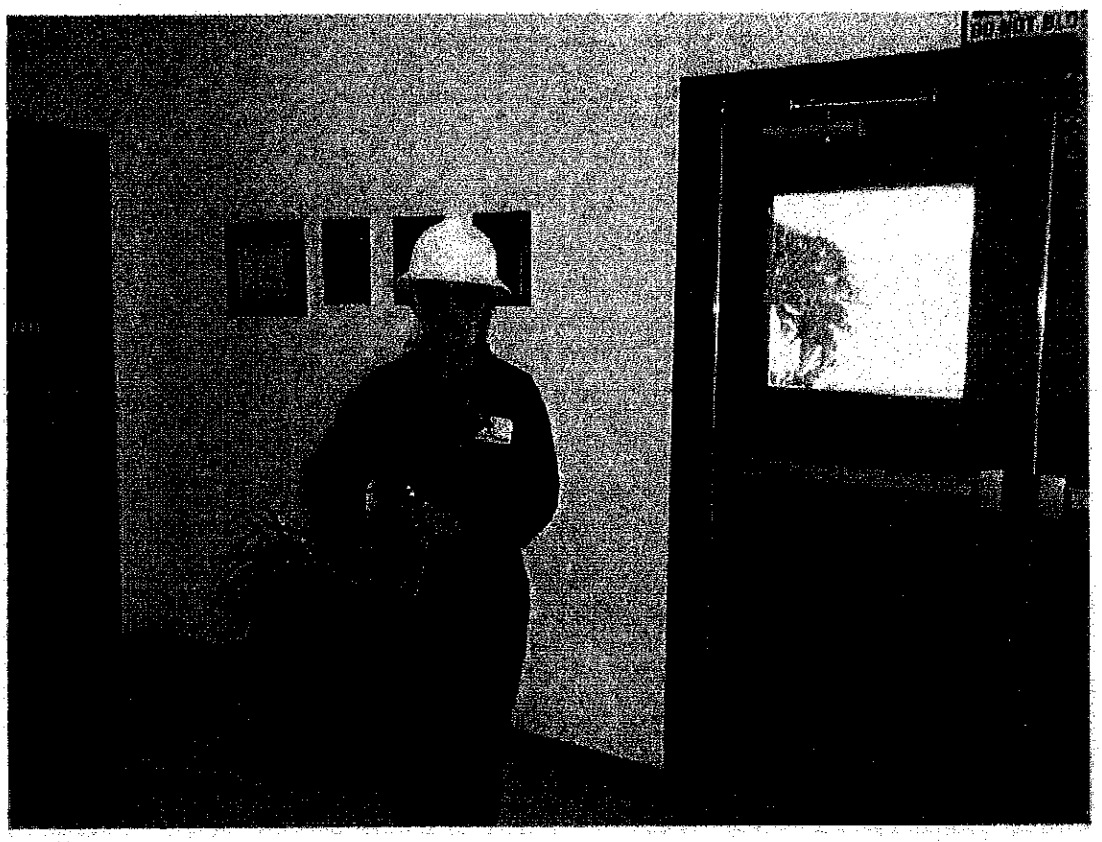
Official Photograph Log
Photo No. 74



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:33 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Down | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: PVC resin (white powder) on Inspector's safety glasses | | |
| Photo ID: DSCF3530 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 75



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:51 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chlor-Alkali Plant - EPA Fagan | | |
| Photo ID: DSCF3531 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 76

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:52 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chlor-Alkali Plant - EPA Verhalen | | |
| Photo ID: DSCF3532 | | |

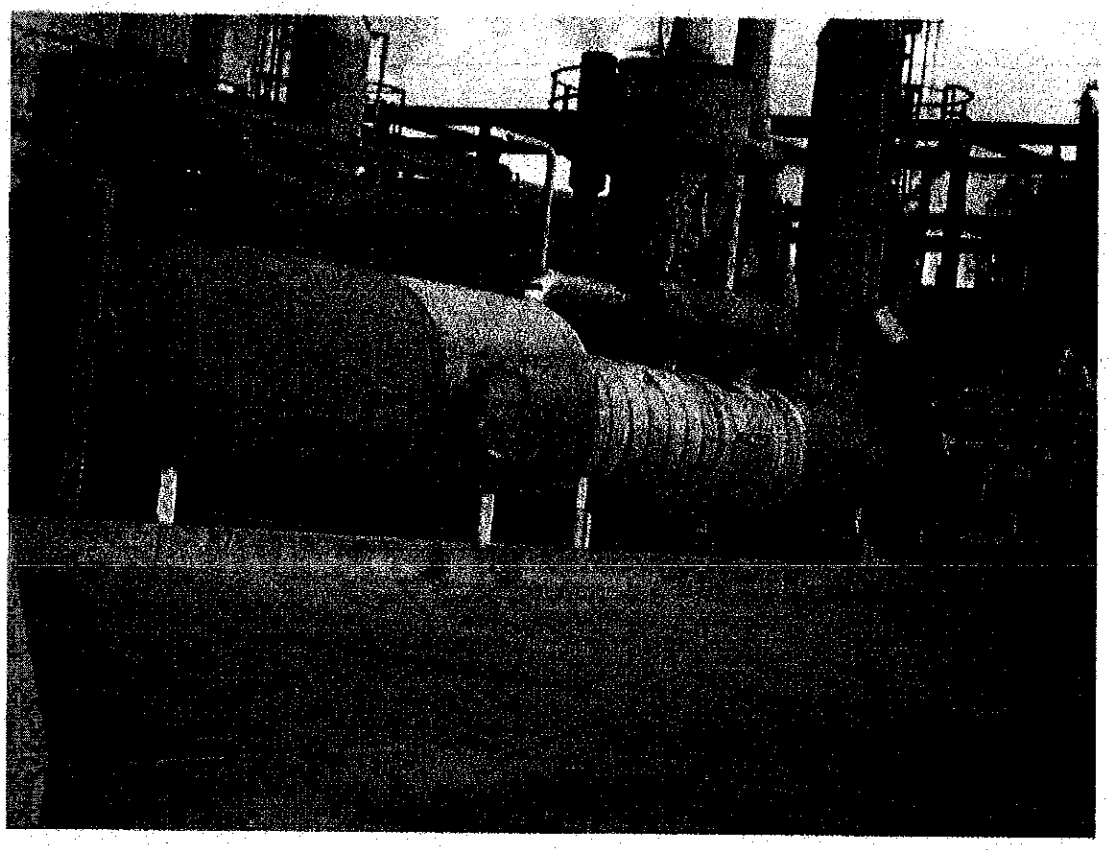
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 77

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 9:52 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Chlor-Alkali Plant - EPA Fagan | | |
| Photo ID: DSCF3533 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

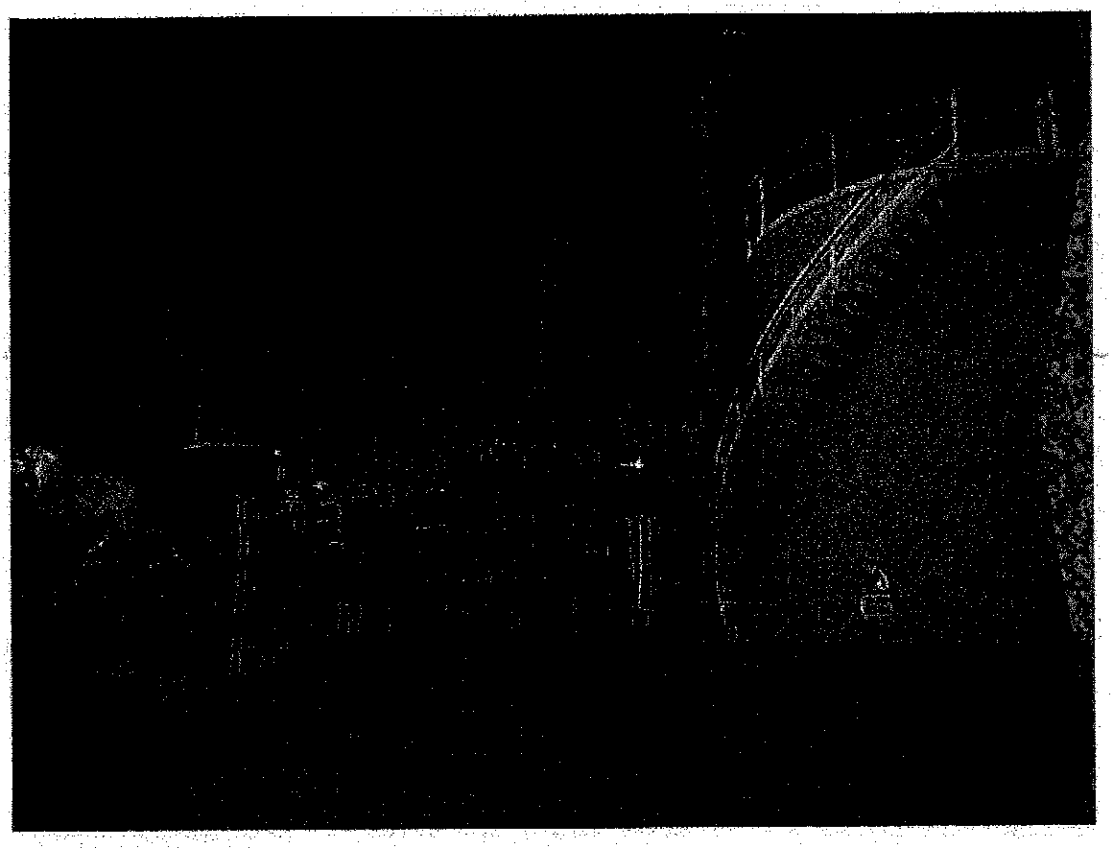
Official Photograph Log
Photo No. 78



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: EDC Plant - Incinerators (see Photos 79 and 80) | | |
| Photo ID: DSCF3534 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

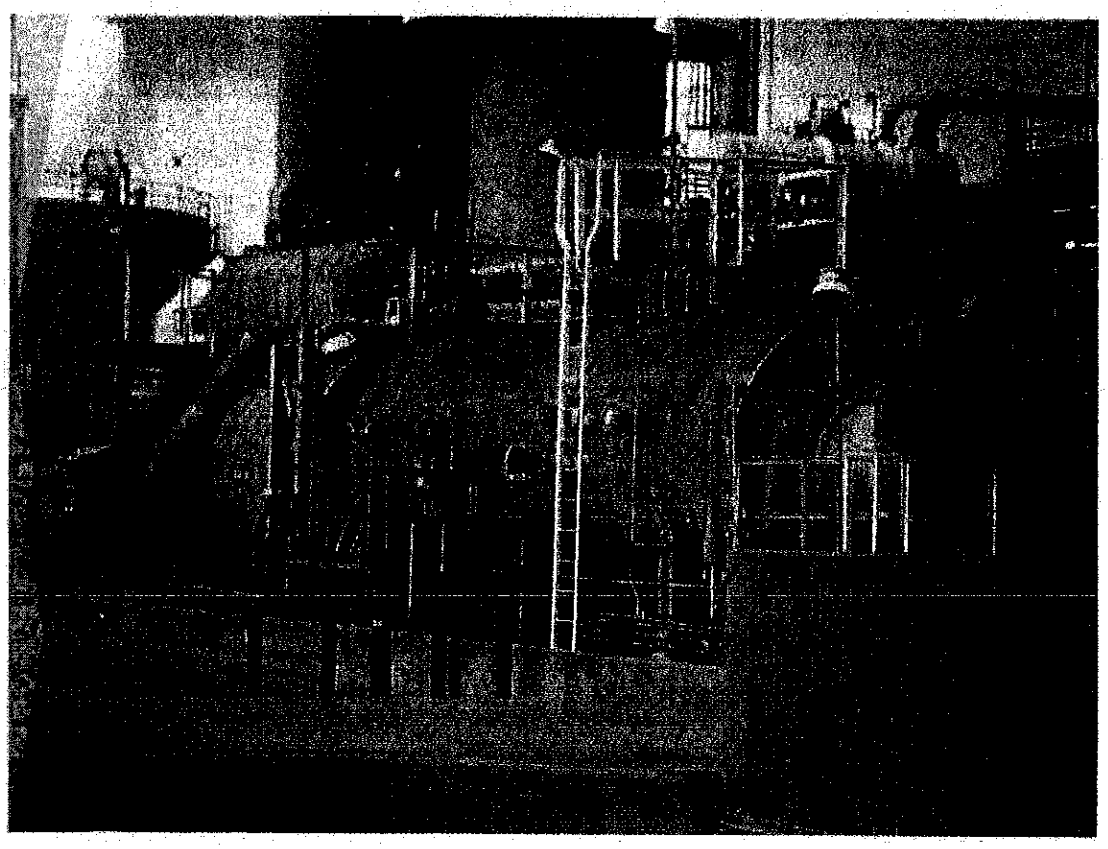
Official Photograph Log
Photo No. 79



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: EDC Plant - Incinerators (see Photos 78 and 80) | | |
| Photo ID: DSCF3535 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 80



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:00 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: EDC Plant - Close-up of Incinerators (see Photos 78 and 79) | | |
| Photo ID: DSCF3536 | | |

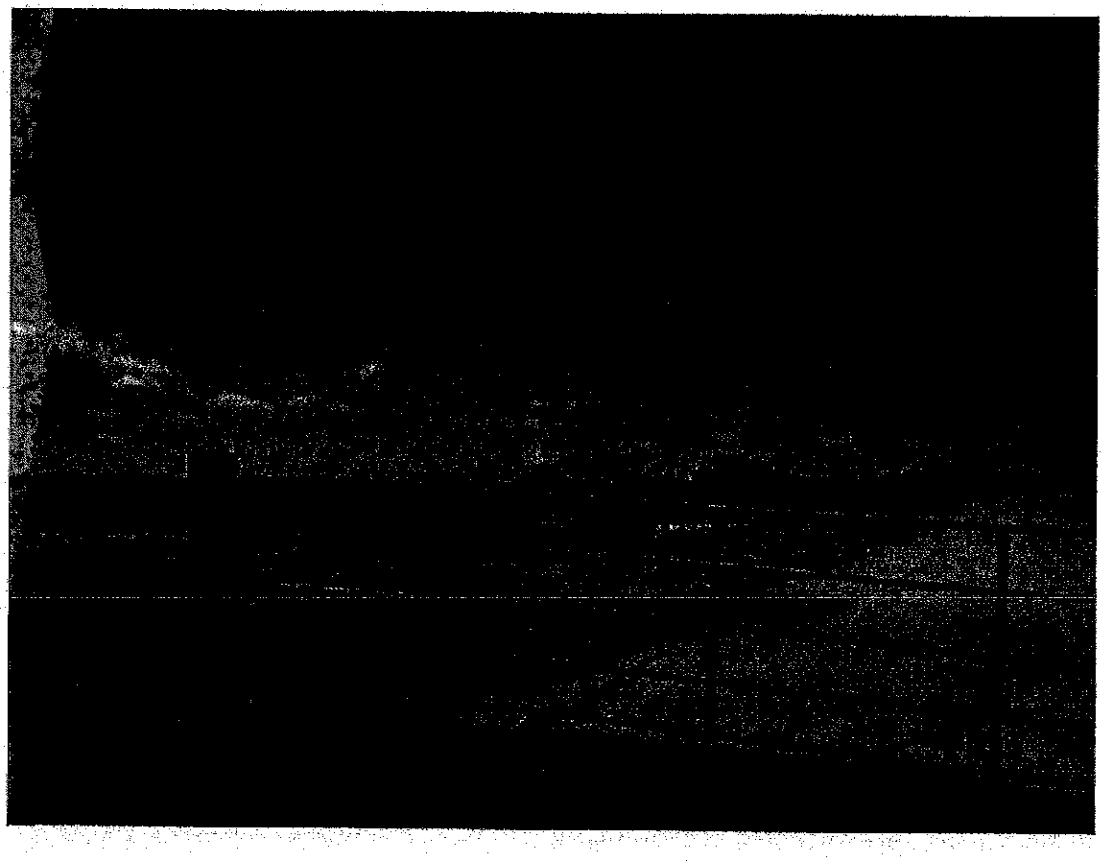
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 81

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:26 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Southern entrance onto property; Alcoa red beds in background; Brine Pipeline signage on right of photo | | |
| Photo ID: DSCF3537 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 82



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:26 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Southern entrance onto property | | |
| Photo ID: DSCF3538 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 83

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:28 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): East | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Southern entrance onto property (see Photo 84) | | |
| Photo ID: DSCF3539 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 84

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:28 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Southern entrance onto property (see Photo 83) | | |
| Photo ID: DSCF3540 | | |

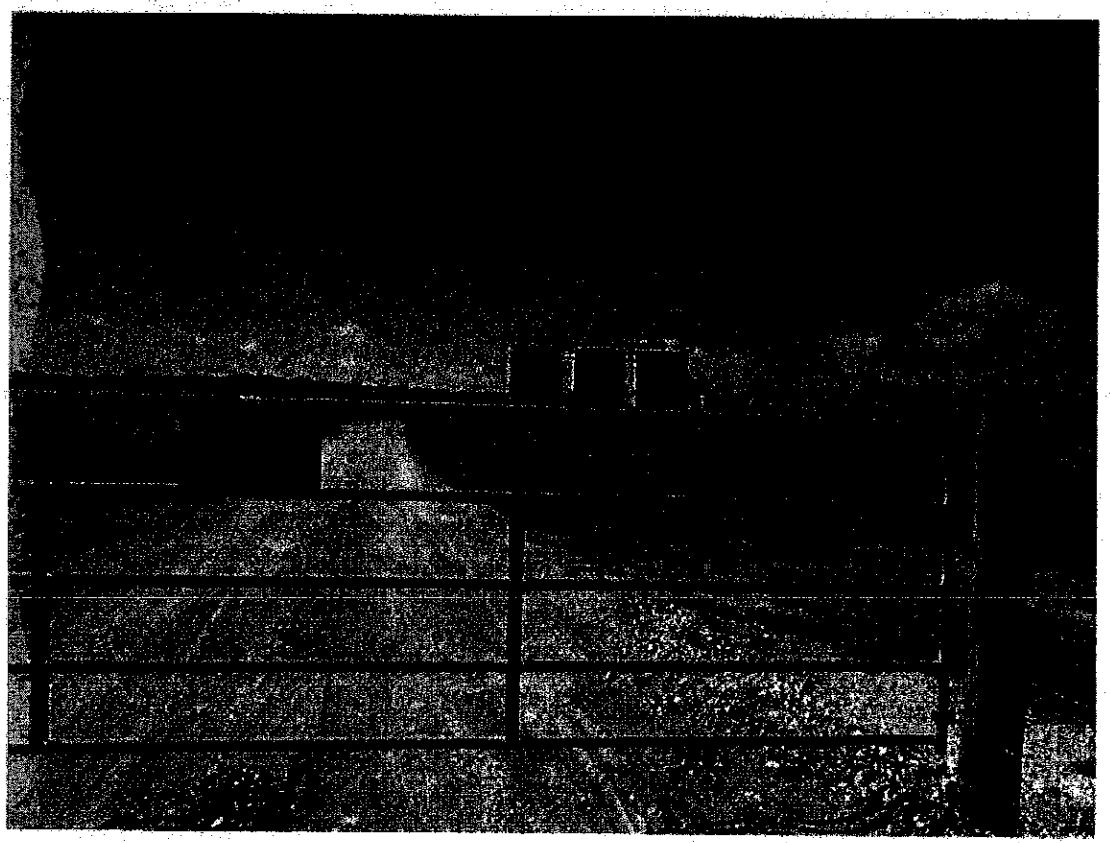
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 85

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:30 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Northwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: TxDOT park on Highway 35; adjacent to Formosa property and across the highway from the Former Brookings Property | | |
| Photo ID: DSCF3541 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 86



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:34 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Northern entrance onto property; production tankage on right side of photograph | | |
| Photo ID: DSCF3542 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 87

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:34 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Northern entrance onto property; production tankage on right side of photograph (see Photo 88) | | |
| Photo ID: DSCF3543 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 88

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:34 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southeast | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Northern entrance onto property; production tankage on right side of photograph (see Photo 89) | | |
| Photo ID: DSCF3544 | | |

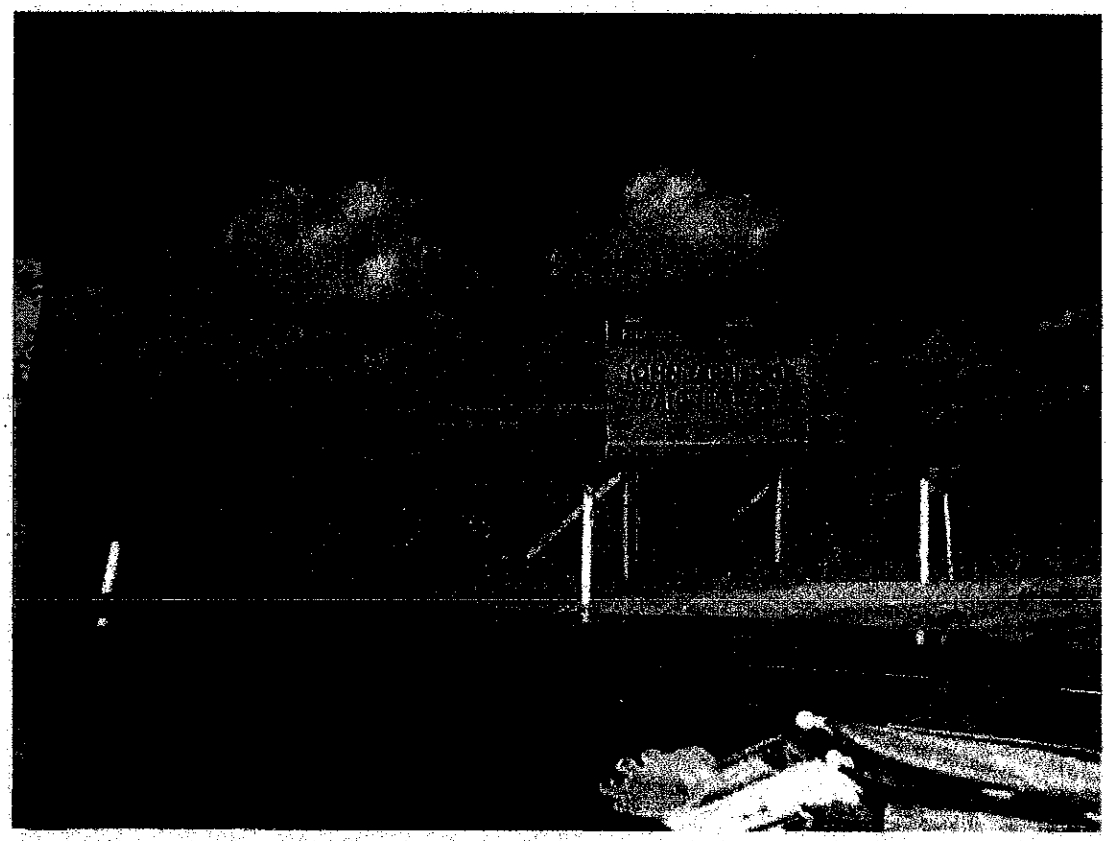
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 89

| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:34 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Northern entrance onto property; Alcoa red beds in background | | |
| Photo ID: DSCF3545 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

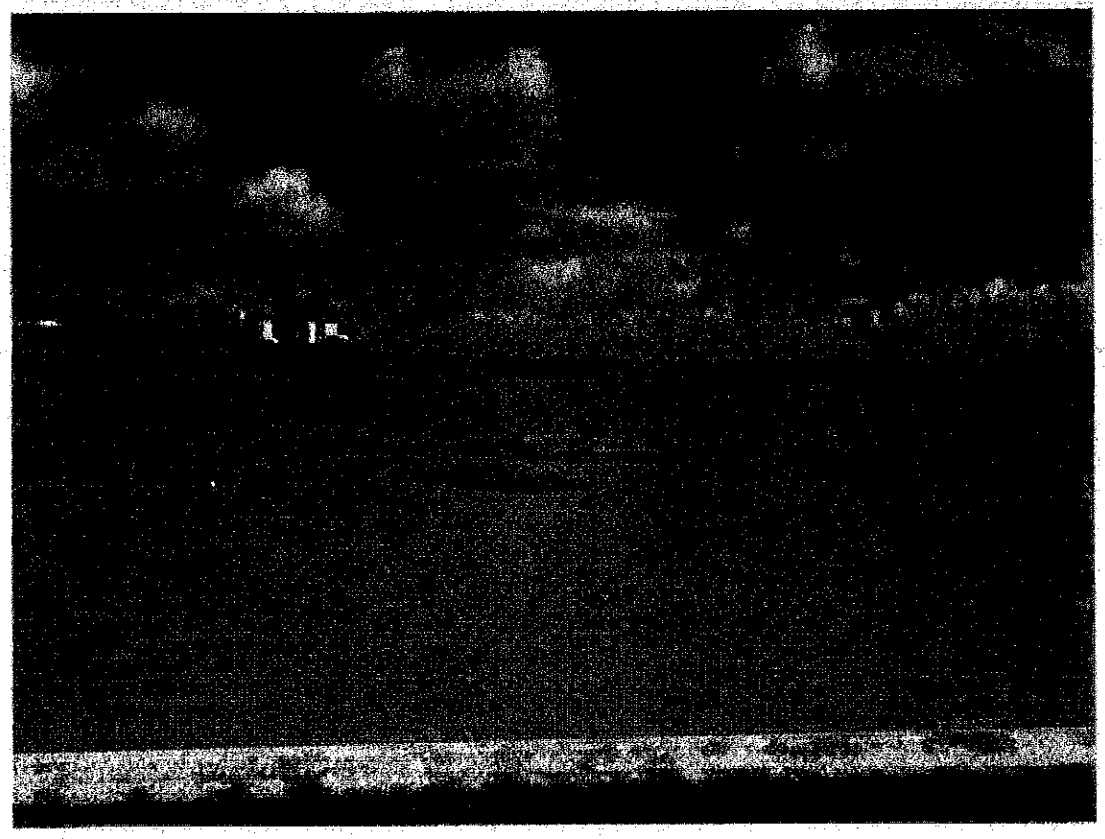
Official Photograph Log
Photo No. 90



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:37 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): Southwest | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Former Brookings Property - Northern boundary of prroperty; Cox Creek in center; Formosa owns the land to the center of the Creek | | |
| Photo ID: DSCF3546 | | |

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log
Photo No. 91



| | | |
|---|---|---|
| Photographer: Nancy Fagan | Date: 6/17/2010 | Time: 10:38 AM |
| City/County: Point Comfort, Calhoun | Direction (facing): South | State: TX |
| Location: Formosa Plastics Corp. | | |
| Subject: Cox Creek toward Formosa facility from bridge on Highway 35 | | |
| Photo ID: DSCF3547 | | |

END OF PHOTOGRAPHS
June 17, 2010

E. Gaines
TX Rio Grande Legal Aid
4920 N. I-35
Austin, TX 78751

CERTIFIED MAIL

7015 0640 0000 9796 9207

UNITED STATES POSTAGE
PITNEY BOWES
02 1P $ 012.15⁰
0001807315 SEP 18 2015
MAILED FROM ZIP CODE 78751

RETURN RECEIPT REQUESTED

Office of the Chief Clerk - MC105
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

RECEIVED
SEP 21 2015
TCEQ MAIL CENTER
CJ

**Marisa Weber**

| | |
|---|---|
| **From:** | PUBCOMMENT-OCC |
| **Sent:** | Friday, September 18, 2015 1:41 PM |
| **To:** | PUBCOMMENT-WQ; PUBCOMMENT-ELD; PUBCOMMENT-OCC2; PUBCOMMENT-OPIC |
| **Subject:** | FW: Public comment on Permit Number WQ0002436000 |
| **Attachments:** | Formosa Permit CCH Request & Attachment Final 9.18.152.pdf |

H

**From:** egaines@trla.org [mailto:egaines@trla.org]
**Sent:** Friday, September 18, 2015 1:39 PM
**To:** DoNot Reply
**Subject:** Public comment on Permit Number WQ0002436000

IWD 7245-7

**REGULATED ENTY NAME** FORMOSA POINT COMFORT PLANT

**RN NUMBER:** RN100218973

**PERMIT NUMBER:** WQ0002436000

**DOCKET NUMBER:**

**COUNTY:** CALHOUN

**PRINCIPAL NAME:** FORMOSA UTILITY VENTURE LTD

**CN NUMBER:** CN602650954

**FROM**

**NAME:** Erin Gaines

**E-MAIL:** egaines@trla.org

**COMPANY:** Texas RioGrande Legal Aid

**ADDRESS:** 4920 N IH 35
AUSTIN TX 78751-2716

**PHONE:** 5123742739

**FAX:**

**COMMENTS:** Please see comments attached.

LSC

# TEXAS RIOGRANDE LEGAL AID, INC.

**Austin Office**
4920 North IH-35
Austin, Texas 78751
Telephone (512) 374-2700, Fax (512) 447-3940

September 18, 2015

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

RE: Major Permit Amendment Formosa Utility Venture, Ltd. and Formosa Plastics Corp. TPDES PERMIT NO. WQ0002436000 Request for Contested Case Hearing.

Dear Ms. Bohac:

Please consider this request for a contested case hearing by the Union of Commercial Oystermen of Texas, the Texas Injured Workers, and the San Antonio Bay Water Keeper (collectively "Protestants").

Union members are shrimpers and oystermen who fish and/or earn their livelihood in Lavaca/Chocolate Bay and other bays in the vicinity. The bays, shrimp and oysters are directly affected by the wastewater discharged by Formosa. Likewise, members' ability to earn a living is affected by Formosa's wastewater discharge.

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 health and safety protections in the workplace and value the aesthetics and beauty of the bays as well as the recreational opportunities they afford. Members' livelihoods, health and safety, and recreational opportunities are affected by Formosa's wastewater discharges.

The Water Keeper is a grassroots group committed to preserving and protecting the health of San Antonio, Lavaca, and Matagorda Bays and its watershed for our children, our economy and our future, through advocacy, education, and enforcement of the Clean Water Act. Water Keeper members' use and enjoyment of the bays and watershed are affected by Formosa's wastewater discharges.

Protestants contend Formosa's Texas Pollutant Discharge Elimination System (TPDES) permit as proposed by the Texas Commission on Environmental Quality (TCEQ) is not sufficiently protective of Lavaca Bay/Chocolate Bay (Lavaca Bay) and will harm their ability to fish, shrimp and enjoy the bay and to earn a livelihood from the bay. The proposed permit will also harm endangered and threatened species that live in and around the Bay.

Protestants have members who own property, reside, work, and recreate near Formosa's facility and its discharges and who would be adversely affected by discharges in the proposed draft permit. Accordingly, Protestants are affected persons as defined by 30 Tex. Admin. Code §55.205(a)(1).

Individual members of the Protestants would have standing to request a hearing in their own right, but no individual member's participation is required for Protestants to assert any claims or seek any relief in a contested case hearing regarding Formosa's application. Individual members of the three groups live at the following addresses:

Union of Commercial Oystermen of Texas
Mauricio Blanco, 714 S. San Antonio Street, Port Lavaca, Texas 77979.
Hurtado Francisco, 418 W. Manhan, Port Lavaca, Texas 77979.
Jose Luis Cruz, 418 W. Manhan, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

Texas Injured Workers
Dale Jurasek, 403 Tommy Dr, Port Lavaca, Texas 77979.
Ronnie Hamrick, 380 Royal Rd, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

San Antonio Bay Water Keeper
David and Christi Campos, 881 Hackberry St, Port Lavaca, Texas 77979.
Diane Wilson, 600 Ramona Rd, Seadrift, TX 77983.

Lavaca Bay is part of the Matagorda Bay System, which connects to the Gulf of Mexico. Lavaca Bay contains extensive oyster reefs and also shrimp nurseries. Unfortunately, Lavaca Bay has already suffered environmental insults. Extensive discharges of mercury into the Bay by Alcoa led to a declaration that the contamination was sufficient to require a Superfund cleanup. Also, Lavaca Bay is fragile because drought conditions in Texas are limiting fresh water to replenish the Bay. Red tides and algal blooms stress the existing ecosystem. Formosa seeks to discharge additional copper and chloroform into the Bay, as well as continue discharges of a long list of toxins. Formosa seeks to increase the amount of contaminated water it discharges, as well as the quantity of toxins it discharges. Protestants seek to protect Lavaca Bay from additional and

ongoing pollution that will degrade the Bay. Protestants offers the following specific comments on Formosa's TPDES permit as well as responses to TCEQ's response to previously filed comments.

Protestants request a contested case hearing.

## I. BACKGROUND

In July 1994, Formosa entered into an agreement with Diane Wilson, EPA, and TNRCC to create a process to assess "the feasibility of waste water recycling and/or reduction and/or removal programs to be studied and/or implemented at Formosa Plastics, Texas with the goal of zero discharge to Lavaca Bay."[1] A Technical Review Commission evaluated studies showing that zero discharge was technically feasible for the Formosa plant, but Formosa decided not adopt the system. Now, over 20 years later, Formosa seeks to increase its permitted discharge levels of certain pollutants and TCEQ has failed to demonstrate why stricter discharge limits are not applicable.

Formosa continues to discharge pursuant to a wastewater permit issued in 2005, which expired in 2010, and has been "administratively continued" now for five years.

Formosa has a repeated record of non-compliance with environmental laws, including its water discharge permits, air permits, and RCRA compliance. It has been fined numerous times and has failed to comply with a consent decree with the EPA.

A goal of the Texas Coastal Management Program is "to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas." Texas Coastal Management Program 2012 Annual Report.[2] A permit that allows additional toxic pollutants into estuaries and bays, that fails to sufficiently restrict the discharge of new dioxins and furans and that does not provide specific enough terms to restrict the discharge of solid waste does not meet this goal.

## II. SPECIFIC DEFICIENCIES IN FORMOSA'S DRAFT PERMIT

TCEQ's draft TPDES permit is deficient and does not comply with the Clean Water Act (CWA) in the following ways.

### 1. Increased copper discharges allowed in permit violate anti-backsliding provisions of CWA and threaten aquatic species.

[1] Wilson-Formosa Zero Discharge Agreement, Formosa Recycling/Reduction/Removal Mediation, July 1994.
[2] http://www.glo.texas.gov/what-we-do/caring-for-the-coast/_publications/2012-cmp-annual-report.pdf

The anti-backsliding provisions of the Clean Water Act restrict a facility from increasing the pollutant load on a body of water. 30 TAC ch. 307; 40 CFR 122.44(l). In spite of this, Formosa requests, and TCEQ approves an increase in copper loading in Lavaca Bay from a daily average of 1.37 pounds/day to 1.47 pounds/day, or up to 36.5 additional pounds of copper each year. Remarkably, it appears the process changes that will lead to this increase in copper discharge have already occurred—that is, that Formosa has already made changes to its manufacturing process that have led to higher pounds of copper being discharged. The CWA does not allow a regulated entity to so entrap an agency, by changing the process without requesting a permit amendment, and then arguing that it can't help but discharge more because the changed process leads to more discharges. If Formosa seeks to change its process and discharge more copper, that entire process must come under review, and Formosa should not have been exceeding or getting close to exceeding its permit requirements prior to this permit amendment.

TCEQ contends that 40 CFR § 122.44(l)(2)(i)(A) allows Formosa to legally discharge higher levels of copper because there have been "material and substantial alterations to the permitted facility [which] occurred after permit issuance which justify the application of a less stringent effluent limitation." Yet TCEQ simply makes a conclusory statement without explaining the alterations that would justify a less stringent effluent limitation. TCEQ's conclusion that whatever necessary unarticulated changes that have been made "justify" lower effluent standards is thus arbitrary and not justified in the record.

Allowing increased amounts of copper to be discharged into Lavaca Bay increases the risk of damage to aquatic species. "Elevated levels of copper are toxic in aquatic environments and may adversely affect fish, invertebrates, plants and amphibians. Acute toxicity effects may include mortality of organisms; chronic toxicity can result in reductions in survival, reproduction and growth."[3]

Further, since Lavaca Bay has been contaminated with mercury, and since mercury and copper have a synergistic effect in a variety of aquatic species,[4] allowing additional copper into the Bay has higher risk of injuring aquatic species, and potentially birds dependent on those aquatic species, including endangered species.

Even assuming Formosa somehow meets an exception to the anti-backsliding provisions of the CWA, there is no evidence in the record to show that these additional copper discharges won't

[3] EPA, "Water Quality Criteria Copper Aquatic Life Criteria: Supplementary Training Materials," http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/copper/background.cfm

[4] Synthamilselvan Dwivedi, A Chezhian, N Kabilan and T Suresh Kumar, "Synergistic Effect of Mercury and Chromium on the Histology and Physiology of Fish, *Tilapia Mossambica* (Peters, 1852) and *Lates calcarifer Calcarifer* (Bloch, 1790)," Toxicol. Intl. 2012 ep-Dec; 19(3): 235–240. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3532766/

sufficiently degrade the Bay to cause harm to aquatic species and endangered species and violate state water quality standards. See 40 CFR 122.44(l)(2)(ii); see also US EPA Interim Objection to Draft Permit and Request for Additional Information to TCEQ, July 28, 2011, at 1 ("Given that the copper limit at Outfall 001 is based on a state water quality standard, it is unclear how an increase in copper loadings through Outfall 001 can reasonably be justified.").

Finally, TCEQ should include concentration based effluent limits as well as mass limits for copper in the permit. On page 1 of its 2011 Interim Objection Letter, EPA stated: "given that the water quality standard for copper is concentration based, the draft permit should also include concentration based effluent limits as well as mass limits."

**2. Increased chloroform discharges violate anti-backsliding provisions of CWA and threaten aquatic species.**

Formosa's draft permit likewise violates the anti-backsliding provisions of the CWA by increasing chloroform discharges to 1.89 lbs/day average and 4.99 lbs/day maximum. 30 TAC ch. 307; 40 CFR 122.44(l). Even though Formosa apparently did not request an increase in chloroform levels in its permit application,[5] TCEQ approved an increase in chloroform loading in Lavaca Bay, stating that Formosa's testing shows higher levels of chloroform than anticipated and arguing that this "new information" exempts Formosa from anti-backsliding requirements. TCEQ's conclusion violates 30 TAC ch. 307 and the CWA.

TCEQ misreads federal anti-backsliding regulations. If there is now "information which was not available at the time of permit issuance," then Formosa can use the anti-backsliding exemption. 40 CFR § 122.44(l)(2)(i)(A)(emphasis added). There is nothing indicating that information about chloroform discharges was not available at the time of the original permit. Further, "new testing methods" are specifically not allowed as a reason to backslide. *Id.*

Chloroform is acutely toxic to pink shrimp.[6] Increases in chloroform discharges also may harm aquatic species and potentially birds dependent on those species, including endangered species.

Even assuming Formosa somehow meets the anti-backsliding provisions of the CWA, there still must be evidence in the record to show that these additional chloroform discharges won't sufficiently degrade the Bay to cause harm to aquatic species and endangered species and violate state water quality standards.

---

[5] See Formosa Application Attachment H, Major and Minor Amendment Requests.

[6] Bentley, R.E., et al. 1975. Acute toxicity of chloroform to bluegill (Lepomis macrochirus), rainbow trout, (Salmo gairdneri), and pink shrimp (Penaeus durorarum). Contract No. WA-6-99-1414-6. U.S. Environ. Prot. Agency.

**3. Permit condition giving Formosa three years to meet dioxin and furan discharge standards is an abuse of discretion and violates the CWA.**

Formosa continues to discharge pursuant to a permit issued in 2005, which expired in 2010 and has been "administratively continued" now for five years. Formosa filed a permit renewal application in 2010 – now five years ago – which described a need to discharge dioxins and furans. Formosa has thus had five years to manage its dioxin and furan discharge. Instead of demanding that Formosa immediately protect the receiving waters, TCEQ, with no evidence showing the need for additional time, now gives Formosa three additional years to comply with furan and dioxin standards. Notably, this is longer than the "one-year compliance period" for 2,3,7,8-TCDD equivalents that TCEQ stated would be included in the draft permit in its May 2013 FACT SHEET, Part VIII B.1.

To now give Formosa three additional years to comply with furan and dioxin standards is an abuse of discretion and harmful to water quality. TCEQ has the authority to allow a discharger time to comply with new effluent limitations, 30 TAC § 307.2(f), but accounting for the five year extension on the permit, Formosa will have had *eight years* notice to comply with these standards from the time of its last permit expiration.

Dioxins and furans, 2,3,7,8 TCDD equivalents, were defined as "priority pollutants" under the CWA in 1982. Appendix A to 40 CFR part 423. At that time, EPA set standards for Best Available Technology Economically Achievable for these pollutants, and in 1997, a new EPA method for analysis of these pollutants was issued.

Formosa should be required to meet the permit limitations for 2,3,7,8 TCDD equivalents (dioxins and furans) immediately.

**4. Formosa's discharges will degrade segments 2453, 2454, Cox Lake and Cox Bay, Lavaca Bay/Chocolate Bay in violation of the CWA.**

Formosa must analyze how tidal activity affects its discharges. Cox Lake has high aquatic life use, and Cox Lake, Cox Bay and Lavaca Bay/Chocolate Bay have exceptional aquatic life use. Texas law prohibits waters to be toxic to aquatic or terrestrial life. Additionally, tides and waves can affect the dispersion and concentration of pollutants discharged, as well as other characteristics of the receiving waters.[7]

[7] See, e.g., Evaluation of Tidal Dilution of Wastewater Discharges into the Delta Using DSM2 QUAL DSM2 User's Group Meeting April 25, 2006, http://baydeltaoffice.water.ca.gov/modeling/deltamodeling/DSM2UsersGroup/DeltaWastewaterDischarges.pdf; Response of Nereis diversicolor (Polychaeta, Nereidae) populations to reduced wastewater discharge in the polluted estuary of Oued Souss, Bay of Agadir, Morocco, A. Ait Alla, B. Detsch, P. Gillet, A. Moukrim, and H. Begayou, ESTUARINE COASTAL AND SHELF SCIENCE (Dec. 2006);

Formosa has violated its permit discharge limits for many pollutants over the last 10 years, including pH, oil & grease, TOC, copper, zinc, 1,2-Dichloroethane, 1,1-Dichloroethane, 2,3,7,8-Tetrachlorodibenzo-p-dixoin, mercury, phenol, purgeable hydrocarbons, BOD, and whole effluent toxicity.[8] And Formosa has been regularly coming close to violating other permit limits, which is why it is seeking an increase in limits for copper and chloroform in particular. Formosa's analysis should demonstrate that its discharges are not harming any estuaries and that its pollutant loads are not affected by tides in such a way that harms aquatic species.

**5. TCEQ inaccurately determines Formosa's compliance history.**

TCEQ's compliance history analysis artificially determines that Formosa is "two clients" and generates two separate compliance histories, one for Formosa Plastics Corporation and one for Formosa Utility Venture. All compliance problems of each "client" should be reviewed for one entity, Formosa Plastics, the applicant in this proceeding. Such a complete review could change whether Formosa, the responsible party, actually has a "satisfactory" compliance history. TCEQ is required to consider "aggregate compliance history" and "patterns of environmental compliance." 30 TAC 60.3(a)(1)(B). By splitting Formosa into two "clients," TCEQ abandons the standards in 30 TAC 60.3(a)(1)(B).

The compliance history also only includes the period from 2005–2010, but since it is now 2015 and the permit has not been issued, the compliance history review should be expanded to include up to the present date per 30 TAC 60.1(b) ("The compliance history period may be extended beyond the date the application for the permit or participation in an innovative program is received by the executive director, up through completion of review of the application."). In particular, it is not clear whether EPA's 2012 Administrative Order under RCRA has been considered as part of the compliance history.

Further, the numerous violations discovered in the joint EPA/TCEQ inspection of Formosa in June 2010 should be included in the compliance history. (See Pellets in discharge, below) Drainage ditches littered with PVC pellets are a clear violation of Formosa's permit. As TCEQ agreed in the ED's Response to Public Comment, PVC pellets discharged from the facility violate the CWA. Likewise a crack in the headwall of outfall number 4 also violated the TPDES permit. See EPA official photos no. 73, 74, Appendix A Photographs from June 16, 2010 Inspection of Formosa.[9]

---

www.researchgate.net/publication/222662225_Response_of_Nereis_diversicolor_(Polychaeta_Nereidae)_populations_to_reduced_wastewater_discharge_in_the_polluted_estuary_of_Oued_Souss_Bay_of_Agadir_Morocco

[8] Compliance data from EPA Enforcement and Compliance History Online (ECHO) database, Effluent Charts for Formosa Point Comfort Plant, http://echo.epa.gov/effluent-charts#TX0085570, and Discharge Monitoring Report Pollution Loading Tool, http://cfpub.epa.gov/dmr/facility_detail.cfm ; Accessed September 18, 2015.

[9] Photo files are too large to attach for these online comments per TCEQ's limit on uploading documents. TCEQ likely already has copies of these photos from the EPA inspection, but if not, here are links to the photos:

**6. The permit needs more specific standards to prohibit LLDPE pellets and PVC dust from being discharged into waters of the United States.**

Protestants have commented that Formosa discharges and continues to discharge polyethylene pellets and PVC pellets and dust in its wastewater. Protestants ask for a specific permit condition stating that LLDPE pellets and PVC dust are solids, and it violates the CWA for Formosa to discharge them. TCEQ responds that such discharges violate Formosa's general permit conditions, but refuses to add a specific condition to the permit. Protestants ask that Formosa be required to notify TCEQ within 24 hours of discharging LLDPE pellets and/or PVC dust. TCEQ again refuses and opines that TCEQ already gets 24-hour notice when a discharge endangers the environment. As LLDPE and PVC dust are toxic solids that do not belong in bodies of water, Protestants demand that TCEQ specify that discharges of these solids requires a 24-hour notice.

TCEQ's disregard for Formosa's discharges of LLDPE pellets and/or PVC dust, a solid waste, in violation of the CWA and its current permit is remarkable. TCEQ participated in an EPA inspection of Formosa in June of 2010. At that time, EPA documented LLDPE pellets and PVC dust littering the ground as well as Formosa's stormwater drainage ditches.

Official photographs taken by EPA during an inspection of the Formosa facility show solid waste destined for discharge. *See* Appendix A Photos, 061610 Formosa; Appendix B Photos, 061710 Formosa. [10] The photos are filled with images of a littered surface at the Formosa facility as well as stormwater drainage ditches and discharges with LLDPE pellets and PVC dust. A few of the many examples include:

- LLDPE pellets on concrete in the rail car loading area. (EPA official photo no. 6, App A Photos 061610 Formosa);
- LLDPE pellets on train track. (EPA official photo no. 7, id.);
- PVC dust in parking lot, (EPA official photo no. 11, id.);
- Drainage ditch with "piles of PVC in drainage channel," (EPA official photo no. 14, id.);
- Apparent PVC dust in drainage channel; (EPA official photo no. 16, id.);
- PVC pellets floating in discharge; (EPA official photo no. 78, 79, 80 id.);
- PVC resin in stormwater discharge (EPA official photo no. 32, App B Photos 061710 Formosa);
- PVC resin on ground near bagging area; (EPA official photo no. 32a [labeled 32], id.).

---

https://www.dropbox.com/s/j5ndxyqif7lybt4/App%20A.%20Photos%20061610%20Formosa.pdf?dl=0; https://www.dropbox.com/s/4vw0m02bywa8icy/App%20B.%20Photos%20061710%20Formosa.pdf?dl=0

[10] See footnote 9.

Clearly, the permit conditions are not stopping Formosa from discharging solid waste into waters of the United States. Permit conditions should be made clearer, 24-hour reporting should be required, to protect the Bay and the fish, oysters and other species depending on clean water.

**7. TCEQ must formally consult US Fish and Wildlife Service regarding the effect on endangered and threatened species of these discharges, and such consultation must include information about LLDC pellets and PVC dust in the discharge, as well as increased copper and chloroform limits.**

A number of endangered species could be taken as a result of discharges by Formosa, and a number of threatened species could be harmed. 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 peregrines tundrius), piping 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 (Cemophora coccinea), and South Texas siren (Siren sp. 1) have been documented in Calhoun County.

TCEQ now agrees that there are bodies of water of critical concern to the endangered Whooping Crane in Calhoun County, where Formosa proposes to discharge. TCEQ admits that it must consult with EPA "and, if appropriate, consult[] with USFWS." TCEQ states that it has "informally" notified U.S. Fish and Wildlife Service of the permit, but USFWS has no record of any consultation on this water discharge permit.

Attorneys for Protestants sent a Freedom of Information request to USFWS regarding any EPA referral for consultation with Formosa. The only consultation related to Formosa's greenhouse gas permit and when to use certain tall equipment in order not to harm the Whooping Cranes. (See attached Exhibit A). USFWS has no record of receiving information about Formosa's water discharges. USFWS has not been consulted about the effects of these discharges on endangered and threatened species.

Any consultation should inform FWS about LLDC pellets and PVC dust in the discharge, as well as increased copper and chloroform limits. Further, TCEQ should inform FWS about the "excursions" on pH and temperatures allowed under this permit as well as the extended period given to Formosa to comply with dioxin and furan limits so that FWS can analyze the effects on threatened and endangered species.

TCEQ has not complied with the Endangered Species Act and must consult with USFWS.

**8. Toxicity Reduction Evaluation should be required.**

As part of the ESA consultation with USFWS, TCEQ should consult USFWS regarding Toxicity Reduction Evaluation (TRE) that would sufficiently protect aquatic life in the Bay. Lavaca Bay has been assaulted by mercury and other pollutants, is a source of fish and oysters and the basis of many persons' livelihood, and should be protected. Just because a toxic discharge doesn't kill aquatic species – and only produces "sublethal" results – does not reduce the significance of the event. A TRE should be required after two toxic events within two months. Depending on the severity of the toxic event, TCEQ should require TRE for one event. The permit requirement that TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. TRE should be mandated in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event. Further, TCEQ should consult TPWD and USFWS regarding this requirement to ensure there is adequate protection for the aquatic life in the Bay.

**9. Formosa should be subject to NSPS Standards**

When Formosa began construction of its Vinyl Chloride Monomer Plant in 1982, it operated on a definite tract of land. In 1987, EPA adopted a final rule for the Organic Chemicals, Plastic and Synthetic Fibers industry. In 1994, Formosa added seven new plants, and in 2001 Formosa added three additional plants. TCEQ contends that these new plants are new "dischargers" and not "new sources" of discharge. However, new land purchased for new plants are not part of the original site.[11] Whether the new plants completed in 1994 and 2001 are located at a new site is significant in determining whether the new plants are "new dischargers" (if at an existing "site") or "new sources" (at a new "site").

On page 2 of its Interim Objection Letter to the Draft Permit in 2011, EPA agreed that Formosa is misclassified as an existing source. EPA stated, "Furthermore, discussion in the fact sheet indicates that the Formosa Plastics facility is an existing source discharger because it began operations in 1982. Information included in the permit application states that the facility completed the 'largest one time expansion of any facility in the State of Texas by the addition of manufacturing facilities at its Point Comfort, Texas location in 1994.' Such a major plant expansion after the 1982 promulgation date for the OCPSF regulations would qualify the expanded operations at the Point Comfort plant as a 'new source' under the regulations rather than an existing source. The addition of the Special Polyvinyl Chloride (SPVC) operations in 2010, would also qualify as a 'new source.'"

[11] "Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity." 40 CFR 122.2

Regardless of whether some of the effluent guidelines for certain pollutant categories are the same for new sources and existing sources, these regulatory distinctions are significant because the facility has not been properly classified and TCEQ has not demonstrated that all proper NSPS standards have been applied, in violation of the CWA.

**10. Effluent limits based on Best Professional Judgment must clearly document and evaluate whether stricter, including zero discharge limits, are proper.**

Many of the effluent limitations in the Draft Permit are based on TCEQ's best professional judgment (BPJ) because no applicable effluent limitation guidelines exist. Except for the five conventional pollutants, the CWA requires technology based effluent limitations to be achieved using the "best available technology economically achievable" or BAT. 33 USC 1311(b)(2). Thus, TCEQ must determine BAT on a case-by-case basis for all pollutant sources not subject to established effluent limitation guidelines, and "the need for and derivation of the permit condition, and the basis for its establishment, should be clearly defined and documented."[12]

It's not clear from the record that TCEQ's process for determining BPJ adequately considered the best available technology. The BPJ analysis for the Draft Permit must be revisited and thoroughly documented to establish the process used and materials considered in reaching the BPJ decision for each pollutant, including whether stricter limits, including zero discharge limits, for these pollutants are BAT. Effluent limitations, including those set by BPJ, must require the elimination of all pollutants where technologically and economically achievable. 33 USC 1311(b)(2)(A). [13] Thus, the levels in the Draft Permit set by TCEQ's BPJ do not meet the technology based effluent limitations required by the CWA.

**11. Significant pH and temperature excursions should be reported within 24 hours and the resulting damage should be monitored.**

TCEQ allows Formosa to have 7 hours and 26 minutes of excursions of pH and temperature levels in any month, with the excursions not exceeding one hour. While the law requires 24-hour reporting to TCEQ of excursions that threaten human and aquatic health, that standard is not clear. Acidification of the seas is a significant threat to oysters. TCEQ should consult with USFWS and put clear permit conditions that establish what pH and temperature levels are significant to aquatic species. Those more specific terms should be added to the permit.

**12. Draft permit must require that all samples and measurements taken for the purpose of monitoring the regulated discharge are representative of the monitored activity.**

---

[12] U.S. EPA Permit Writer's Manual at 5.1.4.12.

[13] *Cf. Tex. Oil & Gas Ass'n v. U.S. EPA*, 161 F.3d 923, 927–29 (upholding EPA's zero discharge limits as BAT in a general permit for the coastal oil and gas industry).

As EPA stated on page 2 of its Interim Objection Letter to the Draft Permit in 2011: "Discussion in the fact sheet and permit indicate that these regulated wastestreams are being mixed with groundwater remediation streams, equipment facility wash down, stormwater, firewater and utility wastewater prior to the application of limitations. 40 CFR Part 122.41(j) requires that all samples and measurements taken for the purpose of monitoring the regulated discharge, shall be representative of the monitored activity. Monitoring of the regulated wastestreams for compliance with ELGs must be performed prior to mixing with any other unregulated wastestreams. Based on this requirement, the current draft permit does not appear to be in compliance with the CWA or the NPDES permitting regulations."

TCEQ has not fixed this issue to comply with the proper standard in the current draft permit – for instance, Page 2a of the draft permit states that "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."

**13. Proper test procedures not included in draft permit.**

It does not appear that the Draft Permit's Test Procedures section on page 4 has been revised to meet 40 CFR 122.41(j)(4), which requires all monitoring for all permits to be conducted according to test procedures approved under 40 CFR 136. As EPA urged in its Interim Objection Letter at page 3, TCEQ must cite 40 CFR 136 as the only source for approved monitoring methods to be in compliance with the CWA.

## III. CONCLUSION

Formosa's Draft Permit suffers from a number of serious legal defects, which must be addressed before the final permit may issue. Protestants appreciate your prompt attention to these comments. Please call Erin Gaines at 512-374-2739 with any questions.

Sincerely,

Erin Gaines
Amy Johnson
Enrique Valdivia
Texas RioGrande Legal Aid
4920 N. I-35
Austin, TX 78751
egaines@trla.org

# Exhibit A

Enrique Valdivia
Attorney
Texas RioGrande Legal Aid, Inc.
1111 North Main Avenue
San Antonio, Texas 78212
(210) 212-3707
evaldivia@trla.org

September 26, 2013

Edith Erfling
Project Leader
USFWS c/o TAMU-CC
6300 Ocean Drive
Corpus Christi, Texas 78412
(281) 286-8282 ext. 228
edith_erfling@fws.gov

Dear Ms. Erfling,

This is a request under the Freedom of Information Act. 5 U.S.C. § 552 et seq. I am requesting all public records and any information considered during the consultation process regarding the two following U.S. Fish & Wildlife Services (FWS) consultations or attempted consultations:

1) a 2004 consultation regarding a wastewater permit renewal between FWS and Formosa Utility Venture, Ltd. and/or Formosa Plastics Corp., and

2) a July 2011 Environmental Protection Agency referral to FWS for an Endangered Species Act consultation with Formosa Utility Venture, Ltd. and/or Formosa Plastics Corp.

If there are any fees for searching or copying these records, please inform me if the cost will exceed $50.00 (fifty). However, I would also like to request a waiver of all fees in that the disclosure of the requested information is in the public interest as Texas RioGrande Legal Aid is a non-profit law firm representing indigent clientele. This information is not being sought for commercial purposes. I am able to accept electronic copies of the named documents if such are available.

If you deny any or all of this request, please cite each specific reason you feel justifies the refusal to release the information and notify me of the appeal procedures available to me under the law.

Thank you for considering my request.

Sincerely,

Enrique Valdivia
Texas RioGrande Legal Aid, Inc.

Mary Orms/R2/FWS/DOI
08/07/2012 03:40 PM

To Steve McVey <smcvey@zephyrenv.com>
cc Dawn Whitehead/R2/FWS/DOI@FWS, Craig Giggleman/R2/FWS/DOI@FWS
bcc
Subject Re: Clarification for Conservation Measures (consultation no. 02ETCC00-2012-TA-0276)

Mr. McVey,

1. We normally request the crane or tall equipment that can be laid down nightly, but if not possible, marking the equipment with some sort of flagging or device that would alert the bird there is an object there and distract them from any linear wires they may collide with.

2. There are different types of bird diverters available. An example is the large balls that cell towers place on their guy wires or that occur on transmission lines.

3. I understand the facility will be lit as it it is now. Whooping cranes will probably avoid such lit areas, and I am not familiar whether the facility marks any tall structures. I would assume that the time whooping cranes may be more vulnerable would be at dawn or dusk when they are flying in or out of an area, and during storms.

4. I was referring haulting construction if a whooping crane appeared and can be resumed once the whooping crane is outside the 1000 ft. area.

5. The bird diverters or potentially the 15 ft+ high equipment being laid down if being used at times for days at the facility.

I hope this helped. I will be ouf of town from 8/8 to 8/15. If you need additional help you may ask for Dawn Whitehead or Craig Giggleman.

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office
c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262

Steve McVey <smcvey@zephyrenv.com>

Steve McVey
<smcvey@zephyrenv.com>
07/30/2012 03:25 PM

To "Mary_Orms@fws.gov" <Mary_Orms@fws.gov>
cc Karen Olson <kolson@zephyrenv.com>
Subject Clarification for Conservation Measures

Mary, What is required in the "marking" of elevated construction equipment? What methods are acceptable/effective?

Also, is marking and installing bird diverters the same?

Does this assume that the construction site will be lit at night with large flood lamps to increase visibility of elevated structures?

To clarify, you recommended that all construction be suspended when a whooping crane was observed within a buffer of 1,000 feet of the construction site. Does this include the existing facility, or just the construction area?

Lastly, which of these recommendations extend beyond the construction period?

Thank you for your responses.

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

02ETCC00-2012-TA-0276

Mary Orms/R2/FWS/DOI
07/24/2012 09:49 AM

To Steve McVey <smcvey@zephyrenv.com>
cc
bcc
Subject RE: Greenhouse Gas Permit - Lavaca Bay

Steve,

Whooping Crane
Calhoun County is within the whooping crane (*Grus americana)* migratory corridor and the wintering grounds of the endangered whooping crane. Whooping cranes usually arrive on the Texas coast between late-October and mid-November and spend almost six months on the wintering grounds. As spring approaches, they leave for the breeding grounds normally between March 25 and April 15 with the last birds usually gone by May 1st (occasional stragglers may stay into mid-May).

Usually, whooping crane migration flights are generally at altitudes of between 1,000 and 6,000 feet, but they fly at lower altitudes when seeking stopover habitats. They will often make low flights up to two miles from a stopover site to forage late in the day or in early morning. They may also interrupt migration flights to drink and/or forage in agricultural fields or wetlands for brief periods and may be at low altitudes during mid-day. Whooping cranes are largely opportunistic in their use of stopover sites along the Central Flyway, and will use sites with available habitat when weather or diurnal conditions require a break in migration. **The Service recommends that:** 1) project construction should be complete prior to the spring and autumn migration of late March to early May and mid-September to mid-November, respectively and 2) if equipment above 15 feet is proposed for use during construction, please mark and/or lie cranes/equipment down during night time hours and periods of low visibility.

Additional recommendations that we spoke of on the telephone call were:
If new transmission lines are required, we recommend they be buried.
If new transmission lines are to be above ground we recommend marking them with bird diverters.
If there are existing transmission lines we recommend those be marked with bird dirverters.
Contractors and workers should be educated as to what species may occur in the area, their appearance, habitats and what protection listed species are offered under the Endangered Species Act and Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act.
If a whooping crane appears on site and is within 1000 feet of construction activities, work should cease until it moves away outside the 1000 foot buffer zone. (You may want to hire a biological monitor during the whooping crane season).
Develop a protocol to notify the proper persons if a whooping crane is observed.

I have attached the map and post monitoring guidelines for the bald eagle. Those are all the recommendations I can think of at the moment, or thought I discussed with you on our phone call.

Calhoun County WHCR map.pptx FINAL BEPDM 05-11-2010_for posting.pdf

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office

c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262
Steve McVey <smcvey@zephyrenv.com>

**Steve McVey**
**<smcvey@zephyrenv.com>**
07/23/2012 01:30 PM

To "Mary_Orms@fws.gov" <Mary_Orms@fws.gov>
cc
Subject RE: Greenhouse Gas Permit - Lavaca Bay

Here is my address.

Thank you for any information that you can provide.

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

**From:** Mary_Orms@fws.gov [mailto:Mary_Orms@fws.gov]
**Sent:** Thursday, July 05, 2012 1:16 PM
**To:** Steve McVey
**Subject:** Re: Greenhouse Gas Permit - Lavaca Bay

Thank you for the info we will be calling in at 1:30

**Steve McVey <**
**smcvey@zephyrenv.com>**

07/05/2012 01:06 PM

To "<Mary_Orms@fws.gov>"
cc Clay Fischer <cfischer@zephyrenv.com>, "Craig_Giggleman@fws.gov" <Craig_Giggleman@fws.gov>, Karen Olson <kolson@zephyrenv.com>
Subject Re: Greenhouse Gas Permit - Lavaca Bay

Great! We can use Zephyr's conference call to facilitate our discussion. Please call the following phone number and use the codes to access our conference line.

281-668-7351
at the voice prompt
Press 1 as a user
Press conference PIN 731#
again, press 731#

Please email me if you have difficulties.

Thanks,
Steve
Sent from my iPhone

On Jul 5, 2012, at 12:52 PM, <Mary_Orms@fws.gov> wrote:

1:30 would be fine

**Steve McVey <**
**smcvey@zephyrenv.com>**

**07/05/2012 12:06 PM**

**To**"Mary_Orms@fws.gov" <Mary_Orms@fws.gov>, **Clay Fischer <**
cfischer@zephyrenv.com>
**cc**"Craig_Giggleman@fws.gov" <Craig_Giggleman@fws.gov>, **Karen Olson <**
kolson@zephyrenv.com>
**Subject**RE: Greenhouse Gas Permit - Lavaca Bay

Thank you Ms. Orms. Would you and Mr. Giggleman be available for a call today at 1:30 or 3:30?

Steve

**Steve McVey, PG**
Texas License No. 2206
**Zephyr Environmental Corporation**
2600 Via Fortuna, Ste 450
Austin, TX 78746
Direct: 512.879.6625
Mobile: 512.924.2841
Main: 512.329.5544
Fax: 512.329.8253
www.zephyrenv.com
www.hazmatacademy.com

**From:** Mary_Orms@fws.gov [mailto:Mary_Orms@fws.gov]
**Sent:** Thursday, July 05, 2012 10:32 AM
**To:** Steve McVey; Clay Fischer
**Cc:** Craig_Giggleman@fws.gov
**Subject:** Fw: Greenhouse Gas Permit - Lavaca Bay

Mr. Fischer and Mr. McVey,

Sorry for the lateness in response. Dawn had sent us the email below and I failed to contact you earlier. Craig Giggleman, our contaminants supervisor and myself are available in the office today if you would like to call in and we can discuss the project. I am sure Dawn explained that the Service does not consult on green house gas impacts, however, we are willing to provide recommendations for other activities associated with the construction if applicable.

Please let us know if you are still interested in having the call today and a recommended time.

Mary Orms
U.S. Fish and Wildlife Service
Corpus Christi Ecological Services Field Office
c/o Texas A&M University at Corpus Christi
6300 Ocean Drive, Unit 5837
Corpus Christi, TX 78412-5837
Phone: (361) 994-9005 Ext: 246
Fax: (361) 994-8262

----- Forwarded by Mary Orms/R2/FWS/DOI on 07/05/2012 09:59 AM -----

**Dawn Whitehead/R2/FWS/DOI**

06/29/2012 10:00 AM

To Mary Orms/R2/FWS/DOI@FWS, Craig Giggleman/R2/FWS/DOI@FWS, Clare Lee/R2/FWS/DOI@FWS

cc Allan Strand/R2/FWS/DOI@FWS, Pat Clements/R2/FWS/DOI@FWS

Subject Fw: Greenhouse Gas Permit - Lavaca Bay

Could you all handle a conference call sometime next week on a GHG Permit for expansion of Formosa Plastics? I am out all next week. I don't think Allan needs to sit in and not sure Pat needs to either. Mary please get back with Clay about what you decide.

Dawn

----- Forwarded by Dawn Whitehead/R2/FWS/DOI on 06/29/2012 09:56 AM -----

Clay Fischer <
cfischer@zephyrenv.com
>

06/29/2012 09:48 AM

To "Dawn_Whitehead@fws.gov" <Dawn_Whitehead@fws.gov>, "Allan_Strand@fws.gov" <Allan_Strand@fws.gov>, "Pat_Clements@fws.gov" <Pat_Clements@fws.gov>

cc Steve McVey <smcvey@zephyrenv.com>

Subject Greenhouse Gas Permit - Lavaca Bay

Hello,

I hope all is well and that you are enjoying the nice summer weather. I am contacting you in regards to an ongoing project Zephyr is assisting with in Calhoun County. Formosa Plastics USA is looking to expand an existing facility in Point Comfort, Texas. Expansion of the facility will require a Greenhouse Gas Permit from EPA. As part of that permit, Zephyr is assisting with the biological assessment of the study area. The attached figure details the study area. The study area is generally situated over Calhoun County but also encompasses portions of Jackson and Victoria Counties. Zephyr has identified the various federally-protected species listed for the counties and is currently studying their likelihood of occurrence in the study area as well as the possible impacts to those species due to the project. I am curious if one, all of you, or someone else from your office would be available next week for a discussion relating to any species of concern to the USFWS within the study area. At this point, we are proposing to accomplish the discussion via conference call, but could arrange a face to face meeting if you feel it is justified. Steve McVey of Zephyr would likely also be involved in those discussions. Please reply to Steve and/or myself with your availability. Thanks!

Regards,

**Clay V. Fischer**
Natural Resources Project Manager
Zephyr Environmental Corp.
2600 Via Fortuna
Suite 450
Austin, Texas 78746
cfischer@zephyrenv.com
www.zephyrenv.com
512.879.6629 (o)
512.592.8591 (c)
512.329.8253 (fax)

7/5/

Steve McVey } natural Resources BA Craig
Clay Fischer Mary
Karen Olsen - Zephyr - air permitting

Proposed Action - Formosa build plant expansion
w/in property
Ethylene & Propylene replace
stock
Propelene - go to new plant

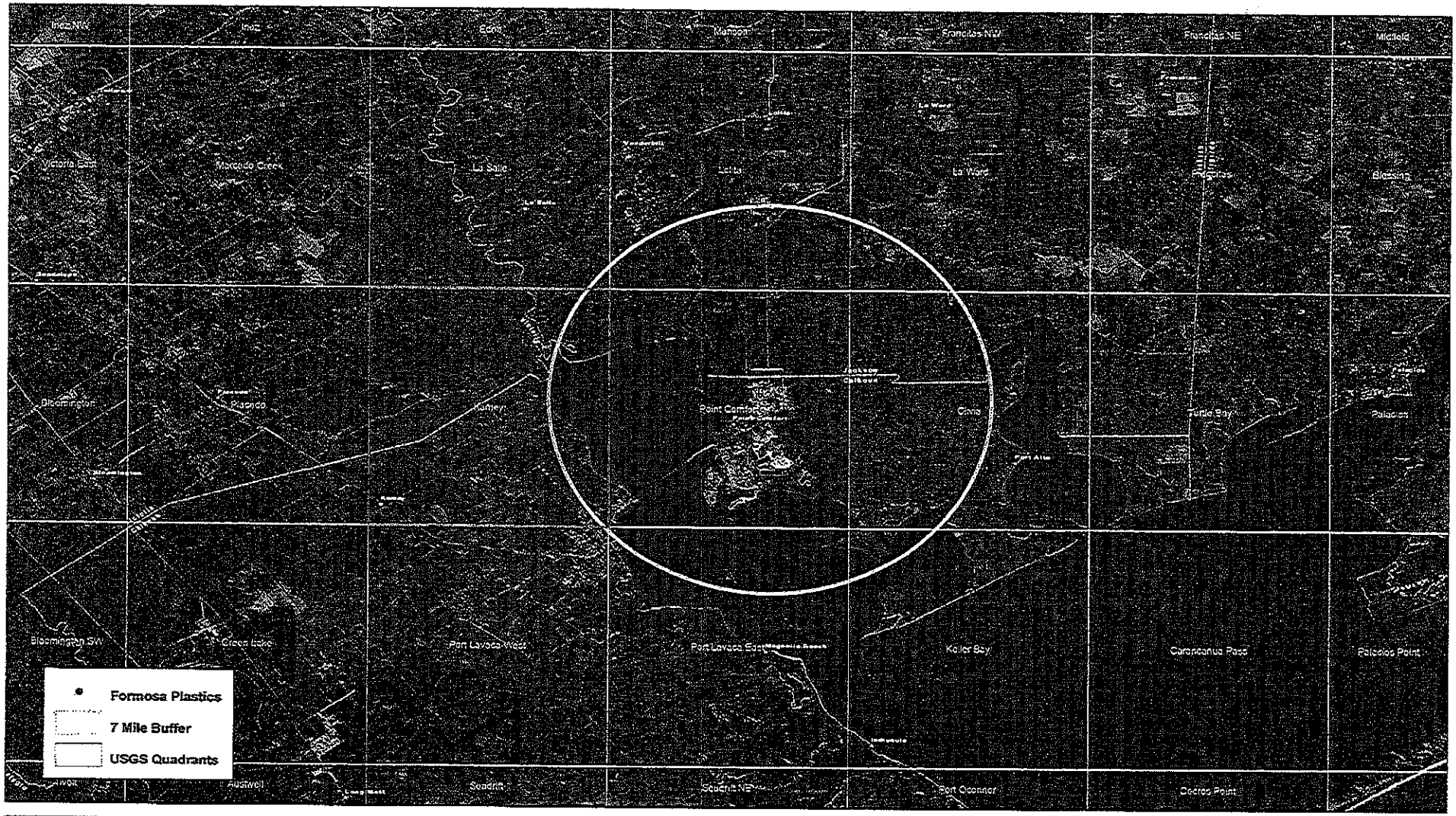
Will exceed a
certain amt of
green house gas - TCEQ - permits - EPA

foot print of new 86-110 acres MOX
construction disturbed
all disturbance - on ground.

Told them repetivetly we do not consult on
Green house gases.

Forward - Language
BE guidelines

02ETCC00-2012-TA-0276


Formosa Plastics
7 Mile Buffer
USGS Quadrants
Scale 1:200,000
1 in = 16,667 ft
0
10,000
20,000
Meters
0
33,000
66,000
Feet
Data Sources:
TNRIS, ESRI- ecubed imagery
zephyr
Quadrants Within a 7 Mile Buffer: GHG Permit
Formosa Plastics, Calhoun County, Texas
File Location:
Drafted By: J. Knowles
Reviewed By: S. McVey
Project No.: 11255.002
Date: 02/07/2012

LSC

LAW OFFICES OF
**TEXAS RIOGANDE LEGAL AID, INC.**
**1111 North Main Street**
**SAN ANTONIO, TEXAS 78212**

Telephone (210) 212-3700 FAX (210) 212-3772

August 2, 2013

IWD
72457

REVIEWED
AUG 22 2013
By

CHIEF CLERKS OFFICE

2013 AUG 22 AM 10:51

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

**via fax 512-239-3311**

RE: Major Permit Amendment Formosa Utility Venture, Ltd. and Formosa Plastics, Corp.
TPDES PERMIT NO. WQ0002436000
Comments and Request for Contested Case Hearing

Greetings:

These comments are filed on behalf of our clients regarding the above-mentioned application:

Mauricio Blanco
714 S. San Antonio Street
Port Lavaca, Texas

Hurtado Francisco
418 W. Manhan
Port Lavaca, Texas

Jose Luis Cruz
418 W. Manhan
Port Lavaca, Texas

Union of Commercial Oysterman of Texas
161 Old Settlement Road
Sea Drift, Texas

Our individual clients and Union members are shrimpers and oystermen who fish in Lavaca Bay. Our clients earn their livelihood fishing from Lavaca/Chocolate Bay and other bays in the vicinity. Our clients are concerned about toxins in oysters and shrimp in Lavaca/Chocolate Bay

as well as a decline in the number of oysters in the Matagorda Bay system. Our clients believe Formosa's Texas Pollutant Discharge Elimination System (TPDES) permit as proposed by the Texas Commission on Environmental Quality (TCEQ) is not sufficiently protective of Lavaca Bay/Chocolate Bay (Lavaca Bay) and will harm their ability to fish the bay and earn a living. Our clients request a contested case hearing.

Lavaca/Chocolate Bay is part of the Matagorda Bay System, which connects to the Gulf of Mexico. Lavaca Bay contains extensive oyster reefs and also shrimp nurseries. Unfortunately, Lavaca Bay has already suffered environmental insults. Extensive discharges of mercury into the Bay by Alcoa lead to a declaration that the contamination was sufficient to require a superfund cleanup. Also, Lavaca Bay is fragile because drought conditions in Texas are limiting fresh water to replenish the Bay. Red tides and algal blooms stress the existing ecosystem. Formosa seeks to discharge additional copper and chloroform into the Bay, as well as a long list of toxins. Formosa seeks to increase the amount of contaminated water it discharges, increase the temperature of its discharge and be permitted to discharge water that will increase the pollution in the Bay. Our clients seek to protect Lavaca Bay from additional pollution that will degrade the Bay. Our clients offer the following specific comments on Formosa's TPDES permit:

**1. Formosa's Bad Compliance History: Formosa should not be allowed more discharges**

Formosa Utility Venture, Ltd. and Formosa Plastics Corp. (Formosa) have a repeated record of non-compliance with environmental laws. The Environmental Protection Agency, the Texas Commission on Environmental Quality (TCEQ) and the Occupational Health and Safety Administration (OSHA) have all fined Formosa. Formosa has had noncompliance issues with its water discharge permits, air permits, and occupational safety performance. Formosa has been fined numerous times, most recently in January of 2013 for failing to comply with a 2010 consent decree with EPA regarding a commitment to install $8000 worth of leak detection equipment. Formosa failed to comply with its consent decree with EPA and was fined $1.47 million in January 2013.

TCEQ must consider Formosa's compliance history when reviewing its TPDES permit. Texas Water Code §26.0281 The Commissioners deserve to know the full extent of Formosa's disregard for the law and failure to protect the surrounding environment. The Union specifically requests that TCEQ fully document Formosa's compliance problems with all laws over the past 20 years. 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.

**2. Overall concern degradation of segments 2453, 2454; must be consistent with Coastal Management Program**

Formosa's increased discharge of pollutants into segments 2453 and 2454 will cause

unreasonable degradation of the water quality of those waters. The designated uses for segments 2454 and 2453 require the highest protection for exceptional aquatic life use, contact recreation, and oyster waters. Finally, the permit must be demonstrably consistent with the Coastal Management Program (CMP) for the Bays and water system; it is not clear from the draft permit that the program is consistent with the CMP. The Union contends that the additional discharges may threaten the existing uses of segments 2453 and 2454.

**3. New Source Performance Standards Apply**

New Source Performance Standards (NSPS), found at 40 CFR 122.2, apply to Formosa. This means in order to comply with law, the permit must include appropriate effluent limitation guidelines, monitoring requirements, limitations and permit conditions all from the new source performance standards. TCEQ has not applied all the NSPS standards to this permit, and the entire permit must be made consistent with those NSPS standards. One example of noncompliance involves the technology at outfall 101. Outfall 101 contains process waste streams, regulated by the Organic Chemicals Plastics and Synthetic Fibers (OCPSF) effluent limitations, 40 CFR 414. The OCPSF requires monitoring effluent before it is mixed, which is not a permit condition in the proposed draft permit. 40 CFR 122.41(j). A thorough review of the NSPS standards with the permit will reveal multiple deficiencies in the permit.

**4. Temperature allowed in new discharge into Bay not protective of exceptional aquatic life use**

Texas water quality standards list the appropriate temperature for segments 2453 and 2453 as 95 degrees Fahrenheit. The proposed permit allows Formosa to discharge water of at a temperature as high as 100 degrees F. This high temperature is not protective of the water quality uses of these waters.

Additionally, the requirement to monitor temperature seems to eliminate any temperature reporting if the exceedance of the temperature standard does not last more than 30 minutes and there are not 7 hours and 26 minutes of temperature exceedances in any 31-day period. This standard is not sufficiently protective. Acute, extreme temperatures can injure aquatic life. TPWD and USFWS should be consulted to recommend at what temperature harm can be cause and should be reported.

**5. Additional copper discharges constitute "backsliding"**

Clean water regulations prevent "backsliding" on effluent limitations in TPDES permits. 40 CFR 122.44 (l)(i)(2). That means the quality of the effluent should not be worse in a reissued permit. Formosa's previous copper discharge limits at outfall 001, which is in the middle of the bay, were 1.37 lb/day. In the proposed permit, those limits are 1.47 lb/day. The proposed less stringent permit limitations violate the anti-backsliding regulation. Formosa should not be allowed to discharge additional copper into the Bay.

**6. Additional Chloroform discharges constitute "backsliding"**

Again, the proposed permit allows "backsliding" on effluent limitations for chloroform in violation of 40 CFR 122.44 (l)(i)(2). The permit states that Formosa's testing shows higher levels of chloroform that previously anticipated, and thus it must be allowed to discharge more. 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.

**7. Dioxin/furan compliance should be immediate, not in three years**

The proposed permit allows three years for Formosa to comply with dioxin/furan limits. The law requires "compliance as soon as possible." 40 CFR 122.47(a)(1). Three years is certainly not as soon as possible, nor is this standard protective of the Bay. Formosa's discharges of dioxin and furan should comply with the law upon issuance of the permit.

**8. Permit terms should specifically prohibit polyethylene pellets and require immediate reporting and clean up of pellets**

Polyethylene pellets have been found in Lavaca Bay, coming from the Formosa facility. 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, that violates 30 TAC 307.4(b)(2-4). Formosa should be required to immediately remove any polyethylene pellets in its discharge. Further, within 24 hours of such a discharge, Formosa should report to TCEQ the details of the discharge and whatever steps it has taken to clean the pellets.

**9. Failure to consult on endangered species issues.**

A number of endangered species could be taken as a result of discharges by Formosa, and a number of threatened species could be harmed. 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 peregrines tundrius), piping 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 (Cemophora coccinea), and South Texas siren (Siren sp. 1) have been documented in Calhoun County. Formosa must consult with U.S. Fish and Wildlife Service regarding the effects of its discharges on these species.

**10. Fecal Impairment issue**

Segments 2453 and 2454 have impairment problems due to bacteria. Formosa discharges human waste under this permit. It is unclear form the permit what kind of treatment Formosa is required to undertake on its human wastewater to protect the Bay from bacteria. Formosa must be required to adequately treat its human waste to protect the Bay from bacteria.

**11. Outfall 901 discharge issue.**

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.

**12. Test methods and monitoring must comply with law.**

All monitoring in the permit must comply with 40 CFR 136, and testing on pollutants must comply with 40 CFR 122.41(j)(4). Testing of pollutants in compliance with to 30 TAC 319.11-319.12 will not achieve compliance with 40 CFR 122.41(j)(40).

**13. Permit should refer to MQL, not MALs**

Not all of TCEQ's MAL standards (minimum analytical level) are consistent with EPA's MQL (maximum quantitation level). A number of TCEQ's MALs are less sensitive than the MQLs. The MQLs should be the testing method in the permit.

**14. Formosa's duty to monitor Lavaca Bay should not be reduced.**

Formosa seeks to reduce monitoring in Lavaca Bay from quarterly each year to such a requirement every three years. The Bay is of high quality. Formosa has a history of noncompliance with its permits and illegal discharges. Monitoring to protect oysters, abundant wildlife and recreation is necessary. Formosa's duty to monitor the bay should not be reduced.

**15. Non-compliance monitoring and reporting should be strengthened and clarified.**

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 – Formosa should be required to send notices to those who request it whenever there is noncompliance with a permit condition. Also, information about permit noncompliance should be saved at the Calhoun County Branch Library in Point Comfort.

Additionally, the permit should state clearly which kinds of situations must be reported as endangering the health of person or aquatic life. The Union recommends that TCEQ consult with USFWS and TPWD regarding which standards harm aquatic life.

Finally, excursions from effluent levels that reach a certain magnitude should be reported within 24 hours to TCEQ, and Formosa should be required to monitor the bay to determine whether their excursions have killed or hurt aquatic life. The Union suggests TCEQ consult USFWS and TPWD to assess the magnitude of excursions that should be reported within 24 hours.

**16. Concern about pH of discharge and acidity of the Bay**

The proposed permit allows the pH of the discharge to be of such a level to threaten aquatic life. 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. Water quality standards set pH levels at 6.5-9. It is difficult to understand the directive that the excursion cannot "exceed the range of 5-11 standard pH units." Does this mean that the excursion can be 11 units higher than the permitted range, or that the highest pH allowed in an excursion is 11 pH? Is the language intended to state that any excursion cannot be lower than 5 or higher than 11 pH? If so, the language should be clarified. Finally, because high acidity injures the ability of some aquatic species to reproduce, the Union contends that TCEQ should consult with TPWD regarding pH excursions. Allowing excessively acidic discharges should not be allowed.

**17. Monitoring and reporting leaks insufficient.**

It should be noted that the most recent enforcement action was instigated because Formosa failed to install leak prevention equipment it was required to install. Formosa's failure to protect against and report leaks should lead TCEQ to put tightly worded protections in the permit. 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. That reporting should be made available to interested parties who request notice and should also be kept at the Calhoun County Lbrary. The permit requires removing holding ponds from the discharge system if lead is detected in the water (and presumably the sediment). It is unclear what happens to this lead-contaminated water, and that should be made clear. Further, the detection of lead should be reported within 24 hours to TCEQ.

**18. Additional wastewater added to discharge**

The proposed permit seems to remove limitations on certain waters discharged. The cap of 9.7 million gallons per day of remediated groundwater and previously treated monitored effluent, as well as the cap of 4.4 million gallons per day of treated process wastewater, equipment/facility washdown, storm water, and utility wastewaters seem to be removed in the permit, so that an unlimited quantity of these waters can be discharged into the bay. The Union is concerned that removing the caps allows Formosa to put unlimited quantities of contaminated waters in to the Bay. There should be some limitation on these discharges or, at least, additional monitoring and sampling of these additional discharges required. Further, some analysis of the effect 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. Again, the Union believes a consultation with USFWS and TPWD would assist the agency. Before allowing the discharge of the new potentially contaminated sources -- 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 – sampling of each type of water should be done to confirm that these waters will not degrade the receiving water. Of particular concern would be leads in these waters or other toxins.

**19. Interested parties should get automatic notice of receiving waters monitoring program**

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 Union requests that TCEQ require Formosa have a mailing list (which could 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.

**20. Chronic biomonitoring requirements should be clear**

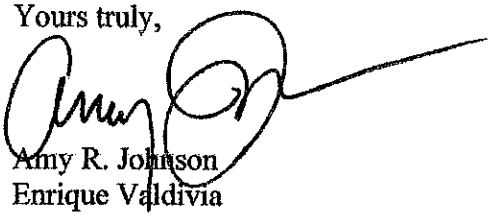
The permit requires whole effluent testing (WET) to determine harm to invertebrates and invertebrates. The permit allows testing to be less frequent, if none of the four WET tests reveal "significant toxicity." This significance statement may refer to "Persistent Toxicity," but it is not clear. The trigger for reduction in frequency of testing should be clearly explained. Further, TCEQ should consult TPWD and USFWS regarding this requirement.

**21. Toxicity Reduction Evaluation (TRE) should be automatic**

A Toxicity Reduction Evaluation (TRE) should be required after two toxic events within two months. Depending on the severity of the toxic event, TCEQ should require TRE for one event. The permit requirement that TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. TRE should be mandated in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event. Further, TCEQ should consult TPWD and USFWS regarding this requirement to ensure there is adequate protection for the aquatic life in the Bay.

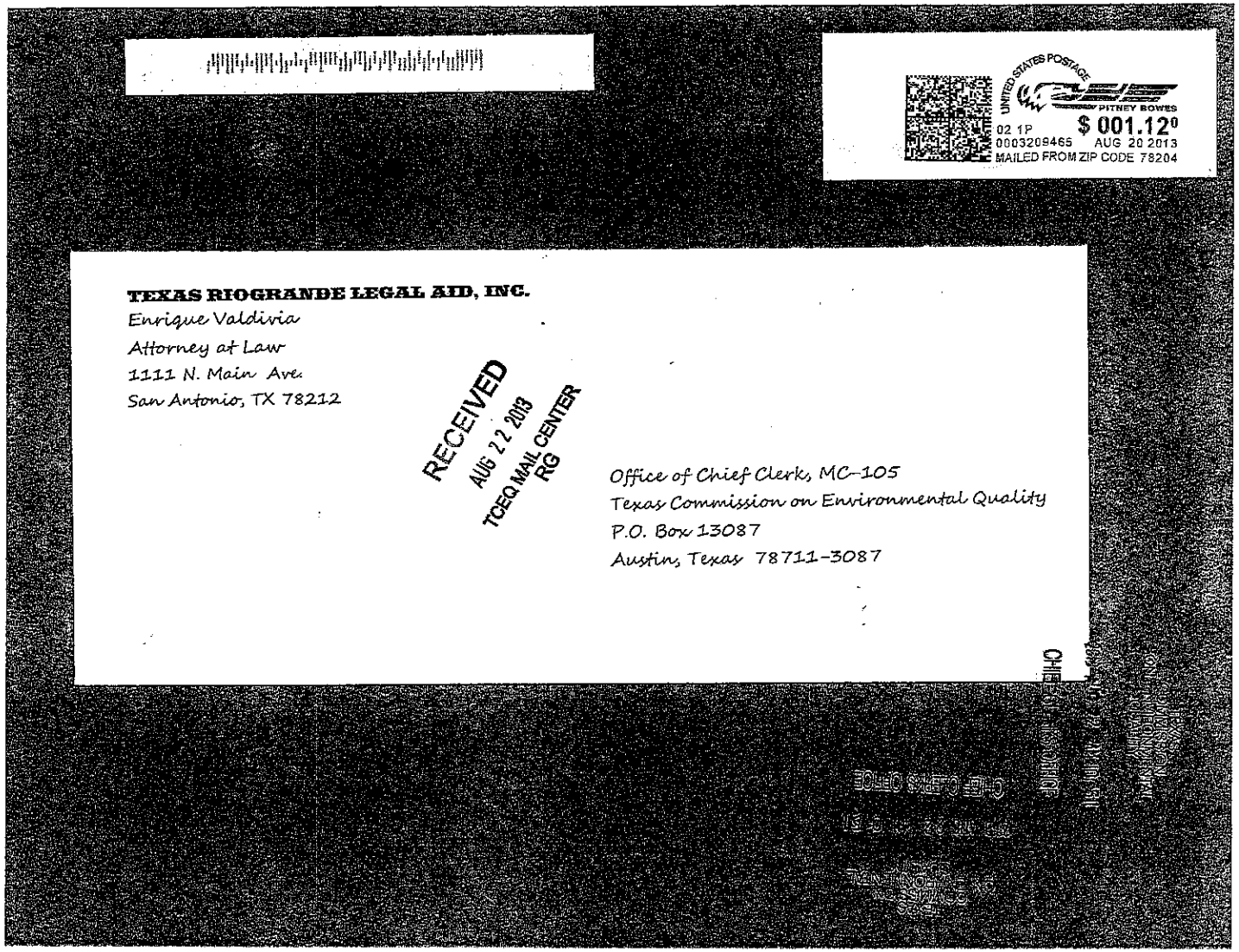
On behalf of our clients, we appreciate the opportunity to comment on this permit and reurge the request for a contested case hearing. We look forward to seeing TCEQ's responses to our comments.

Yours truly,



Amy R. Johnson
Enrique Valdivia

cc: USFWS, TPWD, EPA



UNITED STATES POSTAGE
PITNEY BOWES
02 1P $ 001.12⁰
0003209465 AUG 20 2013
MAILED FROM ZIP CODE 78204

**TEXAS RIOGRANDE LEGAL AID, INC.**
Enrique Valdivia
Attorney at Law
1111 N. Main Ave.
San Antonio, TX 78212

RECEIVED
AUG 22 2013
TCEQ MAIL CENTER
RG

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

**Marisa Weber**

**From:** PUBCOMMENT-OCC
**Sent:** Monday, August 05, 2013 8:55 AM
**To:** PUBCOMMENT-OCC2
**Subject:** FW: Public comment on Permit Number WQ0002436000
**Attachments:** comment letter on Formosa2.pdf

IWD
72457

H

**From:** amy@savagejohnson.com [mailto:amy@savagejohnson.com]
**Sent:** Friday, August 02, 2013 3:42 PM
**To:** donotReply@tceq.state.tx.us
**Subject:** Public comment on Permit Number WQ0002436000

**REGULATED ENTY NAME** FORMOSA POINT COMFORT PLANT

**RN NUMBER:** RN100218973

**PERMIT NUMBER:** WQ0002436000

**DOCKET NUMBER:**

**COUNTY:** CALHOUN

**PRINCIPAL NAME:** FORMOSA UTILITY VENTURE LTD

**CN NUMBER:** CN602650954

**FROM**

**NAME:** Amy Johnson

**E-MAIL:** amy@savagejohnson.com

**COMPANY:** TRLA

**ADDRESS:** 1111 N MAIN AVE
SAN ANTONIO TX 78212-4713

**PHONE:** 2102123700

**FAX:**

**COMMENTS:** Comments are attached

MW

LSC

LAW OFFICES OF
**TEXAS RIOGANDE LEGAL AID, INC.**
**1111 North Main Street**
**SAN ANTONIO, TEXAS 78212**
Telephone (210) 212-3700 FAX (210) 212-3772

August 2, 2013

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

**via fax 512-239-3311**

RE: Major Permit Amendment Formosa Utility Venture, Ltd. and Formosa Plastics, Corp.
TPDES PERMIT NO. WQ0002436000
Comments and Request for Contested Case Hearing

Greetings:

These comments are filed on behalf of our clients regarding the above-mentioned application:

Mauricio Blanco
714 S. San Antonio Street
Port Lavaca, Texas

Hurtado Francisco
418 W. Manhan
Port Lavaca, Texas

Jose Luis Cruz
418 W. Manhan
Port Lavaca, Texas

Union of Commercial Oysterman of Texas
161 Old Settlement Road
Sea Drift, Texas

Our individual clients and Union members are shrimpers and oystermen who fish in Lavaca Bay. Our clients earn their livelihood fishing from Lavaca/Chocolate Bay and other bays in the vicinity. Our clients are concerned about toxins in oysters and shrimp in Lavaca/Chocolate Bay

as well as a decline in the number of oysters in the Matagorda Bay system. Our clients believe Formosa's Texas Pollutant Discharge Elimination System (TPDES) permit as proposed by the Texas Commission on Environmental Quality (TCEQ) is not sufficiently protective of Lavaca Bay/Chocolate Bay (Lavaca Bay) and will harm their ability to fish the bay and earn a living. Our clients request a contested case hearing.

Lavaca/Chocolate Bay is part of the Matagorda Bay System, which connects to the Gulf of Mexico. Lavaca Bay contains extensive oyster reefs and also shrimp nurseries. Unfortunately, Lavaca Bay has already suffered environmental insults. Extensive discharges of mercury into the Bay by Alcoa lead to a declaration that the contamination was sufficient to require a superfund cleanup. Also, Lavaca Bay is fragile because drought conditions in Texas are limiting fresh water to replenish the Bay. Red tides and algal blooms stress the existing ecosystem. Formosa seeks to discharge additional copper and chloroform into the Bay, as well as a long list of toxins. Formosa seeks to increase the amount of contaminated water it discharges, increase the temperature of its discharge and be permitted to discharge water that will increase the pollution in the Bay. Our clients seek to protect Lavaca Bay from additional pollution that will degrade the Bay. Our clients offer the following specific comments on Formosa's TPDES permit:

**1. Formosa's Bad Compliance History: Formosa should not be allowed more discharges**

Formosa Utility Venture, Ltd. and Formosa Plastics Corp. (Formosa) have a repeated record of non-compliance with environmental laws. The Environmental Protection Agency, the Texas Commission on Environmental Quality (TCEQ) and the Occupational Health and Safety Administration (OSHA) have all fined Formosa. Formosa has had noncompliance issues with its water discharge permits, air permits, and occupational safety performance. Formosa has been fined numerous times, most recently in January of 2013 for failing to comply with a 2010 consent decree with EPA regarding a commitment to install $8000 worth of leak detection equipment. Formosa failed to comply with its consent decree with EPA and was fined $1.47 million in January 2013.

TCEQ must consider Formosa's compliance history when reviewing its TPDES permit. Texas Water Code §26.0281 The Commissioners deserve to know the full extent of Formosa's disregard for the law and failure to protect the surrounding environment. The Union specifically requests that TCEQ fully document Formosa's compliance problems with all laws over the past 20 years. 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.

**2. Overall concern degradation of segments 2453, 2454; must be consistent with Coastal Management Program**

Formosa's increased discharge of pollutants into segments 2453 and 2454 will cause

unreasonable degradation of the water quality of those waters. The designated uses for segments 2454 and 2453 require the highest protection for exceptional aquatic life use, contact recreation, and oyster waters. Finally, the permit must be demonstrably consistent with the Coastal Management Program (CMP) for the Bays and water system; it is not clear from the draft permit that the program is consistent with the CMP. The Union contends that the additional discharges may threaten the existing uses of segments 2453 and 2454.

**3. New Source Performance Standards Apply**

New Source Performance Standards (NSPS), found at 40 CFR 122.2, apply to Formosa. This means in order to comply with law, the permit must include appropriate effluent limitation guidelines, monitoring requirements, limitations and permit conditions all from the new source performance standards. TCEQ has not applied all the NSPS standards to this permit, and the entire permit must be made consistent with those NSPS standards. One example of noncompliance involves the technology at outfall 101. Outfall 101 contains process waste streams, regulated by the Organic Chemicals Plastics and Synthetic Fibers (OCPSF) effluent limitations, 40 CFR 414. The OCPSF requires monitoring effluent before it is mixed, which is not a permit condition in the proposed draft permit. 40 CFR 122.41(j). A thorough review of the NSPS standards with the permit will reveal multiple deficiencies in the permit.

**4. Temperature allowed in new discharge into Bay not protective of exceptional aquatic life use**

Texas water quality standards list the appropriate temperature for segments 2453 and 2453 as 95 degrees Fahrenheit. The proposed permit allows Formosa to discharge water of at a temperature as high as 100 degrees F. This high temperature is not protective of the water quality uses of these waters.

Additionally, the requirement to monitor temperature seems to eliminate any temperature reporting if the exceedance of the temperature standard does not last more than 30 minutes and there are not 7 hours and 26 minutes of temperature exceedances in any 31-day period. This standard is not sufficiently protective. Acute, extreme temperatures can injure aquatic life. TPWD and USFWS should be consulted to recommend at what temperature harm can be cause and should be reported.

**5. Additional copper discharges constitute "backsliding"**

Clean water regulations prevent "backsliding" on effluent limitations in TPDES permits. 40 CFR 122.44 (l)(i)(2). That means the quality of the effluent should not be worse in a reissued permit. Formosa's previous copper discharge limits at outfall 001, which is in the middle of the bay, were 1.37 lb/day. In the proposed permit, those limits are 1.47 lb/day. The proposed less stringent permit limitations violate the anti-backsliding regulation. Formosa should not be allowed to discharge additional copper into the Bay.

**6. Additional Chloroform discharges constitute "backsliding"**

Again, the proposed permit allows "backsliding" on effluent limitations for chloroform in violation of 40 CFR 122.44 (l)(i)(2). The permit states that Formosa's testing shows higher levels of chloroform that previously anticipated, and thus it must be allowed to discharge more. 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.

**7. Dioxin/furan compliance should be immediate, not in three years**

The proposed permit allows three years for Formosa to comply with dioxin/furan limits. The law requires "compliance as soon as possible." 40 CFR 122.47(a)(1). Three years is certainly not as soon as possible, nor is this standard protective of the Bay. Formosa's discharges of dioxin and furan should comply with the law upon issuance of the permit.

**8. Permit terms should specifically prohibit polyethylene pellets and require immediate reporting and clean up of pellets**

Polyethylene pellets have been found in Lavaca Bay, coming from the Formosa facility. 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, that violates 30 TAC 307.4(b)(2-4). Formosa should be required to immediately remove any polyethylene pellets in its discharge. Further, within 24 hours of such a discharge, Formosa should report to TCEQ the details of the discharge and whatever steps it has taken to clean the pellets.

**9. Failure to consult on endangered species issues.**

A number of endangered species could be taken as a result of discharges by Formosa, and a number of threatened species could be harmed. 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 peregrines tundrius), piping 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 (Cemophora coccinea), and South Texas siren (Siren sp. 1) have been documented in Calhoun County. Formosa must consult with U.S. Fish and Wildlife Service regarding the effects of its discharges on these species.

**10. Fecal Impairment issue**

Segments 2453 and 2454 have impairment problems due to bacteria. Formosa discharges human waste under this permit. It is unclear form the permit what kind of treatment Formosa is required to undertake on its human wastewater to protect the Bay from bacteria. Formosa must be required to adequately treat its human waste to protect the Bay from bacteria.

**11. Outfall 901 discharge issue.**

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.

**12. Test methods and monitoring must comply with law.**

All monitoring in the permit must comply with 40 CFR 136, and testing on pollutants must comply with 40 CFR 122.41(j)(4). Testing of pollutants in compliance with to 30 TAC 319.11-319.12 will not achieve compliance with 40 CFR 122.41(j)(40).

**13. Permit should refer to MQL, not MALs**

Not all of TCEQ's MAL standards (minimum analytical level) are consistent with EPA's MQL (maximum quantitation level). A number of TCEQ's MALs are less sensitive than the MQLs. The MQLs should be the testing method in the permit.

**14. Formosa's duty to monitor Lavaca Bay should not be reduced.**

Formosa seeks to reduce monitoring in Lavaca Bay from quarterly each year to such a requirement every three years. The Bay is of high quality. Formosa has a history of noncompliance with its permits and illegal discharges. Monitoring to protect oysters, abundant wildlife and recreation is necessary. Formosa's duty to monitor the bay should not be reduced.

**15. Non-compliance monitoring and reporting should be strengthened and clarified.**

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 – Formosa should be required to send notices to those who request it whenever there is noncompliance with a permit condition. Also, information about permit noncompliance should be saved at the Calhoun County Branch Library in Point Comfort.

Additionally, the permit should state clearly which kinds of situations must be reported as endangering the health of person or aquatic life. The Union recommends that TCEQ consult with USFWS and TPWD regarding which standards harm aquatic life.

Finally, excursions from effluent levels that reach a certain magnitude should be reported within 24 hours to TCEQ, and Formosa should be required to monitor the bay to determine whether their excursions have killed or hurt aquatic life. The Union suggests TCEQ consult USFWS and TPWD to assess the magnitude of excursions that should be reported within 24 hours.

**16. Concern about pH of discharge and acidity of the Bay**

The proposed permit allows the pH of the discharge to be of such a level to threaten aquatic life. 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. Water quality standards set pH levels at 6.5-9. It is difficult to understand the directive that the excursion cannot "exceed the range of 5-11 standard pH units." Does this mean that the excursion can be 11 units higher than the permitted range, or that the highest pH allowed in an excursion is 11 pH? Is the language intended to state that any excursion cannot be lower than 5 or higher than 11 pH? If so, the language should be clarified. Finally, because high acidity injures the ability of some aquatic species to reproduce, the Union contends that TCEQ should consult with TPWD regarding pH excursions. Allowing excessively acidic discharges should not be allowed.

**17. Monitoring and reporting leaks insufficient.**

It should be noted that the most recent enforcement action was instigated because Formosa failed to install leak prevention equipment it was required to install. Formosa's failure to protect against and report leaks should lead TCEQ to put tightly worded protections in the permit. 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. That reporting should be made available to interested parties who request notice and should also be kept at the Calhoun County Lbrary. The permit requires removing holding ponds from the discharge system if lead is detected in the water (and presumably the sediment). It is unclear what happens to this lead-contaminated water, and that should be made clear. Further, the detection of lead should be reported within 24 hours to TCEQ.

**18. Additional wastewater added to discharge**

The proposed permit seems to remove limitations on certain waters discharged. The cap of 9.7 million gallons per day of remediated groundwater and previously treated monitored effluent, as well as the cap of 4.4 million gallons per day of treated process wastewater, equipment/facility washdown, storm water, and utility wastewaters seem to be removed in the permit, so that an unlimited quantity of these waters can be discharged into the bay. The Union is concerned that removing the caps allows Formosa to put unlimited quantities of contaminated waters in to the Bay. There should be some limitation on these discharges or, at least, additional monitoring and sampling of these additional discharges required. Further, some analysis of the effect 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. Again, the Union believes a consultation with USFWS and TPWD would assist the agency. Before allowing the discharge of the new potentially contaminated sources -- 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 – sampling of each type of water should be done to confirm that these waters will not degrade the receiving water. Of particular concern would be leads in these waters or other toxins.

**19. Interested parties should get automatic notice of receiving waters monitoring program**

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 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.

**20. Chronic biomonitoring requirements should be clear**

The permit requires whole effluent testing (WET) to determine harm to invertebrates and invertebrates. 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. The trigger for reduction in frequency of testing should be clearly explained. Further, TCEQ should consult TPWD and USFWS regarding this requirement.

**21. Toxicity Reduction Evaluation (TRE) should be automatic**

A Toxicity Reduction Evaluation (TRE) should be required after two toxic events within two months. Depending on the severity of the toxic event, TCEQ should require TRE for one event. The permit requirement that TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. TRE should be mandated in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event. Further, TCEQ should consult TPWD and USFWS regarding this requirement to ensure there is adequate protection for the aquatic life in the Bay.

On behalf of our clients, we appreciate the opportunity to comment on this permit and reurge the request for a contested case hearing. We look forward to seeing TCEQ's responses to our comments.

Yours truly,

Amy R. Johnson
Enrique Valdivia

cc: USFWS, TPWD, EPA

LSC

LAW OFFICES OF
**TEXAS RIOGANDE LEGAL AID, INC.**
**1111 North Main Street**
**SAN ANTONIO, TEXAS 78212**
Telephone (210) 212-3700 FAX (210) 212-3772

IWD
7245?

August 2, 2013

REVIEWED
AUG 05 2013
By

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

**via fax 512-239-3311**

RE: Major Permit Amendment Formosa Utility Venture, Ltd. and Formosa Plastics, Corp.
TPDES PERMIT NO. WQ0002436000
Comments and Request for Contested Case Hearing

Greetings:

These comments are filed on behalf of our clients regarding the above-mentioned application:

Mauricio Blanco
714 S. San Antonio Street
Port Lavaca, Texas

Hurtado Francisco
418 W. Manhan
Port Lavaca, Texas

Jose Luis Cruz
418 W. Manhan
Port Lavaca, Texas

Union of Commercial Oysterman of Texas
161 Old Settlement Road
Sea Drift, Texas

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
2013 AUG -2 PM 4:14
CHIEF CLERKS OFFICE

Our individual clients and Union members are shrimpers and oystermen who fish in Lavaca Bay. Our clients earn their livelihood fishing from Lavaca/Chocolate Bay and other bays in the vicinity. Our clients are concerned about toxins in oysters and shrimp in Lavaca/Chocolate Bay

as well as a decline in the number of oysters in the Matagorda Bay system. Our clients believe Formosa's Texas Pollutant Discharge Elimination System (TPDES) permit as proposed by the Texas Commission on Environmental Quality (TCEQ) is not sufficiently protective of Lavaca Bay/Chocolate Bay (Lavaca Bay) and will harm their ability to fish the bay and earn a living. Our clients request a contested case hearing.

Lavaca/Chocolate Bay is part of the Matagorda Bay System, which connects to the Gulf of Mexico. Lavaca Bay contains extensive oyster reefs and also shrimp nurseries. Unfortunately, Lavaca Bay has already suffered environmental insults. Extensive discharges of mercury into the Bay by Alcoa lead to a declaration that the contamination was sufficient to require a superfund cleanup. Also, Lavaca Bay is fragile because drought conditions in Texas are limiting fresh water to replenish the Bay. Red tides and algal blooms stress the existing ecosystem. Formosa seeks to discharge additional copper and chloroform into the Bay, as well as a long list of toxins. Formosa seeks to increase the amount of contaminated water it discharges, increase the temperature of its discharge and be permitted to discharge water that will increase the pollution in the Bay. Our clients seek to protect Lavaca Bay from additional pollution that will degrade the Bay. Our clients offer the following specific comments on Formosa's TPDES permit:

**1. Formosa's Bad Compliance History: Formosa should not be allowed more discharges**

Formosa Utility Venture, Ltd. and Formosa Plastics Corp. (Formosa) have a repeated record of non-compliance with environmental laws. The Environmental Protection Agency, the Texas Commission on Environmental Quality (TCEQ) and the Occupational Health and Safety Administration (OSHA) have all fined Formosa. Formosa has had noncompliance issues with its water discharge permits, air permits, and occupational safety performance. Formosa has been fined numerous times, most recently in January of 2013 for failing to comply with a 2010 consent decree with EPA regarding a commitment to install $8000 worth of leak detection equipment. Formosa failed to comply with its consent decree with EPA and was fined $1.47 million in January 2013.

TCEQ must consider Formosa's compliance history when reviewing its TPDES permit. Texas Water Code §26.0281 The Commissioners deserve to know the full extent of Formosa's disregard for the law and failure to protect the surrounding environment. The Union specifically requests that TCEQ fully document Formosa's compliance problems with all laws over the past 20 years. 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.

**2. Overall concern degradation of segments 2453, 2454; must be consistent with Coastal Management Program**

Formosa's increased discharge of pollutants into segments 2453 and 2454 will cause

unreasonable degradation of the water quality of those waters. The designated uses for segments 2454 and 2453 require the highest protection for exceptional aquatic life use, contact recreation, and oyster waters. Finally, the permit must be demonstrably consistent with the Coastal Management Program (CMP) for the Bays and water system; it is not clear from the draft permit that the program is consistent with the CMP. The Union contends that the additional discharges may threaten the existing uses of segments 2453 and 2454.

**3. New Source Performance Standards Apply**

New Source Performance Standards (NSPS), found at 40 CFR 122.2, apply to Formosa. This means in order to comply with law, the permit must include appropriate effluent limitation guidelines, monitoring requirements, limitations and permit conditions all from the new source performance standards. TCEQ has not applied all the NSPS standards to this permit, and the entire permit must be made consistent with those NSPS standards. One example of noncompliance involves the technology at outfall 101. Outfall 101 contains process waste streams, regulated by the Organic Chemicals Plastics and Synthetic Fibers (OCPSF) effluent limitations, 40 CFR 414. The OCPSF requires monitoring effluent before it is mixed, which is not a permit condition in the proposed draft permit. 40 CFR 122.41(j). A thorough review of the NSPS standards with the permit will reveal multiple deficiencies in the permit.

**4. Temperature allowed in new discharge into Bay not protective of exceptional aquatic life use**

Texas water quality standards list the appropriate temperature for segments 2453 and 2453 as 95 degrees Fahrenheit. The proposed permit allows Formosa to discharge water of at a temperature as high as 100 degrees F. This high temperature is not protective of the water quality uses of these waters.

Additionally, the requirement to monitor temperature seems to eliminate any temperature reporting if the exceedance of the temperature standard does not last more than 30 minutes and there are not 7 hours and 26 minutes of temperature exceedances in any 31-day period. This standard is not sufficiently protective. Acute, extreme temperatures can injure aquatic life. TPWD and USFWS should be consulted to recommend at what temperature harm can be cause and should be reported.

**5. Additional copper discharges constitute "backsliding"**

Clean water regulations prevent "backsliding" on effluent limitations in TPDES permits. 40 CFR 122.44 (l)(i)(2). That means the quality of the effluent should not be worse in a reissued permit. Formosa's previous copper discharge limits at outfall 001, which is in the middle of the bay, were 1.37 lb/day. In the proposed permit, those limits are 1.47 lb/day. The proposed less stringent permit limitations violate the anti-backsliding regulation. Formosa should not be allowed to discharge additional copper into the Bay.

**6. Additional Chloroform discharges constitute "backsliding"**

Again, the proposed permit allows "backsliding" on effluent limitations for chloroform in violation of 40 CFR 122.44 (l)(i)(2). The permit states that Formosa's testing shows higher levels of chloroform that previously anticipated, and thus it must be allowed to discharge more. 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.

**7. Dioxin/furan compliance should be immediate, not in three years**

The proposed permit allows three years for Formosa to comply with dioxin/furan limits. The law requires "compliance as soon as possible." 40 CFR 122.47(a)(1). Three years is certainly not as soon as possible, nor is this standard protective of the Bay. Formosa's discharges of dioxin and furan should comply with the law upon issuance of the permit.

**8. Permit terms should specifically prohibit polyethylene pellets and require immediate reporting and clean up of pellets**

Polyethylene pellets have been found in Lavaca Bay, coming from the Formosa facility. 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, that violates 30 TAC 307.4(b)(2-4). Formosa should be required to immediately remove any polyethylene pellets in its discharge. Further, within 24 hours of such a discharge, Formosa should report to TCEQ the details of the discharge and whatever steps it has taken to clean the pellets.

**9. Failure to consult on endangered species issues.**

A number of endangered species could be taken as a result of discharges by Formosa, and a number of threatened species could be harmed. 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 peregrines tundrius), piping 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 (Cemophora coccinea), and South Texas siren (Siren sp. 1) have been documented in Calhoun County. Formosa must consult with U.S. Fish and Wildlife Service regarding the effects of its discharges on these species.

**10. Fecal Impairment issue**

Segments 2453 and 2454 have impairment problems due to bacteria. Formosa discharges human waste under this permit. It is unclear form the permit what kind of treatment Formosa is required to undertake on its human wastewater to protect the Bay from bacteria. Formosa must be required to adequately treat its human waste to protect the Bay from bacteria.

**11. Outfall 901 discharge issue.**

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.

**12. Test methods and monitoring must comply with law.**

All monitoring in the permit must comply with 40 CFR 136, and testing on pollutants must comply with 40 CFR 122.41(j)(4). Testing of pollutants in compliance with to 30 TAC 319.11-319.12 will not achieve compliance with 40 CFR 122.41(j)(40).

**13. Permit should refer to MQL, not MALs**

Not all of TCEQ's MAL standards (minimum analytical level) are consistent with EPA's MQL (maximum quantitation level). A number of TCEQ's MALs are less sensitive than the MQLs. The MQLs should be the testing method in the permit.

**14. Formosa's duty to monitor Lavaca Bay should not be reduced.**

Formosa seeks to reduce monitoring in Lavaca Bay from quarterly each year to such a requirement every three years. The Bay is of high quality. Formosa has a history of noncompliance with its permits and illegal discharges. Monitoring to protect oysters, abundant wildlife and recreation is necessary. Formosa's duty to monitor the bay should not be reduced.

**15. Non-compliance monitoring and reporting should be strengthened and clarified.**

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 – Formosa should be required to send notices to those who request it whenever there is noncompliance with a permit condition. Also, information about permit noncompliance should be saved at the Calhoun County Branch Library in Point Comfort.

Additionally, the permit should state clearly which kinds of situations must be reported as endangering the health of person or aquatic life. The Union recommends that TCEQ consult with USFWS and TPWD regarding which standards harm aquatic life.

Finally, excursions from effluent levels that reach a certain magnitude should be reported within 24 hours to TCEQ, and Formosa should be required to monitor the bay to determine whether their excursions have killed or hurt aquatic life. The Union suggests TCEQ consult USFWS and TPWD to assess the magnitude of excursions that should be reported within 24 hours.

**16. Concern about pH of discharge and acidity of the Bay**

The proposed permit allows the pH of the discharge to be of such a level to threaten aquatic life. 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. Water quality standards set pH levels at 6.5-9. It is difficult to understand the directive that the excursion cannot "exceed the range of 5-11 standard pH units." Does this mean that the excursion can be 11 units higher than the permitted range, or that the highest pH allowed in an excursion is 11 pH? Is the language intended to state that any excursion cannot be lower than 5 or higher than 11 pH? If so, the language should be clarified. Finally, because high acidity injures the ability of some aquatic species to reproduce, the Union contends that TCEQ should consult with TPWD regarding pH excursions. Allowing excessively acidic discharges should not be allowed.

**17. Monitoring and reporting leaks insufficient.**

It should be noted that the most recent enforcement action was instigated because Formosa failed to install leak prevention equipment it was required to install. Formosa's failure to protect against and report leaks should lead TCEQ to put tightly worded protections in the permit. 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. That reporting should be made available to interested parties who request notice and should also be kept at the Calhoun County Library. The permit requires removing holding ponds from the discharge system if lead is detected in the water (and presumably the sediment). It is unclear what happens to this lead-contaminated water, and that should be made clear. Further, the detection of lead should be reported within 24 hours to TCEQ.

**18. Additional wastewater added to discharge**

The proposed permit seems to remove limitations on certain waters discharged. The cap of 9.7 million gallons per day of remediated groundwater and previously treated monitored effluent, as well as the cap of 4.4 million gallons per day of treated process wastewater, equipment/facility washdown, storm water, and utility wastewaters seem to be removed in the permit, so that an unlimited quantity of these waters can be discharged into the bay. The Union is concerned that removing the caps allows Formosa to put unlimited quantities of contaminated waters in to the Bay. There should be some limitation on these discharges or, at least, additional monitoring and sampling of these additional discharges required. Further, some analysis of the effect 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. Again, the Union believes a consultation with USFWS and TPWD would assist the agency. Before allowing the discharge of the new potentially contaminated sources -- 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 – sampling of each type of water should be done to confirm that these waters will not degrade the receiving water. Of particular concern would be leads in these waters or other toxins.

**19. Interested parties should get automatic notice of receiving waters monitoring program**

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 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.

**20. Chronic biomonitoring requirements should be clear**

The permit requires whole effluent testing (WET) to determine harm to invertebrates and invertebrates. 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. The trigger for reduction in frequency of testing should be clearly explained. Further, TCEQ should consult TPWD and USFWS regarding this requirement.

**21. Toxicity Reduction Evaluation (TRE) should be automatic**

A Toxicity Reduction Evaluation (TRE) should be required after two toxic events within two months. Depending on the severity of the toxic event, TCEQ should require TRE for one event. The permit requirement that TRE be conducted after "multiple toxic events" and after being instructed by TCEQ does not provide sufficient protection. TRE should be mandated in certain situations, and TCEQ should have the authority to require TRE in case of a severe toxic event. Further, TCEQ should consult TPWD and USFWS regarding this requirement to ensure there is adequate protection for the aquatic life in the Bay.

On behalf of our clients, we appreciate the opportunity to comment on this permit and reurge the request for a contested case hearing. We look forward to seeing TCEQ's responses to our comments.

Yours truly,

Amy R. Johnson
Enrique Valdivia

cc: USFWS, TPWD, EPA

LSC

LAW OFFICE OF
**TEXAS RIOGRANDE LEGAL AID, INC.**
AUSTIN BRANCH
4920 NORTH IH-35
AUSTIN, TX 78751
TELEPHONE (512) 374-2700 TOLL FREE (800) 369-9270
FAX (512) 447-3940
TDD (512) 441-9487

# FACSIMILE

| | | | |
|---|---|---|---|
| *Date:* | August 2, 2013 | *Total Pages: (including this page)* 8 *pages* | |
| *To:* | Office of Chief Clerk, MC-105<br>Texas Commission on<br>Environmental Quality | *Fax:* | ( 512 ) 239-3311 |
| *Re:* | Major Permit Amendment Formosa Utility Venture, Ltd. And Formosa Plastics, Corp.<br>TPDES PERMIT NO. WQ0002436000<br>Comments and Request for Contested Case Hearing | | |
| *From:* | Amy R. Johnson<br>Enrique Valdivia<br>Robert Doggett | *Fax:* | (512) 447-3940 |

Original to follow: ☑ Yes ☐ No

☑ Regular Mail ☐ Overnight Delivery ☐ Certified Mail ☐ Hand Delivered

**Document(s) Faxed:**

- Letter to Office of Chief Clerk, MC-105

**MESSAGE:**

2013 AUG -2 PM 4:14
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CONTACT:**

**NAME:** Anna **PHONE: (512) 374-** 2771

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under Texas law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify me immediately by telephone and return it to me by mail without making a copy. Thank you

**Marisa Weber**

**From:** PUBCOMMENT-OCC
**Sent:** Monday, July 29, 2013 8:52 AM
**To:** PUBCOMMENT-OCC2
**Subject:** FW: Public comment on Permit Number WQ0002436000

H

JWD 72457

**From:** wilsonalamobay@aol.com [mailto:wilsonalamobay@aol.com]
**Sent:** Sunday, July 28, 2013 12:29 PM
**To:** donotReply@tceq.state.tx.us
**Subject:** Public comment on Permit Number WQ0002436000

**REGULATED ENTY NAME** FORMOSA POINT COMFORT PLANT

**RN NUMBER:** RN100218973

**PERMIT NUMBER:** WQ0002436000

**DOCKET NUMBER:**

**COUNTY:** CALHOUN

**PRINCIPAL NAME:** FORMOSA UTILITY VENTURE LTD

**CN NUMBER:** CN602650954

**FROM**

**NAME:** MS Diane Wilson

**E-MAIL:** wilsonalamobay@aol.com

**COMPANY:** Texas Injured Workers

**ADDRESS:** 161 OLD SETTLEMENT RD
SEADRIFT TX 77983-4426

**PHONE:** 3612182353

**FAX:**

**COMMENTS:** My name is Diane Wilson. I am 64, a lifelong resident of Calhoun County, and my commercial fishing family has lived and worked in the area for 120 years. I am a fourth generation shrimper and a cofounder and board member of Texas Injured Workers. Texas Injured Workers (www.texasinjuredworkers.org) is a grassroots groups that began in Calhoun County, Texas and consists primarily of injured workers, former workers, current workers, and whistleblowers from the local

MW

petrochemical, gas, and oil industries on the Texas Gulf Coast. I am requesting a contested case hearing on TPDES Permit No. WQ0002436000, Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas, P.O.Box 700, Point Comfort, Texas 77978-0700. I am requesting this hearing on behalf of Texas Injured Workers and its members,most specifically, Ronnie Hamrick, who spent 20 years at Formosa Plastics, primarily, as a shift supervisor at the PVC unit in the old plant. He is a lifelong resident of Calhoun County, Texas and graduated from Calhoun High School. He is retired from Formosa Plastics, Texas and is a member of Texas Injured Workers. 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 discharge and following concerns. Our concerns are the following: 1) Effluent Limitations for Outfalls 001-013 indicate that there shall be no discharge of floating solids in the discharge from any of the referenced outfalls. TCEQ Rule 307.4 (b) (2-4) requires that all discharges to waters of the state must be free of floating debris and suspended solids. According to discussion with EPA Region 6 enforcement personnel, it is known that polyethylene pellets (solids) have been found and continue to be found floating throughout Lavaca Bay as well as along the adjacent shoreline. (see: alerts.skytruth.org/report/ba51e3c5-9fe8-3f81-b594-a2c45b3c#c=stae: NRC report ID: 1046264; Incident time: 2013-05-07 08:28:00; Nearest City: Point Comfort, TX. Reported size: 75 feet by 200 feet: Caller is reporting an unknown white foamy substance floating in Lavaca Bay). In addition, a recent EPA inspection at Formosa Plastics' old PVC/Vinyl Chloride plant found significant PVC dust littering the workplace, process area, and drainage ditches leading to outfalls to the bay. EPA personnel took numerous photos where the white substance had accumulated. A few years before, a utilities wastewater worker led a group of TCEQ Task Force inspectors from Corpus Christi district office to an island/reef in Lavaca Bay that was covered with PVC pellets where a high tide had deposited the material. On any given day, a visit to the boat launching area at Cox Creek (behind Formosa) or to adjacent shores will unearth PVC pellets. Several years ago a visitor at the Formosa guest house (across the street from the Formosa expansion and bordering Lavaca Bay) walked behind the building and beyond some trees and found a deposit of PVC pellets that measured past his wrist when he stuck his hand into the pellets. The previous high tide had deposited them there. Please provide clarification as to the applicability of the permit limits, the State Rules and the suspect discharge of polyethylene pellets/dust being found in the drainage ditches, the bay and surrounding area. 1. A variety of phthalates have been detected in Lavaca Bay during a Formosa monitoring program. DEHP and DnBP were observed "very frequently" . The presence of phthalates in an area of active commercial shrimping and fishing is disturbing because they are known to bioconcentrate in shrimp, oysters, and some fish, increasing the likelihood of human exposure. The average concentration of DEHP in seawater is 0.005 ppb to 0.7 ppb. In contract DEHP levels in the water around Formosa's outfall has ranged from 12 ppb to 68 ppb; 17 to 13,600 times higher than the background concentrations. The Maximum Contaminant Goal for DEHP in drinking water is 0ppb. The action level is 6ppb. Formosa's DEHP contamination was 2 to 11 times higher than this limit. In 2002, I was involved as a local volunteer for a pilot study to test for phthalates within 50 local Vietnamese couples who fished for a living and ate the seafood in Lavaca/Matagorda Bay. The study showed significant concentrations of phthalates within the urine. Has the plasticers in Formosa's discharge been evaluated as to the effect on the marine life and the human population? 3) According to permittee, increases in copper loading should be allowed because trends indicate that current mass effluent limitations will be infeasible to meet on a consistent basis. Given that copper limit at outfall 001 is based on state water quality standard, how is an increase in copper loadings through outfall 001 justified? Also water quality standard for copper is concentration based, the draft permit should also include concentration based effluent limits as well as mass limits. Also 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? Please clarify. 4) 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. Given the significant economics played by the commercial oyster industry in Calhoun County (TP&W, unpublished data, 2013 ex-vessel value in Calhoun County is $5.5 million) 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. For instance, how will the 5 degree increase in temperature requested in the permit affect the oysters? What about the increase in discharge flow because of the increase of production at the Formosa facility which directly influences their

fresh water needs from Lake Texana, and consequently the flow /or lack thereof into Lavaca Bay. What is the indirect result of lack of freshwater flow and subsequent lack of nutritional needs on the oyster reefs? 5) What has been the effect of Formosa's permit requirement that flow/concentrations be adjusted to low and hi tides in Lavaca Bay? I ask this because a Corpus Christi biologist informed me that repeated boat trips by TCEQ to Lavaca Bay to monitor discharge flow during hi and low tides appeared to show discrepancies in Formosa's reporting. Can the truth and/or validity of this statement be investigated? 6) A 5 year study of Formosa's wastewater exceedances, enforcement actions, adminstrative orders, and violations should be undertaken to determine whether Formosa deserves increased flows and loading of toxins into the Lavaca Bay and a decrease in monitoring. 7) 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. Please clarify how the oyster resource that is so critical for the economic survival of the commercial oystermen and the businesses and families associated will them in Calhoun County will not be injured by the proposed discharge but remain a viable resource for generations to come. In addition, it is critical to evaluating the health and viability of the oysters in Lavaca Bay by determining the landings and ex vessel value of oysters PRIOR to Formosa's discharge into Lavaca Bay and then the preceding and current landings to establish whether there has been or continues to be an impact upon the oyster production in Lavaca/Matagorda Bay by Formosa's discharge. Also, Texas Parks and Wildlife, using BP funds, is proposing to establish oyster reefs in Lavaca/Matagorda Bay. Will these oyster reefs be impacted by Formosa's increased needs for fresh water and increased toxic loading? 8 )All requests for lessening of monitoring should be disapproved. Given Lavaca Bay's shallow waters and the significant part that it plays in the health of the Matagorda Bay estuary, then juxtaposition it with the nature of Formosa's discharge and their own admission that the trend they are will not meet limits on a consistant basis. This is a clear indication that monitoring is warranted. More not less. 9) Zero discharge of Formosa's waste water should be an option. In 1997, Formosa Plastics signed an agreement with me, Diane Wilson, for Zero Discharge of their wastewater. EPA, TNRCC, and Jim Blackburn also signed the agreement. 33 percent of Formosa's original wastestream was recycled with hundreds of thousands of gallons of fresh water saved daily. In additon, the following year, Calhoun County Commissioners signed a resolution supporting zero discharge of industrial wastewaters in the area.

**Marisa Weber**

**From:** PUBCOMMENT-OCC
**Sent:** Wednesday, July 17, 2013 8:27 AM
**To:** PUBCOMMENT-OCC2
**Subject:** FW: Public comment on Permit Number WQ0002436000

H

**From:** wilsonalamobay@aol.com [mailto:wilsonalamobay@aol.com]
**Sent:** Tuesday, July 16, 2013 10:20 PM
**To:** donotReply@tceq.state.tx.us
**Subject:** Public comment on Permit Number WQ0002436000

IWD / 72457

**REGULATED ENTY NAME** FORMOSA POINT COMFORT PLANT

**RN NUMBER:** RN100218973

**PERMIT NUMBER:** WQ0002436000

**DOCKET NUMBER:**

**COUNTY:** CALHOUN

**PRINCIPAL NAME:** FORMOSA UTILITY VENTURE LTD

**CN NUMBER:** CN602650954

**FROM**

**NAME:** MS Diane Wilson

**E-MAIL:** wilsonalamobay@aol.com

**COMPANY:** San Antonio Bay Water Keeper

**ADDRESS:** 161 OLD SETTLEMENT RD
SEADRIFT TX 77983-4426

**PHONE:** 3612182353

**FAX:**

**COMMENTS:** My name is Diane Wilson. I am 64, a lifelong resident of Calhoun County, and my commercial fishing family has lived and worked in the area for 120 years. I am a fourth generation shrimper and the offical Water Keeper and executive director of San Antonio Bay Water Keeper. Our grassroots group is committed to preserving and protecting the health of San Antonio, Lavaca, and Matagorda Bays and its watershed for our children, our economy and our future, through advocacy and education and enforcement of the Clean Water

Act. I am requesting a contested case hearing on TPDES Permit No. WQ0002436000, Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas, P.O.Box 700, Point Comfort, Texas 77978-0700. I am requesting this hearing on behalf of San Antonio Bay Water Keeper and its members, predominately commercial oystermen and shrimpers, but most specifically, David and Christi Campos, Port Lavaca, Texas, who's livlihood and that of their children depend upon the viability and health of the oysters in Lavaca/Matagorda Bay. Our concerns are the following: 1) Effluent Limitations for Outfalls 001-013 indicate that there shall be no discharge of floating solids in the discharge from any of the referenced outfalls. TCEQ Rule 307.4 (b) (2-4) requires that all discharges to waters of the state must be free of floating debris and suspended solids. According to discussion with EPA Region 6 enforcement personnel, it is known that polyethylene pellets (solids) have been found and continue to be found floating throughout Lavaca Bay as well as along the adjacent shoreline. (see: alerts.skytruth.org/report/ba51e3c5-9fe8-3f81-b594-a2c45b3c#c=stae: NRC report ID: 1046264; Incident time: 2013-05-07 08:28:00; Nearest City: Point Comfort, TX. Reported size: 75 feet by 200 feet: Caller is reporting an unknown white foamy substance floating in Lavaca Bay). In addition, a recent EPA inspection at Formosa Plastics' old PVC/Vinyl Chloride plant found significant PVC dust littering the workplace, process area, and drainage ditches leading to outfalls to the bay. EPA personnel took numerous photos where the white substance had accumulated. A few years before, a utilities wastewater worker led a group of TCEQ Task Force inspectors from Corpus Christi district office to an island/reef in Lavaca Bay that was covered with PVC pellets where a high tide had deposited the material. On any given day, a visit to the boat launching area at Cox Creek (behind Formosa) or to adjacent shores will unearth PVC pellets. Several years ago a visitor at the Formosa guest house (across the street from the Formosa expansion and bordering Lavaca Bay) walked behind the building and beyond some trees and found a deposit of PVC pellets that measured past his wrist when he stuck his hand into the pellets. The previous high tide had deposited them there. Please provide clarification as to the applicability of the permit limits, the State Rules and the suspect discharge of polyethylene pellets/dust being found in the drainage ditches, the bay and surrounding area. A variety of phthalates have been detected in Lavaca Bay during a Formosa monitoring program. DEHP and DnBP were observed "very frequently" . The presence of phthalates in an area of active commercial shrimping and fishing is disturbing because they are known to bioconcentrate in shrimp, oysters, and some fish, increasing the likelihood of human exposure. The average concentration of DEHP in seawater is 0.005 ppb to 0.7 ppb. In contract DEHP levels in the water around Formosa's outfall has ranged from 12 ppb to 68 ppb; 17 to 13,600 times higher than the background concentrations. The Maximum Contaminant Goal for DEHP in drinking water is 0ppb. The action level is 6ppb. Formosa's DEHP contamination was 2 to 11 times higher than this limit. In 2002, I was involved as a local volunteer for a pilot study to test for phthalates within 50 local Vietnamese couples who fished for a living and ate the seafood in Lavaca/Matagorda Bay. The study showed significant concentrations of phthalates within the urine. Has the plasticers in Formosa's discharge been evaluated as to the effect on the marine life and the human population? 3) According to permittee, increases in copper loading should be allowed because trends indicate that current mass effluent limitations will be infeasible to meet on a consistent basis. Given that copper limit at outfall 001 is based on state water quality standard, how is an increase in copper loadings through outfall 001 justified? Also water quality standard for copper is concentration based, the draft permit should also include concentration based effluent limits as well as mass limits. Also 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? Please clarify. 4) 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. Given the significant economics played by the commercial oyster industry in Calhoun County (TP&W, unpublished data, 2013 ex-vessel value in Calhoun County is $5.5 million) 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. For instance, how will the 5 degree increase in temperature requested in the permit affect the oysters? What about the increase in discharge flow because of the increase of production at the Formosa facility which directly influences their fresh water needs from Lake Texana, and consequently the flow /or lack thereof into Lavaca Bay. What is the indirect result of lack of freshwater flow and subsequent lack of nutritional needs on the oyster reefs? 5) What has been the effect of Formosa's permit requirement that flow/concentrations be adjusted to low and hi tides in

Lavaca Bay? I ask this because a Corpus Christi biologist informed me that repeated boat trips by TCEQ to Lavaca Bay to monitor discharge flow during hi and low tides appeared to show discrepancies in Formosa's reporting. Can the truth and/or validity of this statement be investigated? 6) A 5 year study of Formosa's wastewater exceedances, enforcement actions, adminstrative orders, and violations should be undertaken to determine whether Formosa deserves increased flows and loading of toxins into the Lavaca Bay and a decrease in monitoring. 7) 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. Please clarify how the oyster resource that is so critical for the economic survival of the commercial oystermen and the businesses and families associated will them in Calhoun County will not be injured by the proposed discharge but remain a viable resource for generations to come. In addition, it is critical to evaluating the health and viability of the oysters in Lavaca Bay by determining the landings and ex vessel value of oysters PRIOR to Formosa's discharge into Lavaca Bay and then the preceding and current landings to establish whether there has been or continues to be an impact upon the oyster production in Lavaca/Matagorda Bay by Formosa's discharge. Also, Texas Parks and Wildlife, using BP funds, is proposing to establish oyster reefs in Lavaca/Matagorda Bay. Will these oyster reefs be impacted by Formosa's increased needs for fresh water and increased toxic loading? 8 )All requests for lessening of monitoring should be disapproved. Given Lavaca Bay's shallow waters and the significant part that it plays in the health of the Matagorda Bay estuary, then juxtaposition it with the nature of Formosa's discharge and their own admission that the trend they are on will not meet limits on a consistant basis. This is a clear indication that monitoring is warranted. More not less. 9) Zero discharge of Formosa's waste water should be an option. In 1997, Formosa Plastics signed an agreement with me, Diane Wilson, for Zero Discharge of their wastewater. EPA, TNRCC, and Jim Blackburn also signed the agreement. 33 percent of Formosa's original wastestream was recycled with hundreds of thousands of gallons of fresh water saved daily. In additon, the following year, Calhoun County Commissioners signed a resolution supporting zero discharge of industrial wastewaters in the area.