APPENDICES

A	NPDES Permit Number TX00855701
B	NPDES Permit Fact Sheet/Statement of Basis
C	NEIC Inspection Photographs
D	Wastewater Treatment Figures
E	Laboratory Refrigerator Thermometer Data
F	Storm Water Outfall Photographs
G	Discharge Monitoring Reports and Associated Cover Letters
H	EPA NPDES Permit Application Information
I	TNRCC Permit Application Information

EPA/FOIA2018-00050

APPENDICES

A	Formosa Spill/Release Reporting Procedure 05 - Notification to Agencies
B	VCM Emissions Modeling Discussion
C	TRI Report Background Calculations
D	Submitted CERCLA Reports for Vinyl Chloride
E	Formosa Maintenance Contractor Paint/Solvent Background Calculations Summary Sheet
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G	May 7, 2004 Correspondence from Formosa Regarding Form R Section 8.8 Reporting

EPA/FOIA2018-00298

APPENDIX G

MAY 7, 2004 CORRESPONDENCE FROM FORMOSA REGARDING FORM R SECTION 8.8 REPORTING

Total Pages = 2

VP0614

Tamara Christian /FTEHSF
<TamaraC@ftpc .fpcusa.com>

05/07/2004 02:46 PM

To '"hamre.martha@epa.gov"'
<hamre.martha@epamail.epa.gov>

cc

bcc

Subject FW: USEPA NEIC (Martha Hamre) Request 4.28.04

b(7)(c)

Martha -

Per your request, David has prepared the following information. Please let me know if you need anything else.

Thank You Tamara

b(7)(c)

> Item 1. Provide copies of the actual release calculations and
> background information reported in Section 8.8 for 2000, 2001, and
> 2002.....
>
> Response:
>
> In 2000 and 2001, FPC reported the chemicals shown as "Releases" on
> the (TCEQ) Annual Emissions Inventory in Section 8.8. This information
> has been previously supplied to the USEPA NEIC in copies of the Air
> Emissions Inventory (EPA Document Log Code: FPCEP43 (RY2000) and FPCEP42
> (RY2001)).
>
> In 2002, review of the instructions determined that we should be
> reporting only those emissions resulting from "remedial actions;
> catastrophic events such as earthquakes, fire, or floods; or one-time
> events not associated with normal or routine production processes". This
> resulted in a substantial reduction in the Section 8.8 reporting; however,
> in review of the files, it was found that VCM noted the 2,727 Lbs. of VCM
> was a "One-Time Release" on their information submittal, resulting in
> entry into Section 8.8, but in fact this was an accumulation of release
> events for the year and did not result from those activities noted in the
> instructions.
>
> For 2003, we are considering that those emissions as a result of
> Hurricane Claudette will be included in Section 8.8.
>
> Item 2. Provide MSDS's for the following:
>
> Response:
>
> We will be forwarding the requested MSDS's under separate cover to
> your attention.
>
> Item 3. Provide Storage Tank emissions calculations (or at least
> examples from one unit if all calculations follow the same format).....
>
> Response:
>
> For the 2000, 2001, and 2002, (TCEQ) Air Emissions Inventory and TRI
> Report, FPC-TX used Storage Tank Emission Calculator (STEC)" for tank
> emissions calculations. This calculator is based on EPA Publication
> AP-42, Fifth Edition. As a calculation example is not available
> electronically, we will submit a copy by facsimile.
>
> Item 4. Are tank emissions sheets located in the Ethylene glycol
> unit tri air emissions section for 2000 or for 1999 (NEIC Doc.
> #FPCEP-44?.....

> Response:
> Review of the referenced information found that the "header" for
> these sheets apparently did not get corrected when the sheets were
> prepared. The data, as summarized on the 5th sheet in the EG Unit
> information (with footer: tank summary 2000.xls) is for RY2000.
>
> Item 5. Provide background and actual calculations for Ethylene
> glycol, Olefins (I and II), GHU, VCM and PVC unit stack air and fugitive
> air releases.....
> Response:
> The requested information has been previously submitted to the
NEIC
> in copies of the (TCEQ) Air Emissions Inventories (NEIC Documents
> #FCEP-41, #FCEP-42, and #FCEP-43). Unit stack air emissions (point source
> emissions) information (i.e., Facility Information, Emission Point
> Information, Emission Factors, and Emissions Information) can be found on
> the questionnaire pages.
>
> Please advise if additional information is required.
>
> Thank you.

> David B. Tiffin
> Environmental, Health, & Safety
> Formosa Plastics Corp. - Texas
> (361) 987-7347

b(7)(c)

THE END

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

ENFORCEMENT CONFIDENTIAL –
CONTAINS CONFIDENTIAL BUSINESS INFORMATION

NEICVP0614E01

MULTIMEDIA COMPLIANCE INVESTIGATION

Formosa Plastics Corporation - Texas
Point Comfort, Texas
Project No.: VP0614

April 2005

Volume 2 of 2 – Contains Confidential Business Information

Project Leader:
Martha Hamre

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Diana A. Love, Director

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
Denver, Colorado

APPENDICES

A	Photographs
B	Letters Regarding Distillation Bottom Regulatory Status
C	TNRCC Bio-sludge Delisting Letter
D	Scrap PVC Reports for 2001, 2002, and 2003 – CONTAINS CONFIDENTIAL BUSINESS INFORMATION
E	Notice of Registration
F	April 2004 Stripper Effluent Data
G	NEIC Laboratory Report
H	Formosa Distillation Bottoms Analysis Data
I	February 12, 2004 Inventory for Less-than-90-day Storage Building

APPENDIX G

NEIC LABORATORY REPORT

Total pages 21

LABORATORY ACTIVITIES TECHNICAL REPORT

SAMPLE INFORMATION

The NEIC Laboratory Branch provided analytical support to the NEIC compliance investigation of the Formosa Plastics (Formosa) facility located in Point Comfort, Texas. Sampling occurred on February 5, 9, 10, 11, and 12, 2004 at Formosa. Fifteen air canister, 7 hydrocarbon, 2 by-product, 5 process waste, 72 wastewater, and 3 field (trip) blank samples were either transported by NEIC Field Branch personnel or shipped via FedEx to the NEIC laboratory. Samples were received on February 6, 11, 13, and 18, 2004 and the receipt date for each sample was noted on the Chain-of-Custody records. The samples were handled in accordance with the NEIC Evidence Management Procedure (NEICPROC/00-059). The samples were received intact and locked. Custody seals on tamper-evident bags were intact. After receipt and inspection, the samples were transferred to secure storage areas in the NEIC laboratory.

Laboratory analyses were not requested for samples from station 13. Samples collected on February 9, 2004 from stations 8 [(VCM Mainline)] and 9 [(VT-680)] were not analyzed for volatile organic compounds (VOCs). They were analyzed for vinyl chloride by the headspace technique described in this laboratory report. VOC trip blanks were not received with samples collected on February 9 or 11, 2004. Trip blanks with NEIC tags NE-12713 through 12715 were shipped with PCB samples, and these trip blanks were not analyzed. 7(B)

Caustic wastewater samples were received near the end of their holding time period (sample tags: NE 12552, NE 12588, NE 12553, NE 12589, NE 12666, NE 12563, NE 12616, NE 12564, NE 12617, NE 12659, NE 12663). Therefore, all analyses could not be completed within the holding time. Reported values for these samples should be considered minimum values. All other wastewater samples were analyzed within their respective holding times. All analyses were performed under the NEIC quality system.

VOLATILE ORGANIC COMPOUNDS

The wastewater, blank, and hydrocarbon samples were analyzed for benzene and other VOCs by purge-and-trap gas chromatography/mass spectrometry (GC/MS). Tam Talarski, Jing-Fen Chen, and Linda Johnson performed the analyses using SW-846 Method 8260B as guidance, and in accordance with the NEIC Procedure, Volatile Organic Analysis by Gas Chromatography/Mass Spectrometry (NEICPROC/00-002R2). Aliquots of each wastewater sample and trip (field) blank were analyzed for VOCs. Hydrocarbon samples were extracted with methanol (0.1 mL/10 mL).

Typically, samples were re-analyzed using a smaller aliquot or a larger dilution when target analyte concentrations exceeded the instrument calibration range.

VOC Results

The VOC results for the wastewater, trip blank, and hydrocarbon samples are reported in Table 1. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, analytical results, and lower quantitation limits (LQLs) for each analyte reported.

Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 1 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample. Measurement uncertainty is not well characterized for the data reported in Table 1 as approximate (≈) concentrations because the results were either above or below the quantitation range. These results are reported to one significant figure.

Quality assurance and quality control (QA/QC) measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias. The relative standard deviations (RSDs) of the sets of replicate subsample measurements ranged from 0.1 to 13 percent. The spike recoveries ranged from 74 to 134 percent.

Based on an evaluation of the QA/QC data, the primary source of analytical measurement error was determined to be the random error associated with the instrumental analysis procedure. An estimate of the RSD associated with the VOC data is about 13 percent based on within-run QC and historical data.

7(B)

Table 1

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
1	Olefins #1 Inlet 02.05.2004	NE 12526	Acetone = 0.460 Benzene = 0.0321 2-Butanone < LQL Ethylbenzene = 0.0136 Naphthalene = 0.734 Styrene = 0.138 Toluene = 0.0795 1,2,4-Trimethylbenzene = 0.0267 1,3,5-Trimethylbenzene = 0.00729 m-&/or p-Xylene = 0.0374 o-Xylene = 0.0256	Acetone = 0.13 Benzene = 0.0050 2-Butanone = 0.050 Ethylbenzene = 0.0050 Naphthalene = 0.20 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
1	Olefins 1 Inlet 02.09.2004	NE 12578[1] NE 12577[2]	Acetone = 6.01 Benzene = 0.126 2-Butanone = 0.476 Ethylbenzene < LQL Naphthalene ≈ 0.6 Styrene = 0.0525 Toluene = 0.0609 1,2,4-Trimethylbenzene = 0.0154 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.0149 o-Xylene = 0.0100	Acetone = 0.050 Benzene = 0.010 2-Butanone = 0.050 Ethylbenzene = 0.010 Naphthalene = 0.20 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
1	CWTP/Olefins I Inlet 02.11.2004	NE 12632	Acetone ≈ 8 Benzene = 0.0715 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.660 Styrene = 0.0257 Toluene = 0.0287 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
1	CWTP/Olefins I Inlet 02.11.2004	NE 12634	Acetone ≈ 7 Benzene = 0.0718 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.660 Styrene = 0.0271 Toluene = 0.0301 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
1	CWTP/Olefins I Inlet 02.11.2004	NE 12636	Acetone ≈ 7 Benzene = 0.0700 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.594 Styrene = 0.0270 Toluene = 0.0286 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
2	Olefins #2 Inlet 02.05.2004	NE 12527	Acetone = 0.0500 Chloroform = 0.00206	Acetone = 0.025 Chloroform = 0.0010
2	Olefins 2 Inlet 02.09.2004	NE 12579	Acetone[2] = 0.0987 Chloroform ≈ 0.002	Acetone = 0.010 Chloroform = 0.0020
2	CWTP/Olefins II Inlet 02.11.2004	NE 12638	Acetone = 0.0407 Chloroform = 0.00210	Acetone = 0.025 Chloroform = 0.0010
3	Degas B Inlet 02.05.2004	NE 12530	Acetone = 0.0820 Benzene = 0.00266 2-Butanone < LQL Chloroform = 0.00280 1,2-Dichloroethane = 0.0156 Hexane = 0.00648 Naphthalene = 0.0601 Styrene = 0.00901 Tetrahydrofuran < LQL Toluene = 0.00524 m-&/or p-Xylene = 0.00240 o-Xylene = 0.00184	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
3	Degas B Inlet 02.09.2004	NE 12581	Acetone = 1.50 Benzene[2] = 0.0163 2-Butanone[2] = 0.0770 Chloroform < LQL 1,2-Dichloroethane[2] = 0.0147 Hexane < LQL Naphthalene[3] = 0.0950 Styrene = 0.00732 Tetrahydrofuran < LQL Toluene = 0.00816 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.30 Benzene = 0.0050 2-Butanone = 0.030 Chloroform = 0.0050 1,2-Dichloroethane = 0.0050 Hexane = 0.0050 Naphthalene = 0.050 Styrene = 0.0050 Tetrahydrofuran = 0.030 Toluene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
3	CWTP/Degas B Inlet 02.11.2004	NE 12639	Acetone ≈ 0.7 Benzene = 0.00834 2-Butanone < LQL Chloroform = 0.00251 1,2-Dichloroethane = 0.0161 Hexane = 0.00300 Naphthalene = 0.0684 Styrene = 0.00315 Tetrahydrofuran = 0.0752 Toluene = 0.00333 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
4	Degas A Inlet 02.05.2004	NE 12531 NE 12532	Chloroform = 2.60 Bromodichloromethane = 0.0143 Bromoform < LQL Dibromochloromethane < LQL	Chloroform = 0.10 Bromodichloromethane = 0.0050 Bromoform = 0.0050 Dibromochloromethane = 0.0050
4	Degas A Inlet 02.09.2004	NE 12582	Bromodichloromethane[2] = 0.0523 Bromoform[1] = 0.225 Chloroform = 2.65 Dibromochloromethane[1] = 0.153	Bromodichloromethane = 0.0050 Bromoform = 0.0050 Chloroform = 0.10 Dibromochloromethane = 0.0050
4	CWTP/Degas A Inlet 02.11.2004	NE 12642	Bromodichloromethane < LQL Bromoform = 0.333 Chloroform = 3.78 Dibromochloromethane = 0.143	Bromodichloromethane = 0.050 Bromoform = 0.050 Chloroform = 0.050 Dibromochloromethane = 0.050
5	Degas A Outlet 02.05.2004	NE 12534 NE 12533	Chloroform = 1.69 Bromodichloromethane = 0.0141 Bromoform < LQL Dibromochloromethane < LQL Naphthalene < LQL	Chloroform = 0.050 Bromodichloromethane = 0.0050 Bromoform = 0.0050 Dibromochloromethane = 0.0050 Naphthalene = 0.0050
5	Degas A Outlet 02.09.2004	NE 12583	Bromodichloromethane[1] = 0.0359 Bromoform[1] = 0.209 Chloroform = 2.02 Dibromochloromethane[1] = 0.122 Naphthalene < LQL	Bromodichloromethane = 0.0050 Bromoform = 0.0050 Chloroform = 0.050 Dibromochloromethane = 0.0050 Naphthalene = 0.050
5	CWTP/Degas A Outlet 02.11.2004	NE 12644	Bromodichloromethane < LQL Bromoform = 0.274 Chloroform = 2.55 Dibromochloromethane = 0.115 Naphthalene = 0.0879	Bromodichloromethane = 0.050 Bromoform = 0.050 Chloroform = 0.050 Dibromochloromethane = 0.050 Naphthalene = 0.050

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
6	Degas B Outlet 02.05.2004	NE 12536	Acetone ≈ 0.2 Benzene = 0.00369 2-Butanone < LQL Chloroform = 0.00283 1,2-Dichloroethane = 0.0176 Ethylbenzene = 0.00125 Hexane = 0.00351 Naphthalene = 0.0928 Styrene = 0.0138 Toluene = 0.00725 m-&/or p-Xylene = 0.00348 o-Xylene = 0.00259	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
6	Degas B Outlet 02.09.2004	NE 12584	Acetone = 1.01 Benzene[2] = 0.0128 2-Butanone[2] = 0.0463 Chloroform < LQL 1,2-Dichloroethane = 0.0117 Ethylbenzene < LQL Hexane < LQL Naphthalene[2] = 0.0749 Styrene = 0.00549 Toluene = 0.00633 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.50 Benzene = 0.0030 2-Butanone = 0.020 Chloroform = 0.0030 1,2-Dichloroethane = 0.0030 Ethylbenzene = 0.0030 Hexane = 0.0030 Naphthalene = 0.030 Styrene = 0.0030 Toluene = 0.0030 m-&/or p-Xylene = 0.0030 o-Xylene = 0.0030
6	CWTP/Degas B Outlet 02.11.2004	NE 12646	Acetone ≈ 1 Benzene = 0.00798 2-Butanone < LQL Chloroform = 0.00246 1,2-Dichloroethane = 0.0134 Ethylbenzene < LQL Hexane = 0.00113 Naphthalene = 0.0577 Styrene = 0.00241 Toluene = 0.00285 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
7	Combined Feed to Equalization 02.05.2004	NE 12537	Acetone = 0.0619 Benzene = 0.00110 Bromodichloromethane = 0.00118 Bromoform < LQL 2-Butanone < LQL Chloroform = 0.00938 1,2-Dichloroethane < LQL Naphthalene = 0.00137 Styrene < LQL Tetrahydrofuran < LQL Toluene < LQL	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Bromoform = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0010 Toluene = 0.0010

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
7	Combined Feed to Equalization 02.09.2004	NE 12585	Acetone ≈ 0.8 Benzene = 0.00776 Bromodichloromethane = 0.00518 Bromoform[2] = 0.0144 2-Butanone[2] = 0.0507 Chloroform[1] = 0.138 Dibromochloromethane = 0.0103 1,2-Dichloroethane = 0.00909 Naphthalene[2] = 0.0637 Styrene = 0.00400 Tetrahydrofuran < LQL Toluene = 0.00382	Acetone = 0.020 Benzene = 0.0030 Bromodichloromethane = 0.0030 Bromoform = 0.0030 2-Butanone = 0.020 Chloroform = 0.0030 Dibromochloromethane = 0.0030 1,2-Dichloroethane = 0.0030 Naphthalene = 0.030 Styrene = 0.0030 Tetrahydrofuran = 0.0010 Toluene = 0.0030
7	CWTP/ Combined Feed to Equalization 02.11.2004	NE 12647	Acetone ≈ 0.9 Benzene = 0.00205 Bromodichloromethane < LQL Bromoform = 0.00110 2-Butanone < LQL Chloroform = 0.00479 1,2-Dichloroethane = 0.00614 Naphthalene = 0.0345 Styrene < LQL Tetrahydrofuran = 0.0570 Toluene < LQL	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Bromoform = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010
8[1,3]	VCM Mainline 02.05.2004	NE 12539 and NE12540	Bromodichloromethane = 0.00685 Chloroform = 0.0617 1,2-Dichloroethane < LQL	Bromodichloromethane = 0.0010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010
8	CWTP/VCM Mainline 02.11.2004	NE 12649	Bromodichloromethane < LQL Chloroform = 0.00457 1,2-Dichloroethane = 0.00204	Bromodichloromethane = 0.0010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010
9	VCM VT 680 02.05.2004	NE 12542 NE 12541	Chloroform = 1.31 Bromodichloromethane = 0.00942 1,2-Dichloroethane = 0.0242 Methylene Chloride = 0.0572	Chloroform = 0.050 Bromodichloromethane = 0.0050 1,2-Dichloroethane = 0.0050 Methylene Chloride = 0.0050
9	CWTP/VCM @ VT-680 02.11.2004	NE 12651	Bromodichloromethane < LQL Chloroform = 1.68 1,2-Dichloroethane < LQL Methylene Chloride < LQL	Bromodichloromethane = 0.050 Chloroform = 0.050 1,2-Dichloroethane = 0.050 Methylene Chloride = 0.050
10[1,3]	Olefins #1 VOC Stripper eff 02.05.2004	NE 12543 and NE 12544	Acetone = 0.695 Benzene = 0.0248 2-Butanone < LQL Naphthalene = 0.972 Styrene = 0.115 Toluene = 0.0674 1,2,4-Trimethylbenzene = 0.0275 m-&/or p-Xylene = 0.0314 o-Xylene = 0.0227	Acetone = 0.31 Benzene = 0.013 2-Butanone = 0.13 Naphthalene = 0.013 Styrene = 0.013 Toluene = 0.013 1,2,4-Trimethylbenzene = 0.013 m-&/or p-Xylene = 0.013 o-Xylene = 0.013

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12590	Acetone = 7.03 Benzene = 0.107 2-Butanone = 0.521 Naphthalene ≈ 0.6 Styrene = 0.0491 Toluene = 0.0545 1,2,4-Trimethylbenzene = 0.0152 m-&/or p-Xylene = 0.0147 o-Xylene = 0.0100	Acetone = 1.0 Benzene = 0.010 2-Butanone = 0.050 Naphthalene = 0.10 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12591	Acetone = 6.83 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12592	Acetone = 6.98 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12593	Acetone = 7.01 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.11.2004	NE 12672	Acetone ≈ 9 Benzene = 0.0712 2-Butanone < LQL Naphthalene = 0.679 Styrene = 0.0185 Toluene = 0.0233 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
11	Olefins #1 Stripper feed 02.05.2004	NE 12546 NE 12545	Acetone = 0.682 Benzene = 0.0151 Ethylbenzene = 0.0171 Naphthalene = 1.08 n-Propylbenzene = 0.00760 Styrene = 0.146 Toluene = 0.0829 1,2,4-Trimethylbenzene = 0.0375 1,3,5-Trimethylbenzene = 0.0114 m-&/or p-Xylene = 0.0439 o-Xylene = 0.0280	Acetone = 0.31 Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 0.013 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
11	Olefins #I Stripper Feed 02.09.2004	NE 12605	Acetone = 0.733 Benzene[2] = 0.0131 Ethylbenzene[2] = 0.0128 Naphthalene ≈ 0.8 n-Propylbenzene < LQL Styrene[2] = 0.0724 Toluene[2]= 0.0763 1,2,4-Trimethylbenzene[2] = 0.0226 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene[2] = 0.0272 o-Xylene[2] = 0.0158	Acetone = 0.50 Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 1.0 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
11	Olefins #I Stripper Feed 02.11.2004	NE 12678	Acetone = 0.794 Benzene = 0.0143 Ethylbenzene = 0.0103 Naphthalene = 0.977 n-Propylbenzene < LQL Styrene = 0.0620 Toluene = 0.0750 1,2,4-Trimethylbenzene = 0.0209 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.0216 o-Xylene = 0.0129	Acetone = 0.31 Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 0.013 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
12	Olefins #1 CPI Effluent 02.05.2004	NE 12548	Acetone < LQL Benzene < LQL Chloroform = 0.00930 Ethylbenzene < LQL Hexane < LQL Naphthalene < LQL Toluene < LQL Trichloroethene = 0.00187 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 Chloroform = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Toluene = 0.0010 Trichloroethene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
12[3]	Olefins #I CPI Effluent 02.09.2004	NE 12607 and NE 12608	Acetone < LQL Benzene < LQL Chloroform[4] = 0.00614 Ethylbenzene < LQL Hexane < LQL Naphthalene < LQL Toluene < LQL Trichloroethene[4] = 0.00201 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.010 Benzene = 0.000050 Chloroform = 0.0020 Ethylbenzene = 0.0020 Hexane = 0.0020 Naphthalene = 0.020 Toluene = 0.0020 Trichloroethene = 0.0020 1,2,4-Trimethylbenzene = 0.0020 1,3,5-Trimethylbenzene = 0.0020 m-&/or p-Xylene = 0.0020 o-Xylene = 0.0020
12	Olefins I CPI Effluent 02.11.2004	NE 12676	Acetone = 0.0641 Benzene = 0.00357 Chloroform = 0.00766 Ethylbenzene = 0.00128 Hexane = 0.00190 Naphthalene = 0.0124 Toluene = 0.00204 Trichloroethene = 0.00225 1,2,4-Trimethylbenzene = 0.00547 1,3,5-Trimethylbenzene = 0.00700 m-&/or p-Xylene = 0.00781 o-Xylene = 0.00819	Acetone = 0.025 Benzene = 0.0010 Chloroform = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Toluene = 0.0010 Trichloroethene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
14[1,5]	Olefins #I Zimpro Effluent 02.05.2004	NE 12552	Acetone = 48.5 Benzene = 1.35	Acetone = 13 Benzene = 0.50
14[5]	Olefins I Zimpro Effluent 02.09.2004	NE 12588	Acetone = 44.9 Benzene ≈ 4	Acetone = 13 Benzene = 0.50
14	Olefins I Zimpro Effluent 02.11.2004	NE 12669	Acetone ≈ 45 Benzene = 1.66	Acetone = 6.3 Benzene = 0.25
15[5]	Olefins #I Zimpro Influent 02.05.2004	NE 12553	Benzene = 185 Toluene = 13.9	Benzene = 5.0 Toluene = 5.0
15[5]	Olefins # Zimpro Influent 02.09.2004	NE 12589	Benzene = 197 Toluene = 15.5	Benzene = 5.0 Toluene = 5.0
15[1,5]	Olefins I Zimpro Influent 02.11.2004	NE 12666	Benzene = 248 Toluene = 20.9	Benzene = 5.0 Toluene = 5.0

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
16	Olefins II VOC Stripper Effluent 02.05.2004	NE 12558	Acetone = 0.0568 Chloroform = 0.00210	Acetone = 0.025 Chloroform = 0.0010
16	Olefins II VOC Stripper Effluent 02.09.2004	NE 12611	Acetone = 0.425 Chloroform < LQL	Acetone = 0.050 Chloroform = 0.0020
16	Olefins II/ VOC Stripper Effluent 02.11.2004	NE 12653	Acetone = 0.0518 Chloroform = 0.00225	Acetone = 0.025 Chloroform = 0.0010
17	Olefins II CPI Effluent Water 02.05.2004	NE 12560	Acetone < LQL Benzene = 0.0291 Bromodichloromethane < LQL Chloroform = 0.0141 Naphthalene = 0.00538 Styrene = 0.00172 Toluene = 0.0113 1,2,4-Trimethylbenzene = 0.00231 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.00448 o-Xylene = 0.00327	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
17	Olefins II CPI Effluent 02.09.2004	NE 12613	Acetone[2] = 0.0376 Benzene[2] = 0.0876 Bromodichloromethane < LQL Chloroform[2] = 0.0144 Naphthalene < LQL Styrene = 0.00840 Toluene[2] = 0.0407 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.00578 o-Xylene < LQL	Acetone = 0.030 Benzene = 0.0050 Bromodichloromethane = 0.0050 Chloroform = 0.0050 Naphthalene = 0.050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
17	Olefins II CPI Effluent 02.11.2004	NE 12655	Acetone < LQL Benzene = 0.00303 Bromodichloromethane = 0.00165 Chloroform = 0.0146 Naphthalene = 0.00126 Styrene = 0.00171 Toluene = 0.0361 1,2,4-Trimethylbenzene = 0.00353 1,3,5-Trimethylbenzene = 0.00157 m-&/or p-Xylene = 0.00500 o-Xylene = 0.00340	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
18[5]	Olefins #II Zimpro Effluent 02.05.2004	NE 12563	Acetone = 82.4 Benzene = 2.48 Chloroform < LQL 2-Hexanone < LQL 4-Methyl-2-pentanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL	Acetone = 25 Benzene = 0.50 Chloroform = 0.50 2-Hexanone = 0.50 4-Methyl-2-pentanone = 0.50 Naphthalene = 0.50 Styrene = 0.50 Toluene = 0.50
18[5]	Olefins II Zimpro Effluent 02.09.2004	NE 12616	Acetone = 95.1 Benzene = 4.24 Chloroform < LQL 2-Hexanone < LQL 4-Methyl-2-pentanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL	Acetone = 25 Benzene = 1.0 Chloroform = 1.0 2-Hexanone = 1.0 4-Methyl-2-pentanone = 1.0 Naphthalene = 1.0 Styrene = 1.0 Toluene = 1.0
18	Olefins II Zimpro Effluent 02.11.2004	NE 12658 NE 12657	Acetone ≈ 90 Benzene[1] = 4.59 Chloroform = 0.00435 2-Hexanone = 0.0146 4-Methyl-2-pentanone = 0.00311 Naphthalene = 0.00605 Styrene = 0.00298 Toluene ≈ 0.2	Acetone = 8.3 Benzene = 0.33 Chloroform = 0.0010 2-Hexanone = 0.0010 4-Methyl-2-pentanone = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010
19[5]	Olefins #II Zimpro Influent 02.05.2004	NE 12564	Benzene = 2990 Toluene = 563	Benzene = 50 Toluene = 50
19[5]	Olefins II Zimpro Influent 02.09.2004	NE 12617	Benzene = 2640 Toluene = 502	Benzene = 50 Toluene = 50
19[5]	Olefins II Zimpro Influent 02.11.2004	NE 12659	Benzene = 350 Toluene < LQL	Benzene = 50 Toluene = 50
20	Olefins I CPI Oil Overflow 02.09.2004	NE 12609	Naphthalene[1] = 23,400 (Hydrocarbon sample)	Naphthalene = 1,000
20	Olefins I CPI Oil Overflow 02.11.2004	NE 12697	Naphthalene = 55,800 (Hydrocarbon sample)	Naphthalene = 5,000
21	Olefins II Zimpro Skimmer Oil 02.09.2004	NE 12619	Benzene = 361,000 Hexane = 8,700 Toluene = 33,100 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
21	Olefins II Zimpro Skimmer Oil 02.11.2004	NE 12662	Benzene = 424,000 Hexane = 12,600 Toluene = 35,200 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
22	Olefins I Skimmer Oil 02.10.2004	NE 12628	Benzene[1] = 395,000 Hexane[1] = 6,400 Toluene[1] = 109,000 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
22	Olefins I Skimmer Oil 02.11.2004	NE 12671	Benzene = 404,000 Hexane = 7,390 Toluene = 105,000	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
23	Olefins II Sump AA 02.11.2004	NE 12663	Naphthalene[1] = 179	Naphthalene = 5.0
24	Olefins I Combined Stripper Feed 02.11.2004	NE 12674 NE 12675	Acetone ≈ 10.5[6] Benzene = 0.283 Ethylbenzene = 0.00892 Naphthalene = 0.695 Styrene = 0.0499 Toluene = 0.0768 1,3,5-Trimethylbenzene = 0.00334 m-&/or p-Xylene = 0.0171 o-Xylene = 0.0101	Acetone = 0.63 Benzene = 0.025 Ethylbenzene = 0.0010 Naphthalene = 0.025 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
25	Olefins I Vessel G440F/Warm Flare Drum 02.11.2004	NE 12690 NE 12689	Benzene = 48.4 Acetone ≈ 200 Ethylbenzene = 5.43 Isopropylbenzene = 0.547 Naphthalene = 10.7 n-Propylbenzene = 4.82 Styrene = 3.42 Toluene = 11.1 1,2,4-Trimethylbenzene = 4.88 1,3,5-Trimethylbenzene = 1.87 m-&/or p-Xylene = 2.82 o-Xylene = 2.35	Benzene = 1.0 Acetone = 13 Ethylbenzene = 0.50 Isopropylbenzene = 0.50 Naphthalene = 0.50 n-Propylbenzene = 0.50 Styrene = 0.50 Toluene = 0.50 1,2,4-Trimethylbenzene = 0.50 1,3,5-Trimethylbenzene = 0.50 m-&/or p-Xylene = 0.50 o-Xylene = 0.50
26	Olefins I Vessel 6710 02.11.2004	NE 12694	Benzene[1] = 31.4 Ethylbenzene[1] = 2.50 Hexane[1] = 16.6 Toluene[1] = 29.1 1,2,4-Trimethylbenzene[1] = 3.10 1,3,5-Trimethylbenzene[1] = 1.65 m-&/or p-Xylene[1] = 14.1 o-Xylene[1] = 4.76	Benzene = 1.0 Ethylbenzene = 1.0 Hexane = 1.0 Toluene = 1.0 1,2,4-Trimethylbenzene = 1.0 1,3,5-Trimethylbenzene = 1.0 m-&/or p-Xylene = 1.0 o-Xylene = 1.0

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
27	Olefins I Sump AA 02.11.2004	NE 12682	Acetone = 0.0739 Bromodichloromethane = 0.00278 Chloroform = 0.0177 Trichloroethene = 0.0280	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
27	Olefins I Sump AA 02.11.2004	NE 12683	Acetone = 0.0684 Bromodichloromethane = 0.00276 Chloroform = 0.0167 Trichloroethene = 0.0277	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
27	Olefins I Sump AA 02.11.2004	NE 12684	Acetone = 0.0660 Bromodichloromethane = 0.00276 Chloroform = 0.0168 Trichloroethene = 0.0275	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
28	Olefins I Sump AB 02.11.2004	NE 12687	Acetone = 0.0346 Bromodichloromethane = 0.00110 Chloroform = 0.00641 Trichloroethene = 0.00168	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
29	Olefins I Sump AC 02.11.2004	NE 12691	Benzene = 0.0550 Ethylbenzene = 0.0175 Hexane = 0.0177 Isopropylbenzene = 0.00461 Naphthalene = 0.0570 n-Propylbenzene = 0.00226 Toluene = 0.0843 1,2,4-Trimethylbenzene = 0.0171 1,3,5-Trimethylbenzene = 0.00639 m-&/or p-Xylene = 0.0565 o-Xylene = 0.0247	Benzene = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Isopropylbenzene = 0.0010 Naphthalene = 0.0010 n-Propylbenzene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12703 NE12704	Naphthalene = 0.838 Acetone ≈ 0.5 Benzene = 0.0156 Ethylbenzene = 0.0119 Styrene = 0.0601 Toluene = 0.0789 1,3,5-Trimethylbenzene = 0.00483 m-&/or p-Xylene = 0.0225 o-Xylene = 0.0122	Naphthalene = 0.050 Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12706	Acetone ≈ 0.5 Benzene = 0.0168 Ethylbenzene = 0.0115 Naphthalene = 0.896 Styrene = 0.0622 Toluene = 0.0847 1,3,5-Trimethylbenzene = 0.00458 m-&/or p-Xylene = 0.0229 o-Xylene = 0.0126	Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Naphthalene = 0.050 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

7(B)

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12708	Acetone ≈ 0.5 Benzene = 0.0154 Ethylbenzene = 0.0122 Naphthalene = 0.896 Styrene = 0.0621 Toluene = 0.0884 1,3,5-Trimethylbenzene = 0.00428 m-&/or p-Xylene = 0.0230 o-Xylene = 0.0127	Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Naphthalene = 0.050 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
31	Olefins II Warm Flare Knockout 02.12.2004	NE 12701	Benzene[1] = 13.2 Hexane[1] = 0.479 Naphthalene[1] = 4.61 Styrene[1] = 2.98 Toluene[1] = 2.39 1,2,4-Trimethylbenzene[1] = 0.647 m-&/or p-Xylene[1] = 0.938 o-Xylene[1] = 0.658	Benzene = 0.33 Hexane = 0.33 Naphthalene = 0.33 Styrene = 0.33 Toluene = 0.33 1,2,4-Trimethylbenzene = 0.33 m-&/or p-Xylene = 0.33 o-Xylene = 0.33
32	Olefins II Sump AB 02.12.2004	NE 12698	Bromodichloromethane = 0.00205 Chloroform = 0.0156	Bromodichloromethane = 0.0010 Chloroform = 0.0010
	Field Blank 02.05.2004	NE 12557	< LQL (Trip Blank)	Target compounds ranged from 0.0010 to 0.025
	Trip Blank 02.12.2004	NE 12709	< LQL	Target compounds ranged from 0.0010 to 0.025

1 *Replicate result; Mean of n = 3.*
2 *Replicate result; Mean of n = 2.*
3 *Results were averaged between tagged samples.*
4 *Replicate result; Mean of n = 4.*
5 *Two-week holding time not met; reported as a minimum value.*

VINYL CHLORIDE

Unpreserved wastewater samples were analyzed for vinyl chloride using EPA Method 107 [Determination of Vinyl Chloride Content of In-Process Wastewater Samples, and Vinyl Chloride Content of Polyvinyl Chloride Resin Slurry, Wet Cake, and Latex Samples (40 CFR, Part 61, App. B, Method 107). Analyses were performed by Jing-Fen Chen.

Vinyl Chloride Results

Vinyl chloride results for the wastewater samples are reported in Table 2. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, and the analytical results. Vinyl chloride was not identified in any of the samples above the lower quantitation limit (LQL) of 0.016 mg/L. The LQL is a calculated value that corresponds to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. The vinyl chloride LQL was calculated by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample.

QA/QC measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias, and blanks were analyzed for vinyl chloride. All results were acceptable.

Table 2

VINYL CHLORIDE RESULTS FOR WASTEWATER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Vinyl Chloride (mg/L)
8	VCM Mainline 02.09.2004	NE 12586	< LQL
9	VT-680 02.09.2004	NE 12587	< LQL
9	VT-680 02.09.2004	NE 12602	< LQL

AIR SAMPLES

Bob Bohn analyzed the air samples for VOCs according to the NEIC procedure "Air Canister Volatile Organic Analysis by Gas Chromatography/Mass Spectrometry." This procedure is based on Compendium Method TO-15, "Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry." An air canister from station number 27 was received under vacuum, which indicated that a sample was not collected. Therefore, the contents of the air canister were not analyzed.

Air Sample Results

The VOC results for the air samples are reported in Table 3. The table contains station numbers, can numbers, NEIC tag numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, analytical results, and lower quantitation limits (LQLs) for each analyte reported. Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 1 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by dilution factor used to prepare the subsample. Measurement uncertainty is not well characterized for the data reported in Table 3 as approximate (≈) concentrations because the results were below the quantitation range. These results are reported to one significant figure.

Quality assurance and quality control (QA/QC) measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias. The relative standard deviations (RSDs) of the sets of replicate subsample measurements ranged from 1.8 to 3.7 percent. Overall air analysis measurement precision was evaluated from the variability of the surrogates, which ranged from 4.9 to 5.8 percent (RSD). The spike recoveries ranged from 99.6 to 100 percent. The independent quality control standard was within 23 percent of the expected value for reported compounds.

7(B)

Table 3

VOC RESULTS FOR AIR CANISTER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Can Number	NEIC Tag Number	Sample Description	Analytical Result (ppbv)	Lower Quantitation Limit (ppbv)
01	01003	NE 12566	Olefins #1 Inlet 02.09.2004	Benzene ≈ 0.5 Chloroform ≈ 0.1 Chloromethane ≈ 0.7 Dichlorodifluoromethane ≈ 0.5	Benzene = 1.0 Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0
02	00954	NE 12567	Olefins #2 Inlet 02.09.2004	Chloroform ≈ 0.3 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.6	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
04	00987	NE 12568	Degas B Inlet 02.09.2004	Chloroform = 6.70 Chloromethane ≈ 0.8 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.5	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
05	00989	NE 12569	Degas A Inlet 02.09.2004	Chloroform ≈ 0.7 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.7	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
08	00970	NE 12570	VCM Mainline 02.09.2004	Benzene ≈ 0.3 Chloromethane = 1.00 Dichlorodifluoromethane ≈ 0.6 Vinyl chloride = 1.20	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl chloride = 1.0
09	00956	NE 12571	VCM VT 680 02.09.2004	Chloroform = 19.8 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Methylene Chloride ≈ 0.09 1,2-Dichloroethane ≈ 0.2	Chloroform = 1.4 Chloromethane = 1.4 Dichlorodifluoromethane = 1.3 Methylene Chloride = 1.4 1,2-Dichloroethane = 1.4
10	00966	NE 12573	Olefins #1 VOC Stripper eff. 02.09.2004	Benzene = 3.20 1,3-butadiene = 5.00 Chloromethane ≈ 0.8 Dichlorodifluoromethane ≈ 0.7	Benzene = 1.0 1,3-butadiene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0
14[1]	00995	NE 12572	Olefins #1 Zimpro eff. 02.09.2004	Benzene = 263 1,3-butadiene = 358 Dichlorodifluoromethane ≈ 0.6 Ethylbenzene ≈ 0.2 Toluene = 21.0	Benzene = 21 1,3-butadiene = 21 Dichlorodifluoromethane = 4.0 Ethylbenzene = 4.1 Toluene = 20
16	00984	NE 12575	Olefins #2 VOC Stripper eff. 02.09.2004	Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 1,2-dichloroethane = 1.90	Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 1,2-dichloroethane = 1.0
18	00973	NE 12576	Olefins #2 Zimpro eff. 02.09.2004	Benzene ≈ 0.3 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 1,2-dichloroethane = 4.90	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 1,2-dichloroethane = 1.0
20	00991	NE 12574	Olefins #1 CPI oil overflow 02.09.2004	Benzene = 1.03 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.6	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0

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Table 3 (continued)

VOC RESULTS FOR AIR CANISTER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Can Number	NEIC Tag Number	Sample Description	Analytical Result (ppbv)	Lower Quantitation Limit (ppbv)
23[1]	00985	NE 12665	Olefins 2 Sump AA 02.11.2004	Benzene = 946 Chloroform ≈ 10 Ethylbenzene = 416 4-Ethyltoluene = 309 Styrene = 920 Toluene = 1,910 1,2,4-Trimethylbenzene = 756 1,3,5-Trimethylbenzene = 296 m- &/or p-Xylene = 939 o-Xylene = 377	Benzene = 62 Chloroform = 21 Ethylbenzene = 61 4-Ethyltoluene = 61 Styrene = 62 Toluene = 61 1,2,4-Trimethylbenzene = 62 1,3,5-Trimethylbenzene = 60 m- &/or p-Xylene = 120 o-Xylene = 61
27	00964	NE 12680	Olefins I Sump AA 02.11.2004	Not analyzed	
29	00968	NE 12693	Olefins I Sump AC 02.11.2004	Benzene = 2.2 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 Ethylbenzene ≈ 0.1 Toluene = 1.3 m- &/or p-Xylene ≈ 0.5 o-Xylene ≈ 0.2	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Ethylbenzene = 1.0 Toluene = 1.0 m- &/or p-Xylene = 2.0 o-Xylene = 1.0
32	00945	NE 12712	Olefins II Sump AB 02.12.2004	Benzene ≈ 0.5 Chloroform = 27.4 Dichlorodifluoromethane ≈ 0.6	Benzene = 2.1 Chloroform = 2.1 Dichlorodifluoromethane = 2.0

1 Replicate result; Mean of n = 3.

PCB CONGENERS

Christine Casey analyzed seven samples for polychlorinated biphenyl (PCB) congeners. EPA Method 1668 was used as guidance for the determination of PCB congeners by gas chromatography/ion trap mass spectrometry. Liquid samples were diluted with isooctane. Solid samples were extracted using an accelerated solvent extractor (ASE) following SW-846 Method 3545 as guidance. A method blank (sand matrix) was extracted and analyzed. Field or matrix blank samples were not available.

PCB Congener Results

PCB congener results are reported in Table 4. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, the monochlorobiphenyl analytical results, and lower quantitation limits (LQLs) for the

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monochlorobiphenyls. Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 4 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample.

QA/QC measures were taken during the analyses. Replicates and spikes were analyzed to evaluate analytical precision and bias. The RSDs for the sets of replicates ranged from 2.6 to 7.3 percent. The spike recoveries ranged from 103 to 108 percent. Based on an evaluation of the QA/QC data, the primary source of analytical measurement error was determined to be the random error associated with the analytical procedure. An estimate of the RSD associated with the PCB data is about 7 percent based on within-run QC data.

According to 40 CFR § 761.3, "PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50." The results shown in Table 4 have not been divided by 50.

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Table 4

PCB CONGENER RESULTS

Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (µg/g)	Lower Quantitation Limit (µg/g)
100	CWTP – Tank 97 02.10.2004	NE 12621	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.29
100	CWTP – Tank 97 02.10.2004	NE 12622	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.25
100	CWTP – Tank 97 02.10.2004	NE 12623	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.25
101	CWTP – TST – 01 copper removal unit sludge 02.10.2004	NE 12624	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.04
102[1]	EDC Distillation Ends from VC-304 02.10.2004	NE 12625	2-Chlorobiphenyl = 5.02 3-Chlorobiphenyl = 16.6 4-Chlorobiphenyl = 10.8	Chlorobiphenyls = 2.3
103	VCM Distillation Ends from DT-407A/B 02.10.2004	NE 12626	Chlorobiphenyls < LQL	Chlorobiphenyls = 2.2
104[2]	VCM Drum HW-04 6631 Strainer Waste 02.10.2004	NE 12627	2-Chlorobiphenyl = 0.45 3-Chlorobiphenyl = 2.60 4-Chlorobiphenyl = 1.34	Chlorobiphenyls = 0.45

1 *Replicate result; Mean of n = 3*
2 *Replicate result; Mean of n = 2*

APPENDICES

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Y	Oil Transfer Logbook Entry
Z	Photographs

Appendix D

CERCLA-Reported Emissions/Ambient-Detected Emissions Evaluation

The table below shows release events for which Formosa submitted CERCLA reports, and the mass of VCM emitted during each event. Also shown in the table is the total amount of VCM detected by the ambient monitoring system during the release events, as modeled using the standard factors in Table 1 of the report.[1] As depicted, the ambient monitor only characterized or "captured" part of the emissions release (136.4 lbs versus 541.9 lbs reported). The difference between these two calculations (405.5 lbs) may then be added to the 11,034 lb/yr NEIC estimate from report Table 1.

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Start Date/Time	End Date/Time	Estimate Based on Report Information	Estimate Based on Ambient Monitoring Data[1]
3/30/2003 11:50	4/1/2003 2:30	49.29	31.03
4/6/2003 21:35	4/6/2003 22:35	10.16	0.97
4/7/2003 5:00	4/7/2003 9:00	12.35	26.36
8/11/2003 10:00	8/11/2003 18:40	141	17.95
8/31/2003 19:00	9/1/2003 11:58	212.5	18.95
9/2/2003 20:07	9/2/2003 21:52	23.3	36.31
9/10/2003 22:58	9/10/2003 23:35	86.3	2.68
9/11/2003 18:30	9/11/2003 22:13	7	2.13
	Total	541.9	136.4
		Difference	405.5

[1] *Believed to be conservative as any incomplete hours (not beginning and ending on the hour) were assumed to be complete and counted towards the release event, although technically not included in the release event given the event starting and ending times reported by Formosa.*

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Appendix D Backup Calculations

CERCLA-Reported Emissions/Ambient-Detected Emissions Evaluation

Start Date/Time	End Date/Time	Estimate Based on Report Information	Estimate Based on Ambient Monitoring Data[1]			
3/30/2003 11:50	4/1/2003 2:30	49.29	31.03			
4/6/2003 21:35	4/6/2003 22:35	10.16	0.97			
4/7/2003 5:00	4/7/2003 9:00	12.35	26.36			
8/11/2003 10:00	8/11/2003 18:40	141	17.95			
8/31/2003 19:00	9/1/2003 11:58	212.5	18.95			
9/2/2003 20:07	9/2/2003 21:52	23.3	36.31			
9/10/2003 22:58	9/10/2003 23:35	86.3	2.68			
9/11/2003 18:30	9/11/2003 22:13	7	2.13			
	Total	541.9	136.38	405.5		
				11037		
		2035		11,443	5.62	9,408

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Appendix E - Daily VCM Emitted Based on Ambient Sampling

ShortDate	DailyAvgVCMConc	DailyAvgWindSpeed	DailyTotalMassVCM
11/13/2003	2.01	10.46	176.60
11/14/2003	1.83	9.92	152.83
11/10/2003	1.49	8.13	109.46
10/9/2003	1.33	8.62	107.09
9/3/2003	1.06	10.62	99.53
11/15/2003	1.44	7.50	96.10
8/2/2003	1.01	10.47	91.58
10/30/2003	0.94	10.38	87.61
9/4/2003	1.03	9.31	80.70
9/2/2003	0.89	10.47	80.53
10/1/2003	0.93	8.50	79.80
10/20/2003	1.53	5.25	79.68
11/17/2003	0.84	10.19	75.92
11/11/2003	1.14	7.46	75.78
10/8/2003	1.04	8.35	73.83
11/9/2003	1.03	8.98	73.07
9/5/2003	0.92	8.71	72.63
10/16/2003	0.97	8.00	67.63
7/26/2003	0.83	8.96	65.00
10/25/2003	0.72	9.50	62.68
11/7/2003	0.69	10.63	62.16
10/14/2003	0.60	10.75	61.05
10/10/2003	1.07	6.80	60.36
11/16/2003	1.16	6.21	59.79
8/6/2003	0.69	9.67	59.79
9/9/2003	0.85	8.14	58.91
8/30/2003	0.75	8.44	58.47
10/11/2003	1.02	7.08	57.44
8/7/2003	0.64	9.92	56.04
10/21/2003	1.16	5.61	56.01
8/15/2003	0.71	9.25	55.90
11/18/2003	0.51	12.91	54.74
11/2/2003	0.65	9.02	54.32
8/23/2003	1.13	5.71	53.30
9/6/2003	0.62	9.67	52.15
11/12/2003	1.09	5.43	52.04
8/22/2003	1.20	4.79	51.71
10/28/2003	0.97	6.08	51.18
7/25/2003	0.69	8.50	51.04
9/7/2003	0.62	9.92	50.60
7/31/2003	0.63	8.96	50.59
10/3/2003	0.71	7.71	50.21
4/7/2003	0.91	6.15	49.81
8/5/2003	0.63	8.71	48.79
11/6/2003	0.72	7.92	47.74
10/24/2003	0.79	7.00	47.57
11/1/2003	0.61	8.92	47.55

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10/23/2003	0.77	6.83	47.18
10/15/2003	0.68	8.04	46.01
10/31/2003	0.66	8.17	45.68
8/3/2003	0.47	10.63	44.53
7/30/2003	0.61	8.23	44.37
9/8/2003	0.65	8.25	43.98
8/20/2003	0.63	7.83	43.83
10/12/2003	1.03	5.63	43.74
7/24/2003	0.88	9.11	42.77
11/8/2003	0.58	8.46	42.01
10/7/2003	0.82	6.06	41.83
10/2/2003	0.45	10.17	41.77
7/27/2003	0.63	7.29	41.77
8/9/2003	0.56	8.17	41.10
10/17/2003	0.65	7.17	41.08
8/14/2003	0.84	5.63	40.77
9/1/2003	0.51	8.86	40.22
8/1/2003	0.52	8.88	40.14
4/23/2003	0.33	13.97	39.86
7/29/2003	0.85	5.27	39.71
8/16/2003	0.64	6.83	39.62
10/29/2003	0.86	5.54	39.52
10/19/2003	0.98	4.67	39.51
11/3/2003	0.65	6.85	38.88
6/21/2003	0.68	6.63	38.20
8/21/2003	0.61	6.96	37.31
10/26/2003	0.31	14.09	37.00
11/4/2003	0.61	6.63	36.85
9/10/2003	0.90	5.53	36.52
8/8/2003	0.51	8.25	36.09
5/1/2003	0.40	10.53	36.05
4/8/2003	0.24	17.12	35.26
10/22/2003	0.72	5.58	34.39
10/4/2003	0.61	6.58	33.87
8/4/2003	0.41	9.31	33.83
9/30/2003	0.41	8.42	33.75
6/11/2003	0.28	13.11	33.55
9/23/2003	0.71	5.71	32.84
10/13/2003	0.90	4.54	32.14
3/2/2003	0.41	10.01	32.03
8/19/2003	0.43	8.03	31.52
10/18/2003	0.73	5.92	31.14
11/19/2003	0.66	6.17	30.93
4/29/2003	0.35	9.88	30.79
6/12/2003	0.25	13.26	29.60
5/5/2003	0.23	14.15	29.06
4/28/2003	0.31	10.29	28.66
8/24/2003	0.62	4.92	28.63
10/5/2003	0.53	6.56	28.31
6/24/2003	0.27	11.79	28.09
3/1/2003	0.44	8.46	27.84
11/5/2003	0.56	6.08	27.74

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8/13/2003	0.58	6.11	27.63
5/4/2003	0.19	16.55	27.35
3/29/2003	0.21	15.79	27.17
6/15/2003	0.43	6.15	26.73
6/10/2003	0.28	11.05	26.54
8/12/2003	0.59	6.42	26.40
3/27/2003	0.31	10.25	26.31
5/9/2003	0.19	15.71	26.28
4/30/2003	0.30	9.72	26.19
8/29/2003	0.39	7.35	26.13
8/10/2003	0.56	5.53	26.02
9/12/2003	0.53	6.56	25.99
9/27/2003	0.44	6.88	25.91
2/28/2003	0.39	11.17	25.90
8/18/2003	0.42	6.96	25.58
7/28/2003	0.62	4.71	25.47
9/16/2003	0.40	6.83	25.45
9/11/2003	2.04	6.25	25.34
8/11/2003	0.46	6.25	24.90
4/26/2003	0.33	8.83	24.74
3/28/2003	0.22	13.85	24.20
7/10/2003	0.27	9.41	23.88
4/25/2003	0.33	8.55	23.81
7/14/2003	0.32	8.17	23.80
9/29/2003	0.34	7.35	23.80
4/1/2003	0.25	12.00	23.69
4/22/2003	0.29	9.66	23.62
9/28/2003	0.33	7.71	23.56
9/20/2003	0.36	7.83	23.51
9/19/2003	0.34	8.03	23.38
5/2/2003	0.28	9.21	23.16
5/16/2003	0.18	14.38	23.11
5/8/2003	0.16	16.20	23.10
8/28/2003	0.34	7.72	22.92
4/9/2003	0.23	11.71	22.61
5/30/2003	0.22	11.17	22.25
9/18/2003	0.39	6.96	22.12
10/6/2003	0.56	4.61	21.74
5/27/2003	0.35	7.61	21.72
3/31/2003	0.26	9.92	21.66
10/27/2003	0.41	6.29	21.58
4/21/2003	0.25	9.59	21.57
6/4/2003	0.27	8.96	21.49
5/6/2003	0.18	13.15	21.37
9/24/2003	0.66	4.92	21.33
5/7/2003	0.19	12.15	21.29
8/25/2003	0.46	5.25	21.27
3/3/2003	0.31	11.48	21.17
8/17/2003	0.44	5.51	21.07
3/19/2003	0.27	9.54	20.83
5/28/2003	0.30	7.71	20.77
8/26/2003	0.39	5.89	20.49

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3/25/2003	0.28	8.75	20.42
3/26/2003	0.28	9.48	20.41
8/27/2003	0.39	6.93	20.36
4/16/2003	0.23	10.52	20.22
3/5/2003	0.31	10.28	19.94
4/18/2003	0.16	14.12	19.61
5/31/2003	0.21	10.13	19.34
4/24/2003	0.25	9.28	19.24
4/2/2003	0.19	12.96	19.04
5/14/2003	0.14	15.46	18.72
5/12/2003	0.22	9.72	18.67
7/13/2003	0.34	5.96	18.38
8/31/2003	0.31	6.73	18.26
3/24/2003	0.25	9.71	18.17
9/25/2003	0.41	5.25	17.74
5/29/2003	0.23	7.90	17.69
7/8/2003	0.29	6.84	17.31
6/23/2003	0.18	10.83	17.17
4/27/2003	0.20	9.39	17.15
5/10/2003	0.14	13.74	17.05
6/28/2003	0.28	6.60	16.47
5/20/2003	0.23	7.88	16.34
6/29/2003	0.29	6.00	16.26
9/21/2003	0.28	6.96	16.14
6/5/2003	0.21	8.97	16.12
7/9/2003	0.23	7.81	15.83
7/6/2003	0.16	10.96	15.76
4/20/2003	0.26	6.77	15.58
4/3/2003	0.13	13.67	15.45
3/20/2003	0.20	10.17	15.42
4/12/2003	0.28	6.51	15.39
6/22/2003	0.20	8.54	15.37
5/15/2003	0.13	13.79	15.36
3/18/2003	0.22	9.37	15.34
4/19/2003	0.13	13.61	15.31
4/15/2003	0.12	14.09	14.89
6/13/2003	0.21	8.52	14.87
5/3/2003	0.18	9.08	14.85
7/7/2003	0.22	7.83	14.84
9/13/2003	0.29	6.11	14.54
4/10/2003	0.35	4.88	14.45
6/20/2003	0.29	5.25	14.26
6/2/2003	0.15	10.38	14.22
6/9/2003	0.31	6.50	14.21
6/3/2003	0.19	8.38	14.09
3/6/2003	0.18	10.85	14.08
9/22/2003	0.35	4.79	13.99
4/6/2003	0.17	9.93	13.97
7/5/2003	0.18	8.49	13.81
9/26/2003	0.30	5.89	13.74
4/14/2003	0.14	10.58	13.69
6/26/2003	0.22	7.19	13.63

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6/16/2003	0.29	4.87	13.60
6/25/2003	0.13	11.54	13.59
5/13/2003	0.12	12.46	13.46
7/4/2003	0.21	7.11	13.22
5/21/2003	0.16	10.17	13.15
4/4/2003	0.13	10.77	12.85
3/17/2003	0.22	7.15	12.73
6/6/2003	0.24	5.53	12.73
9/14/2003	0.26	5.63	12.51
9/15/2003	0.21	8.74	12.48
7/11/2003	0.19	7.50	12.46
4/5/2003	0.16	8.37	12.41
9/17/2003	0.27	5.51	12.39
6/18/2003	0.26	5.33	12.21
5/18/2003	0.21	7.29	12.18
3/30/2003	0.21	7.13	11.90
4/13/2003	0.19	7.52	11.67
3/23/2003	0.24	6.21	11.67
7/12/2003	0.33	3.81	11.61
7/1/2003	0.20	6.47	11.57
3/22/2003	0.22	6.63	11.51
6/27/2003	0.25	5.09	11.37
4/17/2003	0.22	5.80	11.23
7/3/2003	0.19	6.46	10.85
5/17/2003	0.22	6.05	10.79
3/12/2003	0.17	8.13	10.78
5/11/2003	0.17	7.33	10.75
5/19/2003	0.14	8.25	10.61
5/25/2003	0.13	8.75	10.45
6/19/2003	0.22	6.38	10.21
6/30/2003	0.17	6.69	10.09
6/1/2003	0.13	9.17	10.01
6/8/2003	0.29	3.96	9.86
6/17/2003	0.25	4.39	9.81
3/7/2003	0.22	5.88	9.80
5/26/2003	0.18	6.08	9.46
4/11/2003	0.21	5.00	9.41
5/22/2003	0.15	6.50	8.71
5/23/2003	0.20	6.00	8.69
3/15/2003	0.18	6.65	8.64
2/26/2003	0.14	10.70	8.53
3/4/2003	0.24	5.48	8.42
7/2/2003	0.17	5.71	8.29
3/13/2003	0.18	6.01	8.18
3/14/2003	0.16	6.64	8.12
7/15/2003	0.18	17.36	7.95
3/16/2003	0.20	5.01	7.92
3/21/2003	0.18	5.58	7.82
5/24/2003	0.10	7.25	6.47
6/7/2003	0.21	2.42	6.25
6/14/2003	0.22	3.74	5.92
2/27/2003	0.32	7.87	3.73

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2/25/2003	0.09	13.43	2.76
11/20/2003	0.44	1.41	2.45
3/11/2003	0.07	10.55	2.40
3/8/2003	0.04	6.03	0.56

7(B)

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Appendix H
Leaks Greater than 1 ppm VCM by Sample Station

7(B)

Above1ppmVCM Crosstab												
Station#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
12		9	199	100	93	37	364	895	1215	1049	739	4700
44		9	48	130	219	294	430	851	819	1099	571	4470
16		34	76	144	111	145	463	600	1329	978	525	4405
45		5	58	116	146	207	373	849	922	949	640	4265
28		45	215	53	142	321	337	535	419	1212	805	4084
15		46	53	106	874	71	320	493	429	760	327	3479
43		15	114	78	131	281	410	713	389	645	480	3256
35		5	2	33	2	154	589	911	162	1084	244	3186
23		32	50	14	39	125	254	545	387	1134	571	3151
13		6	123	110	99	59	285	457	741	841	363	3084
19		25	65	39	238	184	384	418	359	822	297	2831
33			2	48	26	173	510	679	313	749	284	2784
11		5	141	148	47	37	187	208	414	778	782	2747
34		3	10	11	20	212	275	633	245	891	366	2666
24		21	35	15	25	131	204	440	322	1017	410	2620
25		39	52	43	111	160	174	295	218	915	544	2551
26		18	28	35	38	121	170	465	201	776	521	2373
20		18	49	46	62	129	247	354	300	783	362	2350
14		17	23	15	28	55	211	394	642	652	260	2297
32			6	13	22	186	189	664	168	500	349	2097
31			23	33	29	131	157	540	179	602	332	2026
41		14	82	20	12	132	278	461	231	546	206	1982
17		2	20	1	2	49	203	213	513	688	273	1964
37		4	13	57	15	186	485	442	208	296	218	1924
38		12	67	97	33	161	412	421	227	310	169	1909
53			1	17	33	69	45	261	511	606	123	1666
54		36	8	1	135	93	146	474	210	387	103	1593
36		3	3	13	9	115	328	371	158	282	127	1409
21		4	25	37	12	94	85	115	183	401	357	1313
46		16	53	39	6	75	67	230	331	317	114	1248
18		21	33	17	7	35	87	324	237	346	108	1215
22		6	15	30	17	110	86	102	149	367	332	1214
47		9	112	32	11	15	14	219	313	362	109	1196

7(B)

Above1ppmVCM_Crosstab												
Station#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
8		1	31	37		7	409	151	190	192	173	1191
52					28	9	200	540	56	213	107	1153
42		19	64	9	5	31	64	176	305	356	117	1146
29			6	6	22	196	170	605	85			1090
30		1	20	10	92	167	156	522	64			1032
9		2	34	21	8	37	279	139	180	133	151	984
39		14	15	16	6	25	32	196	199	289	103	895
5				1	8	22	59	296	212	200	90	888
10				4	3	41	174	104	127	269	140	862
48				2	2	5	133	260	24	231	95	752
27		11	35	23	25	53	122	319	49			637
40			1	3	2	31	6	142	157	189	79	610
7				4	10	28	136	409	17			604
51					5	7	92	321	17	74	64	580
1				1	4	2	8	81	133	185	149	563
6				30		9	21	27	214	83	148	532
58					2	6	8	71	161	160	71	479
55									189	206	70	465
50				3	22	12	31	185	14	98	35	400
2					1	1	11	45	85	93	137	373
56									159	147	64	370
59				2	1	6	3	59	94	95	82	342
49						1	46	172	2	69	45	335
60		12	3	3		2	3	36	47	118	59	283
57									11	120	25	156

Appendix I
Total VCM Mass Determined by Sample Station

MassVCM-D-StationTotals

Station#	MaxHourlyAvgVCM(ppm)	Total#Samples	TotalMassVCM(lbs)
16	115.97	14670	321.75
44	58.70	14588	311.50
28	21.86	14627	310.01
12	160.45	14676	296.39
45	82.55	14582	293.25
15	82.38	14671	261.64
19	158.60	14655	259.86
43	19.51	14590	252.05
23	256.48	14639	249.17
11	150.45	14742	242.73
13	84.60	14670	241.13
25	95.37	14631	217.95
34	69.05	14611	200.53
35	153.17	14610	200.43
26	152.03	14630	192.90
33	27.76	14612	182.34
20	21.22	14652	180.00
24	33.95	14634	177.05
31	168.43	14618	172.93
37	71.20	14606	171.96
32	1859.05	14613	170.68
14	31.96	14670	148.14
41	36.51	14593	144.64
38	79.42	14600	142.51
54	14.31	14561	135.52
17	131.98	14665	119.15
21	24.83	14648	112.25
53	12.47	14563	110.07
22	9.48	14644	109.24
8	34.24	14905	104.85
36	15.32	14608	97.27
29	9.53	10269	96.57
52	8.61	14566	94.49
42	11.64	14591	89.81
18	40.34	14660	86.12
30	18.80	10266	84.32
46	7.30	14580	82.64
9	20.00	14591	82.53
47	8.23	14578	78.23

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MassVCM-D-StationTotals

Station#	MaxHourlyAvgVCM(ppm)	Total#Samples	TotalMassVCM(lbs)
10	12.14	13011	69.80
5	6.39	12628	64.30
48	5.68	14574	62.66
39	14.75	14598	61.80
40	6.16	14596	58.19
2	54.63	12641	54.79
27	19.18	10273	53.01
50	2.73	14572	50.68
51	4.49	14569	50.46
1	5.44	12653	49.96
6	18.16	12441	49.78
60	4.34	14558	46.94
7	13.43	8401	43.82
49	2.71	14574	40.40
58	6.96	12532	38.71
55	7.54	4339	38.33
59	6.92	12530	35.03
56	7.14	4339	32.97
57	8.49	4339	11.43

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Valve Monitoring Events by Quarter

UNIT	2000 1	2000 2	2000 3	2000 4	2000 5	2000 6	2000 7	2000 8	2000 9	2000 10	2000 11	2000 12	2001 1	2001 2	2001 3	2001 4	2001 5	2001 6	2001 7	2001 8	2001 9	2001 10	2001 11
C/A			625			627			627		322	317			627			627			627		
C3			552	1		551	1		639	3	532	20			557	6		551			558		
EDC	532	1228	3	1	459	1345		1757	3	1784	15		2	1805	2		1807	13		413	1394	2	1851
EGVOC		2073	133		2	2234	36	2208	69	1442	811	34	4	2263	1		2231	72	1		2285		2336
FHC									1490	2	59	1460	4	3	1513	1		1516	2	70	1590	5	25
GHU			2572	5		2493	7		2453	10	2407	12			2462	21		2419	10		2431	83	479
HDPE								3691	166	264	3676	40	10	3721	46	40	3885	18	18	3720	46	1365	5024
HDPE II																							
INLANDIV		468			466			468	8		468			468		41	509			41	468		537
LLDPE							6		4023	219	12	3702	18	13	3695	13	121	3689	4	4	3840	19	19
MT			1158			1109	1		1367		63	1096	2	2	1128			1128			1128		17
OLEFINS	11433	12	13	11452	17	83	11764		148	11612	62	59	11834	34	35	11629	127	102	11634	16	30	11645	126
OLII																					926	926	
PPII																	3277	3242		3232		6	3285
PPU	18	1729	27	11	1744	11	10	1775	4	1759	21	12	2	1707	64	19	1772	33	32	224	1661	94	1835
PPVOC							12	5655	269	10	5548	104	67	5705	6	4	5756	33	13	5608	67	140	5711
PVC	2295	3	161	2454			2439	2		2496	10		2439	1	1	2472	31	15	2456	2	1	2467	71
VCM	7149	109	28		6932	230	7176	7	183	7172	15	4	7213	5	10	6791	419	68	7213	6	7	7294	8

- Missed monitoring: Total valves to be monitored = 4125+1772 = 5897. Total valves monitored = 224. Total missed monitoring events = 5897-224 = 5673

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Valve Monitoring Events by Quarter

2001 12	2002 1	2002 2	2002 3	2002 4	2002 5	2002 6	2002 7	2002 8	2002 9	2002 10	2002 11	2002 12	2003 1	2003 2	2003 3	2003 4	2003 5	2003 6	2003 7	2003 8	2003 9	2003 10	2003 11
639			627			633			633		1	647			633			645			632		
639			559			557			559		1	721	3	3	560			557	83	1	550		
6		1811	4		1712	96	26	1705	102	4	1713	167	4	1701	141	5	1719	105	1660	103	7	6	6
4		2290	6	2	2203	93	1	2216	85		2220	122		2199	86		2316	25	2209	89	2	4	
1582			1605	11	11	1608	14	14	1605	13	11	1597	20	15	2727	1097	112	1664	72	21	3699	41	2
1969	18		2443	22	3	2420	11		2433	20		2523	42	3	2443	27	2	2400	55		2665	19	1
1297	441	4969	44	44	5062	123	232	5010	212	208	5470	497	67	4905	221	18	5119	45	200	5060	11	44	3010
						4469	3942	5	2		4125	23	80	3949	74	51	3761	36	40	3686	17	16	1115
1		509			509			508	1		508	30		504	7		509			508			837
3890	22	16	3758	16	10	3728	43	48	3726	7	6	4165	17	12	3822	55	53	3765	314	20	3704	17	2
1282			1128			1124			1182	57	3	1349			1220			1172	155	1	1434		
106	11694	98	92	11880	248	261	11712	132	156	11354	147	890	12776	322	189	10424	1467	472	11332	126	95	11249	5
11686	11682	28	26	3015		11913	82	46	11756	287	115	11533	314	393	11881	194	171	11626	98	72	12051	123	10
4	4	3125	10	9	3073	13	22	2967	132	4	3102	525	53	3111	198	49	3093	24	15	3091	25	20	
96	52	1830	53	46	1830	25	50	1797	26	27	1759	120	57	1789	60	34	1823	72	77	1813	28	30	3097
128	98	5648	188		5932	39	227	5913	490	105	5946	1089	85	6243	107	20	6168	77	178	5874	24	26	8542
4	2475	6	6	2464	4		2458	3	3	2183	5	350	2589	24	65	2183		265	2402	4	4	3183	
4	7135	4	36	7200	8	164	7439	6	282	3347	2	4292	7905	6	7	9	144	7717	710	6379	10	2879	410

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Monthly Remonitoring Summary - Missed Monitoring

Unit	CompTag	LDASTag	LeakDate	LeakReading	1stMonthRemonitored	2ndMonthRemonitored
FHC	305177	305177**53749957	5/1/2003	137800		
FHC	306014	306014**53750816	5/1/2003	97400		
FHC	306030	306030**53750927	5/1/2003	74600		
FHC	306031	306031**53750934	5/1/2003	46000		
FHC	306315	306315**53751803	4/30/2003	30700		6/29/2003 - 0 ppm
FHC	306477	306477**53752931	4/30/2003	13700		6/29/2003 - 120 ppm
FHC	306489	306489**53753014	4/30/2003	14200		6/29/2003 - 160 ppm
FHC	306573	306573**53753589	4/30/2003	24400		6/29/2003 - 700 ppm
FHC	306575	306575**53753602	4/30/2003	784000		6/29/2003 - 1020 ppm
HDPE	235685	235685**47904757	2/1/2001	20000		
HDPE	238354	238354**47982003	5/18/2003	12900	6/28/2003 - 0 ppm	
HDPE II	301705-2	301705-2**42770830	5/18/2003	44799		
HDPE II	302179	302179**42760527	2/4/2003	92900		
LLDPE	231572	231572**47946288	6/16/2003	10398		8/30/2003 - 0 ppm
LLDPE	239746	239746**47457287	6/16/2003	16197		8/15/2003 - 45 ppm
MT	221784	221784**55407952	3/18/2003	12487		
OLEFINS	141150	141150**61608840	1/3/2002	40000		
OLEFINS	141239	141239**61614223	4/15/2002	50000		
OLEFINS	143251	143251**61673026	4/24/2002	12700	5/28/2002 - 0 ppm	
OLEFINS	307416	307416**56919993	4/10/2003	18700		6/30/2003 - 0 ppm
OLEFINS	6430RV-9	6430RV-9**62218419	4/7/1998	50000		
OLEFINS	EV- 30152	EV- 30152**5294182	1/18/1999	40000		
OLEFINS	EV- 60405	EV- 60405**5302720	1/5/1999	50000		
OLEFINS	EV- 60790	EV- 60790**5304373	7/6/2000	50000		9/5/2000 - 0 ppm
OLEFINS	EV- 60804	EV- 60804**5304454	7/6/2000	10000		9/5/2000 - 0 ppm
OLEFINS	EV-30157B	EV-30157B**5312791	4/15/2002	12400	5/28/2002 - 0 ppm	
OLEFINS	EV-42057	EV-42057**53159622	4/11/2002	11700		
OLEFINS	FV- 21809	FV- 21809**5323447	4/13/2002	11700		
OLEFINS	PT-60151A	PT-60151A**5334096	3/26/2003	19800	4/1/2003 - 24 ppm	
OLII	262472	262472**74702954	3/24/2003	50000	4/1/2003 - 55 ppm	

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Unit	CompTag	LDASTag	LeakDate	LeakReading	1stMonthRemonitored	2ndMonthRemonitored
OLII	266097	266097**74770661	4/1/2002	35400		6/27/2002 - 0 ppm
OLII	271949	271949**75035906	7/24/2003	20000	8/7/2003 - 2300 ppm	
OLII	274812	274812**75160355	12/3/2002	149079		
PPII	253710	253710**45550973	6/21/2001	25000		
PPII	254476	254476**45591099	6/19/2001	10000		
PPII	254638	254638**45599968	6/19/2001	48000		
PPII	263054	263054**56207685	7/29/2003	13800		
PPU	204631	201631**61853959	5/5/2003	14099	6/29/2003 - 0 ppm	
PPU	205048	205048**62140979	8/30/2001	50000	9/11/2001 - 3903 ppm	
PPU	205336	205336**62157166	5/15/2003	40898	6/29/2003 - 0 ppm	
PPU	205656	205656**62175381	2/3/1999	25000		4/23/1999 - 2437 ppm
PPVOC	226988	226988**47199391	2/6/2002	10000	3/18/2002 - 0 ppm	

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UNIT	LDAS_TAG	COMP_CLASS	LeakDate	LeakTime	LeakReading	LeakWORKORD_NO	Reg
OLEFINS	143531**61684361	VALVE	08-Oct-03	07:54:14	38979	031008GG3YZO	EPAVV
GHU	200591**61759452	VALVE	14-Jun-01	06:15:08	770	010614OEX1TH	EPAH
GHU	200670**61765552	VALVE	30-Sep-99		559	990930Q33HO2	EPAH
GHU	201513**61841871	VALVE	22-Sep-99		625	990922E0P6A2	EPAH
GHU	201707**61861443	VALVE	22-Sep-99		714	990922IQ7DMN	EPAH
PPU	201937**61884863	VALVE	14-May-03	14:16:40	21400	030514N1G8IT	EPAVV
GHU	201989**61890423	VALVE	09-Dec-99	11:59:06	780	991209GA5HYV	EPAH
GHU	202008**61893100	VALVE	23-Sep-99		692	9909234MLC2D	EPAH
GHU	202227**61913540	VALVE	09-Dec-99	11:59:06	736	991209ZKMUAW	EPAH
GHU	202805**61978091	VALVE	23-Sep-99		752	990923C0G540	EPAH
GHU	203271**62023301	VALVE	27-Sep-99		728	990927YAWMEV	EPAH
GHU	203457**62042167	VALVE	08-Mar-01	14:59:21	2693	01030861LG0I	EPAH
GHU	203458**62042280	VALVE	27-Sep-99		1781	990927K9QWRT	EPAH
GHU	203773**62072688	VALVE	27-Sep-99		723	99092734IELN	EPAH
EDC	210250**38765188	VALVE	30-Nov-99	12:41:12	50000	991130NONVWY	EPAH
EDC	210828**38861400	VALVE	01-Dec-99	08:42:53	593	991201TFQ2OX	EPAH
EDC	212000**39193433	VALVE	30-Nov-99	12:41:12	872	9911306QAEW3	EPAH
EGVOC	216268**52978245	VALVE	30-Sep-03	19:53:50	551	030930463BNO	EPAH
MT	222178**55438073	VALVE	30-Sep-02	09:48:41	4329	020930YCQ3Q1	EPAH
PPVOC	223400**47135113	VALVE	14-May-02	13:20:41	26800	020514A9CQKU	EPAVV
PPVOC	224709**47156622	VALVE	07-Aug-01	15:09:17	18100	010807MGS4RJ	EPAVV
PPVOC	228488**47242697	VALVE	27-Aug-02	17:10:36	12600	0208278WACRD	EPAVV
HDPE	234817**47870716	VALVE	14-Nov-03	07:50:43	59800	031114AGHHI0	EPAVV
EGVOC	236559**48805944	VALVE	24-May-03	12:22:42	3502	030524EON0ED	EPAH
FHC	250639**45338101	VALVE	11-Mar-03	13:17:44	21300	030311MBVQ44	EPAVV
FHC	250938**45345144	VALVE	07-Dec-00	06:55:10	15000	001207G7UGTH	EPAVV
FHC	251476**45360987	VALVE	30-Jan-01	16:10:47	50000	010125JIC101	EPAVV
VCM	255462**49756623	VALVE	06-Jun-01	09:45:36	45000	01060610TTGQ	EPAH
VCM	255462**49756623	VALVE	20-Jun-01	07:46:50	25000	0106207PGDM3	EPAH
HDPE	256655**48291543	VALVE	16-May-03	12:34:39	38900	030516WWWAAM	EPAVV
OLII	262472**74702954	VALVE	24-Mar-03	14:32:46	50000	030324WTN99D	EPAVV
EDC	263168**60154032	VALVE	20-Aug-03	14:17:40	9346	0308201VHM7K	EPAH
HDPE II	264945**42727116	VALVE	17-Nov-03	09:10:37	44595	031117BO1KED	EPAVV
OLII	266711**74798165	VALVE	04-Sep-02	13:49:27	34600	020904WC6RW0	EPAVV
HDPE II	300884**42752117	VALVE	26-Apr-03	06:33:29	24700	030426SBG9O1	EPAVV
FHC	305177**53749957	VALVE	01-May-03	11:18:47	137800	030501DAG3OF	EPAVV
VCM	C101V262**59344429	VALVE	21-Apr-99		732	990421D0PSXP	EPAH
VCM	C101V394**59358416	VALVE	04-Oct-99	17:09:48	793	9910048H2CF0	EPAH
VCM	C202BV99**59495228	VALVE	03-Nov-99	09:49:05	4784	991103CJIU4T	EPAH
VCM	C202CV135**5949665	VALVE	09-Jun-03	11:18:40	904	0306093UX0TX	EPAH
VCM	C202CV136**5949689	VALVE	09-Jun-03	11:22:02	817	030609USCBRV	EPAH
VCM	C301V157**59608633	VALVE	06-Oct-99	17:34:22	531	991006WU76EE	EPAH
OLEFINS	EV- 30152**5294182	VALVE	20-Oct-99	00:00:00	50000	9910203Y8M7U	EPAVV
OLEFINS	EV- 30373**5295073	VALVE	28-Feb-00	14:09:56	50000	000228LPYPF6	EPAVV
OLEFINS	EV- 60595**5303541	VALVE	09-Apr-02	12:12:12	10400	0204097JI7T0	EPAVV
OLEFINS	EV- 60855**5304816	VALVE	31-Oct-02	11:30:30	10200	0210310BJ6ON	EPAVV
OLEFINS	EV-90076C**5318873	VALVE	08-Oct-02	15:11:14	29500	0210089ORPJE	EPAVV
OLEFINS	EV-90076E**5318877	VALVE	08-Oct-02	15:13:35	72300	021008WACWOD	EPAVV
OLEFINS	PI-15662B**5330158	VALVE	19-Oct-99	00:00:00	26500	9910191NFUSF	EPAVV
OLEFINS	PI-60501B**5331788	VALVE	08-Oct-02	14:00:39	84300	021008DAGNMW	EPAVV
VCM	V511A77**60460722	VALVE	13-Jan-00	06:55:53	811	000113P1FIGK	EPAH
VCM	V512V44**60476579	VALVE	29-Nov-99	12:05:47	2640	99112929J56W	EPAH

1(B)

UNIT	LDAS_TAG	COMP_CLASS	LeakDate	LeakTime	LeakReading	LeakWORKORD_NO	Reg
VCM	C2H4HDRV77**5959998	VALVE	27-Jan-99		529	990127QW28LP	EPAH
VCM	C101V262**59344429	VALVE	21-Apr-99		732	990421D0PSXP	EPAH
GHU	200714**61768968	VALVE	21-Sep-99		586	9909210VHO6K	EPAH
GHU	201513**61841871	VALVE	22-Sep-99		625	990922E0P6A2	EPAH
GHU	201707**61861443	VALVE	22-Sep-99		714	990922Q7DMN	EPAH
GHU	202008**61893100	VALVE	23-Sep-99		692	9909234MLC2D	EPAH
GHU	202805**61978091	VALVE	23-Sep-99		752	990923C0G640	EPAH
GHU	203271**62023301	VALVE	27-Sep-99		728	990927YAWMEV	EPAH
GHU	203458**62042280	VALVE	27-Sep-99		1781	990927K9QWRT	EPAH
GHU	203773**62072688	VALVE	27-Sep-99		723	99092734IELN	EPAH
GHU	200670**61765552	VALVE	30-Sep-99		559	990930Q32HO2	EPAH
VCM	C101V394**59359416	VALVE	04-Oct-99	17:09:40	793	9910043H2CFC	EPAH
VCM	C301V157**59608833	VALVE	06-Oct-99	17:34:22	531	991006WU76EE	EPAH
OLEFINS	PI-15662B**5330159	VALVE	19-Oct-99	00:00:00	26500	991019*NFUSF	EPAVV
OLEFINS	EV- 30152**5294182	VALVE	20-Oct-99	00:00:00	50000	9910203Y6M7U	EPAVV
VCM	C202BV39**59495228	VALVE	03-Nov-99	09:49:05	4784	991103CJIU4T	EPAH
VCM	V512V44**60476579	VALVE	29-Nov-99	12:05:47	2640	991129J9J56W	EPAH
EDC	210250**38765188	VALVE	30-Nov-99	12:41:12	50000	991130NONVWY	EPAH
EDC	212000**39193433	VALVE	30-Nov-99	12:41:12	872	991130GCAEW3	EPAH
EDC	210828**38861400	VALVE	01-Dec-99	08:42:53	593	991201TFQ2OX	EPAH
FHC	250938**45345144	VALVE	07-Dec-00	06:55:10	15000	001207G7UGTH	EPAVV
FHC	251476**45360987	VALVE	07-Dec-00	07:00:15	50000	001207OI2BDY	EPAVV
FHC	251476**45360987	VALVE	07-Dec-00	14:41:03	50000	00120742S2TL	EPAVV
VCM	255462**49756623	VALVE	06-Jun-01	09:45:36	45000	0106061OTTGQ	EPAH
VCM	255462**49756623	VALVE	20-Jun-01	07:46:50	25000	0106207PGDM3	EPAH
FHC	250645**45338254	VALVE	24-Sep-02	05:16:49	56500	020924V1F6EH	EPAVV
MT	222178**55438073	VALVE	30-Sep-02	09:48:41	4329	020930YCQ3Q1	EPAH
OLEFINS	EV- 60855**5304816	VALVE	31-Oct-02	11:30:30	10200	021031OBJ6ON	EPAVV
FHC	251385**45358780	VALVE	10-Mar-03	09:21:23	25497	030310BR64F6	EPAVV
FHC	251804**45361470	VALVE	11-Mar-03	11:53:50	119400	030311ZGO41S	EPAVV
FHC	306257**53751356	VALVE	30-Apr-03	08:19:36	45200	030430H2HG1S	EPAVV
FHC	306014**53750816	VALVE	01-May-03	09:53:36	97400	030501KQMR49	EPAVV
FHC	306030**53750927	VALVE	01-May-03	10:47:23	74600	03050121K38B	EPAVV
PPU	201937**61884863	VALVE	14-May-03	14:16:40	21400	030514N1G8IT	EPAVV
HDPE	256655**48201543	VALVE	16-May-03	12:34:39	30900	030516WWWAAM	EPAVV
FHC	250703-2**45339738	VALVE	23-Jun-03	13:13:25	50000	030629T3RW8M	EPAVV
PPII	263054**56207685	VALVE	29-Jul-03	06:48:29	13800	0307309NPLWH	EPAVV
EDC	263168**60164032	VALVE	20-Aug-03	14:17:40	9346	0308201VHM7K	EPAH
FHC	250384**45330796	VALVE	22-Sep-03	15:51:15	25900	030922ET0H9T	EPAVV
FHC	250557**45335665	VALVE	22-Sep-03	14:24:03	56792	0309224P3ZBI	EPAVV
FHC	250582**45336453	VALVE	22-Sep-03	15:07:14	13000	0309226MR8HX	EPAVV
FHC	250595**45336769	VALVE	22-Sep-03	14:51:36	19000	030922HYSSDI	EPAVV
FHC	250647**45336315	VALVE	22-Sep-03	13:30:17	38896	030922R1DVXG	EPAVV
FHC	250648**45336346	VALVE	22-Sep-03	13:42:16	712299	030922NNPARR	EPAVV
FHC	250662**45338902	VALVE	22-Sep-03	13:56:07	15092	030922NY58VP	EPAVV
FHC	250666**45339032	VALVE	22-Sep-03	14:06:20	32192	030922BPE5FQ	EPAVV
FHC	250993**45346914	VALVE	22-Sep-03	16:31:45	530500	030922D54CW8	EPAVV
FHC	303053**53746282	VALVE	23-Sep-03	13:24:20	14398	030923SLYM0K	EPAVV
FHC	303053**53746282	VALVE	23-Sep-03	13:24:20	14398	030923POCV76	EPAVV
FHC	305044**53749053	VALVE	23-Sep-03	15:54:34	15098	030923HFU701	EPAVV
FHC	305044**53749053	VALVE	23-Sep-03	15:54:34	15098	0309234H4246	EPAVV
FHC	306313**53751789	VALVE	23-Sep-03	08:42:13	153100	03092354MG7L	EPAVV
FHC	306313**53751789	VALVE	23-Sep-03	08:42:13	153100	0309239VSTN8	EPAVV
FHC	306475**53752916	VALVE	23-Sep-03	10:03:01	22300	030923EEM5LD	EPAVV
FHC	306475**53752916	VALVE	23-Sep-03	10:03:01	22300	030923RON6MK	EPAVV
FHC	306525**53753256	VALVE	23-Sep-03	10:33:40	981000	0309232UIFH3	EPAVV
FHC	306525**53753256	VALVE	23-Sep-03	10:33:40	981000	0309239KQAWL	EPAVV
FHC	306532**53753304	VALVE	23-Sep-03	10:41:21	12300	030923ZTI37X	EPAVV
FHC	306532**53753304	VALVE	23-Sep-03	10:41:21	12300	030923SRKBSZ	EPAVV
FHC	303219**53747343	VALVE	24-Sep-03	09:20:15	13898	030924N92017	EPAVV
FHC	303331-2**53747607	VALVE	24-Sep-03	09:54:31	20798	030924BNCC2	EPAVV
FHC	303386**53748009	VALVE	24-Sep-03	09:29:34	28198	030924OG0H6J	EPAVV
FHC	250198**45325653	VALVE	29-Sep-03	11:12:09	34100	030929X2RNAG	EPAVV
FHC	250214**45328125	VALVE	29-Sep-03	10:51:30	32100	030929ZNAL8B	EPAVV
FHC	250049**45345490	VALVE	29-Sep-03	13:31:19	969100	030929SJDO5H	EPAVV
FHC	250049**45345490	VALVE	29-Sep-03	13:31:19	969100	030929EJQVZR	EPAVV
OLEFINS	143531**6168436!	VALVE	08-Oct-03	07:64:14	38979	031008GG3YZO	EPAVV
OLEFINS	EV- 40031**5238496	VALVE	14-Oct-03	14:30:49	18900	031014CMRENT	EPAVV
HDPE	234917**47870716	VALVE	14-Nov-03	07:50:43	59900	031114AGHHI0	EPAVV
HDPE II	264045**42727116	VALVE	17-Nov-03	09:10:37	44595	031117BO1KED	EPAVV
HDPE II	303695**42801635	VALVE	17-Nov-03	14:40:28	37300	031117QC7P75	EPAVV

7(B)

LDAR Audit Findings for Formosa - Point Comfort [VP0614]

Leaking*/Open-ended Components Counts by Unit

11/17/2003 - 11/20/2003

Process Unit	*Component Type*	*Number Leaking/ Open-ended*	*Number Monitored*	*Percent Leaking*
HDPE 1				
	Connector	3	3	100.00
	Open-ended Line	1		
	Plug	4		
	Valve	20	649	3.08
LLDPE				
	Connector	4	4	100.00
	Valve	15	368	4.08
Marine Traffic				
	Connector	3	5	60.00
	PRV	1		
	Pump	0	1	0.00
	Valve	4	382	1.05
Olefins 1				
	Connector	1	1	100.00
	Plug	1		
	Pump	1	1	100.00
	Valve	24	654	3.67
PP 2				
	Connector	1	1	100.00
	Plug	1		
	Valve	8	262	3.05
PVC				
	Connector	3	3	100.00
	Valve	3	307	0.98
VCM				
	Connector	2	2	100.00
	Plug	0		
	Pump	0	1	0.00
	Valve	2	727	0.28

7(B)

EPA/FOIA2018-00856

**Leak Definitions:* *Valves: 500* *Pumps: 1000* *Connectors: 500* *PRVs: 500*

Process Unit	Component Type	Number Leaking/ Open-ended	Number Monitored	Percent Leaking
Plant-Wide Totals				
	Connector	17	19	89.47
	Open-ended Line	1		
	Plug	6		
	PRV	1		
	Pump	1	3	33.33
	Valve	76	3349	2.27

7(B)

EPA/FOIA2018-00857

*Leak Definitions: Valves: 500 Pumps: 1000 Connectors: 500 PRVs: 500

LDAR Audit Findings for Formosa - Point Comfort [VP0614]

Leaking*/Open-ended Components Identified by Unit

11/17/2003 - 11/20/2003

7(B)

Process Unit	Component Type	Tag ID	Reading	Comments
HDPE 1				
	Connector			
		235144	799	
		235400	1163	
		NoTag	7604	
	Open-ended Line			
		238179	13900	
	Plug			
		235497	30800	
		236840	1500	
		236886	1487	
		238162	100000	
	Valve			
		234163	54700	
		234198	1660	Formosa did not try to confirm due to existing leak tag (8/18/03)
		234845	927	
		234846	1943	
		235305	6510	
		235480	1337	
		236273	7344	
		236292	1531	monitoring data lost due to malfunctioning LeakTracker, # lost estimated by time duration lost
		236293	2220	monitoring data lost due to malfunctioning LeakTracker, # lost estimated by time duration lost
		236298	5246	monitoring data lost due to malfunctioning LeakTracker, # lost estimated by time duration lost
		236806	9281	monitoring data lost due to malfunctioning LeakTracker, # lost estimated by time duration lost
		236859	929	
		236867	7313	
		236868	1969	
		236886	1487	

*Leak Definitions: Valves: 500 Pumps: 1000 Connectors: 500 PRVs: 500

Process Unit	Component Type	Tag ID	Reading	Comments
HDPE 1				
	Valve			
		236903	1976	monitoring data lost due to malfunctioning LeakTracker, # lost estimated by time duration lost
		238268	74000	
		402467	1506	tag hung at time leak was found
		NT236774	66900	
		NT5663	527	
	Total Leakers/Open-ends	*28*		
LLDPE				
	Connector			
		239330	1987	
		239346	5287	
		239917	22300	
		329321	108000	
	Valve			
		230949	5092	
		232713	607	
		232716	950	
		232717	2159	
		232769	2052	
		232771	3028	
		232772	2180	
		232789	1443	
		239125	883	
		239154	19600	
		239234	18800	
		239236	1006	
		239444	1005	
		239563	873	
		239956	848	
	Total Leakers/Open-ends	*19*		
Marine Traffic				
	Connector			
		220500	5726	
		220663	800	was 2149, changed due to equipment malfunction
		220688	20000	was 69000, changed due to equipment malfunction
	PRV			
		221221	4363	
	Valve			

7(B)

**Leak Definitions:* *Valves: 500* *Pumps: 1000* *Connectors: 500* *PRVs: 500*

Process Unit	Component Type	Tag ID	Reading	Comments
Marine Traffic				
	Valve			
		21224	4920	
		220665	2700	was 7975, changed due to equipment malfunction
		NT221182	4654	
		NT221182	1119	
	Total Leakers/Open-ends	*8*		
Olefins 1				
	Connector			
		EV30973	2748	confirmed?
	Plug			
		EV-31081A	2550	
	Pump			
		3607JA	9706	
	Valve			
		139175	1056	
		139873	1202	
		143145	856	
		306711	2627	
		306717	30500	
		EV30333	1389	Non-standard Tag ID
		EV-30359	4821	Non-standard Tag ID
		EV-30683	2238	Non-standard Tag ID
		EV-30694	7382	Non-standard Tag ID
		EV-31074	5466	Non-standard Tag ID
		EV-40017	6607	Non-standard Tag ID
		EV-40018	1246	Non-standard Tag ID
		EV-40020	2974	Non-standard Tag ID
		EV-40022	1944	Non-standard Tag ID
		EV-40024	1100	Non-standard Tag ID
		EV40027	22400	Non-standard Tag ID
		EV40035A	2808	Non-standard Tag ID
		EV40037A	6247	Non-standard Tag ID
		EV90235	8939	Non-standard Tag ID
		EV90243	2147	Non-standard Tag ID
		EV90284	659	Non-standard Tag ID
		EV90301	1421	Non-standard Tag ID
		LV90433	100000	Non-standard Tag ID
		NT139861	1168	
	Total Leakers/Open-ends	*27*		
PP 2				
	Connector			
		263044	1248	

7(B)

**Leak Definitions:* *Valves: 500* *Pumps: 1000* *Connectors: 500* *PRVs: 500*

Process Unit	Component Type	Tag ID	Reading	Comments
PP 2				
	Plug			
		252879	24700	
	Valve			
		252582	625	
		252897	1453	
		252899	57100	
		253113	4470	
		253196	2092	
		254399	892	
		254453	653	adjusted by Formosa personnel before confirmation reading; EAI post adjustment reading: 460 ppm
		307864	56500	claimed to be N2 by Formosa
	Total Leakers/Open-ends	*10*		
PVC				
	Connector			
		214133	180800	
		214440	4978	
		308219	6710	
	Valve			
		213974	3979	
		214073	929	
		214448	1025	
	Total Leakers/Open-ends	*6*		
VCM				
	Connector			
		142692	2030	
		201CV-25	30000	
	Valve			
		NT120491	967	
		NT120797	793	
	Total Leakers/Open-ends	*4*		

7(B)

EPA/FOIA2018-00861

**Leak Definitions:* *Valves: 500* *Pumps: 1000* *Connectors: 500* *PRVs: 500*

LLDPE	5
Marine Traffic	20
Olefins 1	4
PP 2	4
PVC	9
VCM	38
TOTAL	115

7(B)

EPA/FOIA2018-00862

LDAR Audit Findings for Formosa - Point Comfort [VP0614]

Missing Identification Tags by Process Unit

11/17/2003 - 11/20/2003

7(B)

Process Unit	Tag ID
HDPE 1	
	NT
	NT1
	NT2
	NT233958
	NT234131
	NT234179
	NT234259
	NT235256
	NT235256
	NT235256
	NT235256
	NT235256
	NT235256
	NT235290
	NT235290
	NT235290
	NT23556
	NT236603
	NT236605
	NT236605
	NT236608
	NT236647
	NT236655
	NT236774
	NT236861
	NT236992
	NT236999
	NT3
	NT307096
	NT307096
	NT4
	NT5
	NT5663
	NT5663
	NT6
LLDPE	
	NT230941
	NT239570
	NT239570

Process Unit	Tag ID
LLDPE	
	NT239962
	NT239970
Marine Traffic	
	NT221178
	NT221178
	NT221178
	NT221178
	NT221178
	NT221178
	NT221182
	NT221182
	NT221182
	NT221182
	NT221182
	NT221183
	NT221193
	NT221201
	NT221259
	NT221259
	NT238578
	NT238578
	NT307230
Olefins 1	
	NT139861
	NTEV31198
	NTEV31212
	NTEV42018B
PP 2	
	NT252833
	NT253056
	NT253113
	NT253184
PVC	
	NT213837
	NT213993
	NT213994

Process Unit	Tag ID
PVC	
	NT214030
	NT214030
	NT214329
	NT303202
	NT305499
	NT305538
VCM	
	NT120062
	NT120414
	NT120491
	NT120797
	NT120797
	NT120797
	NT120798
	NT120798
	NT121295
	NT121296
	NT121297
	NT201V-19
	NT262767
	NT262767
	NT301V-40
	NT301V-41
	NT308938
	NT501AV-44
	NT501AV-61
	NT503V-223
	NT503V-95
	NT6596
	NTC201
	NTC201AV52
	NTC201AV52
	NTC201AV63
	NTC201AV85
	NTC202BV57
	NTC202CV02
	NTC301V216
	NTC301V68
	NTC303V060

Process Unit	Tag ID	Process Unit	Tag ID	Process Unit	Tag ID
VCM					
	NTC303V062				
	NTC304V044				
	NTC502V12				
	NTHV251C				
	NTLV-236A				
	NTV-206B				

7(B)

Number of Components Monitored Per Day

USER_PW	INSTRUMENT	CAL_DATE	Monitoring DATE	No. Monitoring Events
M99	494	30-Nov-99	30-Nov-99	7223
720	480B	28-Dec-02	27-Dec-02	5580
330	478	19-Jun-00	19-Jun-00	2454
M59	466	11-Oct-99	11-Oct-99	2386
540	444	05-Dec-01	05-Dec-01	2349
M59	466	04-Oct-99	05-Oct-99	2195
258	450	09-Dec-99	09-Dec-99	2097
525	913B	15-Oct-02	15-Oct-02	2043
230	478	17-Oct-00	17-Oct-00	2031
M59	466	12-Oct-99	12-Oct-99	1995
M125	478	12-Jul-00	12-Jul-00	1983
556	478B	21-Oct-02	21-Oct-02	1920
M220	444	03-Dec-01	03-Dec-01	1664
M59	450	18-Jul-00	18-Jul-00	1660
729	452B	14-Aug-03	14-Aug-03	1819
M397	953B	11-Nov-03	11-Nov-03	1816
M241	497	24-Sep-02	24-Sep-02	1725
525	913	14-Jan-02	14-Jan-02	1680
783	932B	12-Nov-03	12-Nov-03	1660
M220	450	24-Sep-01	24-Sep-01	1636
577	402A	06-Dec-02	06-Dec-02	1625
M216	913	23-Oct-01	23-Oct-01	1623
M100	449	21-Nov-99	21-Nov-99	1603
374	449	17-Oct-00	17-Oct-00	1594
M216	913	29-Jan-02	29-Jan-02	1594
375	450	03-Jan-01	03-Jan-01	1594
358	494	22-Mar-00	22-Mar-00	1593
525	913	18-Nov-01	18-Nov-01	1589
783	932B	22-Oct-03	22-Oct-03	1584
M374	957B	03-Sep-03	03-Sep-03	1554
719	913B	04-Mar-03	05-Mar-03	1533
674	919B	28-Dec-02	28-Dec-02	1534
656	944B	14-Oct-02	14-Oct-02	1525
M100	450	06-Oct-99	06-Oct-99	1502
M100	449	29-Nov-99	29-Nov-99	1502
M59	466	03-Jan-00	03-Jan-00	1500
M100	450	01-Oct-99	01-Oct-99	1496
M241	489	05-Jun-02	05-Jun-02	1404
525	402	23-Oct-01	23-Oct-01	1489
M220	908	23-Oct-01	23-Oct-01	1489
M100	449	06-Jan-00	06-Jan-00	1481
M100	450	13-Oct-99	13-Oct-99	1480
534	402	05-Dec-01	05-Dec-01	1478
M100	450	12-Oct-99	12-Oct-99	1478
525	913	24-Sep-02	24-Sep-02	1476
M267	402	24-Apr-02	24-Apr-02	1471
M100	449	09-Nov-99	09-Nov-99	1470
719	958B	05-Sep-03	05-Sep-03	1470
656	913B	27-Dec-02	27-Dec-02	1469
M100	449	05-Jan-00	05-Jan-00	1469
M100	450	03-Nov-99	03-Nov-99	1452
M100	449	14-Dec-99	14-Dec-99	1437
230	450	05-Jan-00	05-Jan-00	1420
258	450	29-Nov-99	29-Nov-99	1429
M241	497	23-Oct-01	23-Oct-01	1423
M100	449	04-Jan-00	04-Jan-00	1425
374	449	17-Oct-00	19-Oct-00	1415
M374	919B	20-Jun-03	20-Jun-03	1405
M99	450	19-Oct-99	19-Oct-99	1402
230	478	16-Oct-00	16-Oct-00	1402
375	450	17-Oct-00	17-Oct-00	1394
M125	449	17-Aug-00	17-Aug-00	1390
M163	474	28-Nov-00	28-Nov-00	1390
M196	450	12-Mar-01	12-Mar-01	1385
M241	913	10-Oct-02	10-Oct-02	1395
525	913	23-Sep-02	23-Sep-02	1382
M241	402	14-Jan-02	14-Jan-02	1375
783	932B	06-Nov-03	06-Nov-03	1357
M216	402	25-Jul-02	25-Jul-02	1351
534	444	12-Dec-01	12-Dec-01	1353
375	450	28-Nov-00	28-Nov-00	1345
534	444	28-Nov-01	28-Nov-01	1342
729	452B	12-Nov-03	12-Nov-03	1330
M163	474	31-Oct-00	31-Oct-00	1325
230	478	12-Oct-00	12-Oct-00	1318
468	906	19-Jun-01	19-Jun-01	1318
434	402	19-Jun-01	19-Jun-01	1298
375	450	12-Oct-00	12-Oct-00	1297
525	402	29-Jan-02	29-Jan-02	1290
M220	497	03-Dec-01	03-Dec-01	1289
M376	497B	20-Jun-03	20-Jun-03	1286
M216	402	03-Oct-01	03-Oct-01	1284
M99	449	14-Oct-99	14-Oct-99	1278

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Number of Components Monitored Per Day

USER_PW	INSTRUMENT	CAL_DATE	Monitoring DATE	No. Monitoring Events
574	913B	10-Dec-02	10-Dec-02	1277
656	426B	11-Dec-02	11-Dec-02	1274
M220	402	28-Nov-01	28-Nov-01	1273
M220	908	22-Oct-01	22-Oct-01	1272
230	449	25-Sep-00	25-Sep-00	1268
M163	474	23-Oct-00	23-Oct-00	1267
232	913	04-Jun-02	04-Jun-02	1260
775	402A	12-Jun-03	12-Jun-03	1259
719	956B	19-Aug-03	19-Aug-03	1258
729	452B	05-Sep-03	05-Sep-03	1256
M337	402A	05-Mar-03	05-Mar-03	1254
230	917	30-Oct-00	30-Oct-00	1254
M220	402	18-Oct-01	18-Oct-01	1252
230	473	11-Oct-00	11-Oct-00	1251
M220	906	01-Oct-01	01-Oct-01	1251
M247	913	22-Oct-01	22-Oct-01	1250
M163	474	30-Oct-00	30-Oct-00	1250
M241	497	18-Nov-01	18-Nov-01	1250
525	402	22-Oct-01	22-Oct-01	1249
525	402	05-Nov-01	05-Nov-01	1249
783	932B	17-Jun-03	17-Jun-03	1248
525	402	24-Oct-01	24-Oct-01	1248
M216	497	22-Oct-01	22-Oct-01	1247
534	402	18-Nov-01	18-Nov-01	1244
457	450	30-May-01	30-May-01	1244
783	932B	12-Jun-03	12-Jun-03	1236
M241	489	29-Jan-02	29-Jan-02	1236
525	402	30-Aug-02	30-Aug-02	1235
M125	473	06-Sep-00	06-Sep-00	1235
M59	466	10-Jan-00	10-Jan-00	1233
230	473	31-Oct-00	31-Oct-00	1232
656	426B	28-Dec-02	28-Dec-02	1231
511	903	01-Oct-01	01-Oct-01	1231
M125	917	12-Oct-00	12-Oct-00	1231
258	494	06-Jan-00	06-Jan-00	1227
M216	450	01-Oct-01	01-Oct-01	1222
M125	449	31-Oct-00	31-Oct-00	1221
511	913	16-Oct-01	16-Oct-01	1220
M374	488B	23-Sep-03	23-Sep-03	1218
M196	473	06-Mar-01	06-Mar-01	1216
294	494	04-Apr-00	04-Apr-00	1214
M100	449	21-Dec-99	21-Dec-99	1213
375	450	18-Oct-00	18-Oct-00	1213
375	450	11-Oct-00	11-Oct-00	1211
719	426B	12-Jun-03	12-Jun-03	1205
783	932B	18-Jun-03	18-Jun-03	1200
M52	450	28-Oct-99	28-Oct-99	1203
258	450	13-Dec-99	09-Dec-99	1197
729	452B	07-Aug-03	07-Aug-03	1194
719	426B	27-Dec-02	27-Dec-02	1192
230	473	21-Sep-00	21-Sep-00	1189
M163	474	07-Dec-00	07-Dec-00	1189
M125	917	21-Nov-00	21-Nov-00	1186
M125	473	05-Sep-00	05-Sep-00	1185
M125	473	01-Nov-00	01-Nov-00	1185
534	444	13-Nov-01	13-Nov-01	1181
458	450	02-Jul-01	02-Jul-01	1181
M219	933	05-Dec-01	05-Dec-01	1178
525	908	16-Oct-01	16-Oct-01	1171
230	474	01-Nov-00	01-Nov-00	1170
M220	444	26-Nov-01	26-Nov-01	1169
M241	486	04-Feb-02	04-Feb-02	1167
230	473	20-Oct-00	20-Oct-00	1165
540	497	04-Dec-01	04-Dec-01	1164
M216	450	18-Sep-01	18-Sep-01	1161
M241	913	30-Aug-02	30-Aug-02	1152
M220	444	04-Dec-01	04-Dec-01	1152
230	473	26-Oct-00	26-Oct-00	1152
M216	497	11-Feb-02	11-Feb-02	1149
719	426B	20-Mar-03	20-Mar-03	1138
525	913	18-Jul-02	18-Jul-02	1137
673	467B	16-Dec-02	16-Dec-02	1137
M100	450	04-Oct-99	04-Oct-99	1136
258	466	01-Feb-00	01-Feb-00	1135
525	913	25-Apr-02	25-Apr-02	1134
M216	402	06-Feb-02	06-Feb-02	1133
M337	953B	12-Nov-03	12-Nov-03	1128
230	449	20-Sep-00	20-Sep-00	1128
719	913B	28-Dec-02	28-Dec-02	1128
673	949B	23-Dec-02	23-Dec-02	1128
M125	494	05-Jun-00	05-Jun-00	1126
M337	402	05-Mar-02	05-Mar-02	1125
M216	499	14-Jan-02	14-Jan-02	1122

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Number of Components Monitored Per Day

USER_PW	INSTRUMENT	CAL_DATE	Monitoring DATE	No. Monitoring Events
M337	402A	12-Mar-03	12-Mar-03	1119
783	9326	19-Aug-03	19-Aug-03	1117
M219	450	07-Sep-01	07-Sep-01	1112
M374	9266	30-Apr-03	30-Apr-03	1111
230	450	06-Jan-00	06-Jan-00	1111
511	402	18-Sep-01	18-Sep-01	1104
M241	913	14-Feb-02	14-Feb-02	1103
457	450	29-May-01	29-May-01	1101
M59	449	11-Apr-00	11-Apr-00	1101
458	905	30-May-01	30-May-01	1100
320	450	05-Sep-00	05-Sep-00	1094
525	913	10-Oct-02	10-Oct-02	1093
M267	402	20-May-02	20-May-02	1091
783	9323	25-Sep-03	25-Sep-03	1090
719	4973	18-Jul-03	18-Jul-03	1090
674	9448	14-Nov-02	14-Nov-02	1086
525	497	01-Nov-01	01-Nov-01	1086
M267	944	04-Jun-02	04-Jun-02	1086
256	450	21-Dec-99	21-Dec-99	1083
M219	497	28-Nov-01	28-Nov-01	1082
729	4523	11-Aug-03	11-Aug-03	1076
783	9328	18-Aug-03	18-Aug-03	1077
674	9448	13-Nov-02	13-Nov-02	1074
284	494	04-May-00	04-May-00	1074
M337	9528	20-Mar-03	20-Mar-03	1072
M385	4678	20-Jun-03	20-Jun-03	1072
M163	917	24-Nov-00	24-Nov-00	1068
M100	449	01-Nov-99	01-Nov-99	1068
230	449	28-Nov-00	28-Nov-00	1067
M241	944	26-Jul-02	26-Jul-02	1067
M216	913	13-Mar-02	13-Mar-02	1065
534	402	07-Nov-01	07-Nov-01	1060
M216	402	19-Sep-01	19-Sep-01	1058
719	9198	27-Feb-03	27-Feb-03	1056
525	913	20-May-02	20-May-02	1056
M374	9526	18-May-03	18-May-03	1055
M374	9236	29-Sep-03	29-Sep-03	1051
525	497	10-Dec-01	10-Dec-01	1051
230	449	07-Dec-00	07-Dec-00	1050
477	906	18-Jun-01	18-Jun-01	1045
525	497	04-Jun-02	04-Jun-02	1044
M241	489	28-Jan-02	28-Jan-02	1043
719	9568	20-Aug-03	21-Aug-03	1042
534	444	10-Dec-01	10-Dec-01	1042
M59	450	07-Jul-00	07-Jul-00	1040
525	913	26-Jul-02	26-Jul-02	1039
783	4268	18-Jul-03	18-Jul-03	1038
783	9325	26-Aug-03	26-Aug-03	1037
M337	9198	11-Mar-03	11-Mar-03	1036
M216	402	10-Oct-01	10-Oct-01	1035
674	9448	06-Dec-02	06-Dec-02	1034
375	450	30-Oct-00	30-Oct-00	1032
534	444	13-Dec-01	13-Dec-01	1032
434	449	08-Mar-01	08-Mar-01	1030
M216	450	17-Sep-01	17-Sep-01	1028
M220	906	10-Dec-01	10-Dec-01	1024
M216	913	08-Oct-01	08-Oct-01	1023
M241	497	08-Jan-02	08-Jan-02	1023
230	475	03-Oct-00	03-Oct-00	1021
375	450	10-Oct-00	10-Oct-00	1021
M59	450	11-Jul-00	11-Jul-00	1020
M241	944	05-Jul-02	05-Jul-02	1020
525	489	11-Feb-02	11-Feb-02	1020
434	450	05-Jun-01	05-Jun-01	1019
729	4526	19-Aug-03	19-Aug-03	1017
320	449	07-Aug-00	07-Aug-00	1015
525	402	04-Dec-01	04-Dec-01	1013
M59	450	07-Apr-00	07-Apr-00	1010
678	4578	17-May-03	17-May-03	1010
M100	449	10-Jan-00	10-Jan-00	1007
258	494	21-Feb-00	21-Feb-00	1006
540	497	06-Feb-02	06-Feb-02	1006
M59	466	15-Dec-99	15-Dec-99	1006
M100	449	03-Jan-00	03-Jan-00	1005
M59	466	20-Oct-99	20-Oct-99	1002
556	4266	14-Dec-02	14-Dec-02	1002
525	497	04-Feb-02	04-Feb-02	1001
540	402	04-Feb-02	04-Feb-02	1001
534	906	04-Dec-01	04-Dec-01	1000
M99	449	24-Apr-00	24-Apr-00	1000

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APPENDIX W

NEIC LABORATORY ACTIVITIES
TECHNICAL REPORT

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LABORATORY ACTIVITIES TECHNICAL REPORT

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SAMPLE INFORMATION

The NEIC Laboratory Branch provided analytical support to the NEIC compliance investigation of the Formosa Plastics (Formosa) facility located in Point Comfort, Texas. Sampling occurred on February 5, 9, 10, 11, and 12, 2004 at Formosa. Fifteen air canister, 7 hydrocarbon, 2 by-product, 5 process waste, 72 wastewater, and 3 field (trip) blank samples were either transported by NEIC Field Branch personnel or shipped via FedEx to the NEIC laboratory. Samples were received on February 6, 11, 13, and 18, 2004 and the receipt date for each sample was noted on the Chain-of-Custody records. The samples were handled in accordance with the NEIC Evidence Management Procedure (NEICPROC/00-059). The samples were received intact and locked. Custody seals on tamper-evident bags were intact. After receipt and inspection, the samples were transferred to secure storage areas in the NEIC laboratory.

Laboratory analyses were not requested for samples from station 13. Samples collected on February 9, 2004 from stations 8 (VCM Mainline) and 9 (VT-680) were not analyzed for volatile organic compounds (VOCs). They were analyzed for vinyl chloride by the headspace technique described in this laboratory report. VOC trip blanks were not received with samples collected on February 9 or 11, 2004. Trip blanks with NEIC tags NE-12713 through 12715 were shipped with PCB samples, and these trip blanks were not analyzed.

Caustic wastewater samples were received near the end of their holding time period (sample tags: NE 12552, NE 12588, NE 12553, NE 12589, NE 12666, NE 12563, NE 12616, NE 12564, NE 12617, NE 12659, NE 12663). Therefore, all analyses could not be completed within the holding time. Reported values for these samples should be considered minimum values. All other wastewater samples were analyzed within their respective holding times. All analyses were performed under the NEIC quality system.

VOLATILE ORGANIC COMPOUNDS

The wastewater, blank, and hydrocarbon samples were analyzed for benzene and other VOCs by purge-and-trap gas chromatography/mass spectrometry (GC/MS). Tam Talarski, Jing-Fen Chen, and Linda Johnson performed the analyses using SW-846 Method 8260B as guidance, and in accordance with the NEIC Procedure, Volatile Organic Analysis by Gas Chromatography/Mass Spectrometry (NEICPROC/00-002R2). Aliquots of each wastewater sample and trip (field) blank were analyzed for VOCs. Hydrocarbon samples were extracted with methanol (0.1 mL/10 mL).

Typically, samples were re-analyzed using a smaller aliquot or a larger dilution when target analyte concentrations exceeded the instrument calibration range.

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VOC Results

The VOC results for the wastewater, trip blank, and hydrocarbon samples are reported in Table 1. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, analytical results, and lower quantitation limits (LQLs) for each analyte reported.

Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 1 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample. Measurement uncertainty is not well characterized for the data reported in Table 1 as approximate (≈) concentrations because the results were either above or below the quantitation range. These results are reported to one significant figure.

Quality assurance and quality control (QA/QC) measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias. The relative standard deviations (RSDs) of the sets of replicate subsample measurements ranged from 0.1 to 13 percent. The spike recoveries ranged from 74 to 134 percent.

Based on an evaluation of the QA/QC data, the primary source of analytical measurement error was determined to be the random error associated with the instrumental analysis procedure. An estimate of the RSD associated with the VOC data is about 13 percent based on within-run QC and historical data.

Table 1

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
1	Olefins #1 Inlet 02.05.2004	NE 12526	Acetone = 0.460 Benzene = 0.0321 2-Butanone < LQL Ethylbenzene = 0.0136 Naphthalene = 0.734 Styrene = 0.138 Toluene = 0.0795 1,2,4-Trimethylbenzene = 0.0267 1,3,5-Trimethylbenzene = 0.00729 m-&/or p-Xylene = 0.0374 o-Xylene = 0.0256	Acetone = 0.13 Benzene = 0.0050 2-Butanone = 0.050 Ethylbenzene = 0.0050 Naphthalene = 0.20 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
1	Olefins 1 Inlet 02.09.2004	NE 12578[1] NE 12577[2]	Acetone = 6.01 Benzene = 0.126 2-Butanone = 0.476 Ethylbenzene < LQL Naphthalene ≈ 0.6 Styrene = 0.0525 Toluene = 0.0609 1,2,4-Trimethylbenzene = 0.0154 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.0149 o-Xylene = 0.0100	Acetone = 0.050 Benzene = 0.010 2-Butanone = 0.050 Ethylbenzene = 0.010 Naphthalene = 0.20 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
1	CWTP/Olefins I Inlet 02.11.2004	NE 12632	Acetone ≈ 8 Benzene = 0.0715 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.660 Styrene = 0.0257 Toluene = 0.0287 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
1	CWTP/Olefins I Inlet 02.11.2004	NE 12634	Acetone ≈ 7 Benzene = 0.0718 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.660 Styrene = 0.0271 Toluene = 0.0301 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
1	CWTP/Olefins I Inlet 02.11.2004	NE 12636	Acetone ≈ 7 Benzene = 0.0700 2-Butanone < LQL Ethylbenzene < LQL Naphthalene = 0.594 Styrene = 0.0270 Toluene = 0.0286 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Ethylbenzene = 0.010 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 1,3,5-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
2	Olefins #2 Inlet 02.05.2004	NE 12527	Acetone = 0.0500 Chloroform = 0.00206	Acetone = 0.025 Chloroform = 0.0010
2	Olefins 2 Inlet 02.09.2004	NE 12579	Acetone[2] = 0.0987 Chloroform ≈ 0.002	Acetone = 0.010 Chloroform = 0.0020
2	CWTP/Olefins II Inlet 02.11.2004	NE 12638	Acetone = 0.0407 Chloroform = 0.00210	Acetone = 0.025 Chloroform = 0.0010
3	Degas B Inlet 02.05.2004	NE 12530	Acetone = 0.0820 Benzene = 0.00266 2-Butanone < LQL Chloroform = 0.00280 1,2-Dichloroethane = 0.0156 Hexane = 0.00648 Naphthalene = 0.0601 Styrene = 0.00901 Tetrahydrofuran < LQL Toluene = 0.00524 m-&/or p-Xylene = 0.00240 o-Xylene = 0.00184	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
3	Degas B Inlet 02.09.2004	NE 12581	Acetone = 1.50 Benzene[2] = 0.0163 2-Butanone[2] = 0.0770 Chloroform < LQL 1,2-Dichloroethane[2] = 0.0147 Hexane < LQL Naphthalene[5] = 0.0950 Styrene = 0.00732 Tetrahydrofuran < LQL Toluene = 0.00816 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.30 Benzene = 0.0050 2-Butanone = 0.030 Chloroform = 0.0050 1,2-Dichloroethane = 0.0050 Hexane = 0.0050 Naphthalene = 0.050 Styrene = 0.0050 Tetrahydrofuran = 0.030 Toluene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
3	CWTP/Degas B Inlet 02.11.2004	NE 12639	Acetone ≈ 0.7 Benzene = 0.00834 2-Butanone < LQL Chloroform = 0.00251 1,2-Dichloroethane = 0.0161 Hexane = 0.00300 Naphthalene = 0.0684 Styrene = 0.00315 Tetrahydrofuran = 0.0752 Toluene = 0.00333 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
4	Degas A Inlet 02.05.2004	NE 12531 NE 12532	Chloroform = 2.60 Bromodichloromethane = 0.0143 Bromoform < LQL Dibromochloromethane < LQL	Chloroform = 0.10 Bromodichloromethane = 0.0050 Bromoform = 0.0050 Dibromochloromethane = 0.0050
4	Degas A Inlet 02.09.2004	NE 12582	Bromodichloromethane[2] = 0.0523 Bromoform[1] = 0.225 Chloroform = 2.65 Dibromochloromethane[1] = 0.153	Bromodichloromethane = 0.0050 Bromoform = 0.0050 Chloroform = 0.10 Dibromochloromethane = 0.0050
4	CWTP/Degas A Inlet 02.11.2004	NE 12642	Bromodichloromethane < LQL Bromoform = 0.333 Chloroform = 3.78 Dibromochloromethane = 0.143	Bromodichloromethane = 0.050 Bromoform = 0.050 Chloroform = 0.050 Dibromochloromethane = 0.050
5	Degas A Outlet 02.05.2004	NE 12534 NE 12533	Chloroform = 1.69 Bromodichloromethane = 0.0141 Bromoform < LQL Dibromochloromethane < LQL Naphthalene < LQL	Chloroform = 0.050 Bromodichloromethane = 0.0050 Bromoform = 0.0050 Dibromochloromethane = 0.0050 Naphthalene = 0.0050
5	Degas A Outlet 02.09.2004	NE 12583	Bromodichloromethane[1] = 0.0359 Bromoform[1] = 0.209 Chloroform = 2.02 Dibromochloromethane[1] = 0.122 Naphthalene < LQL	Bromodichloromethane = 0.0050 Bromoform = 0.0050 Chloroform = 0.050 Dibromochloromethane = 0.0050 Naphthalene = 0.050
5	CWTP/Degas A Outlet 02.11.2004	NE 12644	Bromodichloromethane < LQL Bromoform = 0.274 Chloroform = 2.55 Dibromochloromethane = 0.115 Naphthalene = 0.0879	Bromodichloromethane = 0.050 Bromoform = 0.050 Chloroform = 0.050 Dibromochloromethane = 0.050 Naphthalene = 0.050

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
6	Degas B Outlet 02.05.2004	NE 12536	Acetone ≈ 0.2 Benzene = 0.00369 2-Butanone < LQL Chloroform = 0.00283 1,2-Dichloroethane = 0.0176 Ethylbenzene = 0.00125 Hexane = 0.00351 Naphthalene = 0.0928 Styrene = 0.0138 Toluene = 0.00725 m-&/or p-Xylene = 0.00348 o-Xylene = 0.00259	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
6	Degas B Outlet 02.09.2004	NE 12584	Acetone = 1.01 Benzene[2] = 0.0128 2-Butanone[2] = 0.0463 Chloroform < LQL 1,2-Dichloroethane = 0.0117 Ethylbenzene < LQL Hexane < LQL Naphthalene[2] = 0.0749 Styrene = 0.00549 Toluene = 0.00633 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.50 Benzene = 0.0030 2-Butanone = 0.020 Chloroform = 0.0030 1,2-Dichloroethane = 0.0030 Ethylbenzene = 0.0030 Hexane = 0.0030 Naphthalene = 0.030 Styrene = 0.0030 Toluene = 0.0030 m-&/or p-Xylene = 0.0030 o-Xylene = 0.0030
6	CWTP/Degas B Outlet 02.11.2004	NE 12646	Acetone ≈ 1 Benzene = 0.00798 2-Butanone < LQL Chloroform = 0.00246 1,2-Dichloroethane = 0.0134 Ethylbenzene < LQL Hexane = 0.00113 Naphthalene = 0.0577 Styrene = 0.00241 Toluene = 0.00285 m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
7	Combined Feed to Equalization 02.05.2004	NE 12537	Acetone = 0.0619 Benzene = 0.00110 Bromodichloromethane = 0.00118 Bromoform < LQL 2-Butanone < LQL Chloroform = 0.00938 1,2-Dichloroethane < LQL Naphthalene = 0.00137 Styrene < LQL Tetrahydrofuran < LQL Toluene < LQL	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Bromoform = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0010 Toluene = 0.0010

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
7	Combined Feed to Equalization 02.09.2004	NE 12585	Acetone ≈ 0.8 Benzene = 0.00776 Bromodichloromethane = 0.00518 Bromoform[2] = 0.0144 2-Butanone[2] = 0.0507 Chloroform[1] = 0.138 Dibromochloromethane = 0.0103 1,2-Dichloroethane = 0.00909 Naphthalene[2] = 0.0637 Styrene = 0.00400 Tetrahydrofuran < LQL Toluene = 0.00382	Acetone = 0.020 Benzene = 0.0030 Bromodichloromethane = 0.0030 Bromoform = 0.0030 2-Butanone = 0.020 Chloroform = 0.0030 Dibromochloromethane = 0.0030 1,2-Dichloroethane = 0.0030 Naphthalene = 0.030 Styrene = 0.0030 Tetrahydrofuran = 0.0010 Toluene = 0.0030
7	CWTP/ Combined Feed to Equalization 02.11.2004	NE 12647	Acetone ≈ 0.9 Benzene = 0.00205 Bromodichloromethane < LQL Bromoform = 0.00110 2-Butanone < LQL Chloroform = 0.00479 1,2-Dichloroethane = 0.00614 Naphthalene = 0.0345 Styrene < LQL Tetrahydrofuran = 0.0570 Toluene < LQL	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Bromoform = 0.0010 2-Butanone = 0.010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Tetrahydrofuran = 0.0050 Toluene = 0.0010
8[1,3]	VCM Mainline 02.05.2004	NE 12539 and NE12540	Bromodichloromethane = 0.00685 Chloroform = 0.0617 1,2-Dichloroethane < LQL	Bromodichloromethane = 0.0010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010
8	CWTP/VCM Mainline 02.11.2004	NE 12649	Bromodichloromethane < LQL Chloroform = 0.00457 1,2-Dichloroethane = 0.00204	Bromodichloromethane = 0.0010 Chloroform = 0.0010 1,2-Dichloroethane = 0.0010
9	VCM VT 680 02.05.2004	NE 12542 NE 12541	Chloroform = 1.31 Bromodichloromethane = 0.00942 1,2-Dichloroethane = 0.0242 Methylene Chloride = 0.0572	Chloroform = 0.050 Bromodichloromethane = 0.0050 1,2-Dichloroethane = 0.0050 Methylene Chloride = 0.0050
9	CWTP/VCM @ VT-680 02.11.2004	NE 12651	Bromodichloromethane < LQL Chloroform = 1.68 1,2-Dichloroethane < LQL Methylene Chloride < LQL	Bromodichloromethane = 0.050 Chloroform = 0.050 1,2-Dichloroethane = 0.050 Methylene Chloride = 0.050
10[1,3]	Olefins #1 VOC Stripper eff 02.05.2004	NE 12543 and NE 12544	Acetone = 0.695 Benzene = 0.0248 2-Butanone < LQL Naphthalene = 0.972 Styrene = 0.115 Toluene = 0.0674 1,2,4-Trimethylbenzene = 0.0275 m-&/or p-Xylene = 0.0314 o-Xylene = 0.0227	Acetone = 0.31 Benzene = 0.013 2-Butanone = 0.13 Naphthalene = 0.013 Styrene = 0.013 Toluene = 0.013 1,2,4-Trimethylbenzene = 0.013 m-&/or p-Xylene = 0.013 o-Xylene = 0.013

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12590	Acetone = 7.03 Benzene = 0.107 2-Butanone = 0.521 Naphthalene ≈ 0.6 Styrene = 0.0491 Toluene = 0.0545 1,2,4-Trimethylbenzene = 0.0152 m-&/or p-Xylene = 0.0147 o-Xylene = 0.0100	Acetone = 1.0 Benzene = 0.010 2-Butanone = 0.050 Naphthalene = 0.10 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12591	Acetone = 6.83 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12592	Acetone = 6.98 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.09.2004	NE 12593	Acetone = 7.01 Benzene < LQL 2-Butanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 1.0 Benzene = 0.20 2-Butanone = 1.0 Naphthalene = 2.0 Styrene = 0.20 Toluene = 0.20 1,2,4-Trimethylbenzene = 0.20 m-&/or p-Xylene = 0.20 o-Xylene = 0.20
10	Olefins #I VOC Stripper Effluent 02.11.2004	NE 12672	Acetone ≈ 9 Benzene = 0.0712 2-Butanone < LQL Naphthalene = 0.679 Styrene = 0.0185 Toluene = 0.0233 1,2,4-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.25 Benzene = 0.010 2-Butanone = 0.10 Naphthalene = 0.010 Styrene = 0.010 Toluene = 0.010 1,2,4-Trimethylbenzene = 0.010 m-&/or p-Xylene = 0.010 o-Xylene = 0.010

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
11	Olefins #1 Stripper feed 02.05.2004	NE 12546	Acetone = 0.682	Acetone = 0.31
		NE 12545	Benzene = 0.0151 Ethylbenzene = 0.0171 Naphthalene = 1.08 n-Propylbenzene = 0.00760 Styrene = 0.146 Toluene = 0.0829 1,2,4-Trimethylbenzene = 0.0375 1,3,5-Trimethylbenzene = 0.0114 m-&/or p-Xylene = 0.0439 o-Xylene = 0.0280	Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 0.013 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
11	Olefins #I Stripper Feed 02.09.2004	NE 12605	Acetone = 0.733 Benzene[2] = 0.0131 Ethylbenzene[2] = 0.0128 Naphthalene ≈ 0.8 n-Propylbenzene < LQL Styrene[2] = 0.0724 Toluene[2]= 0.0763 1,2,4-Trimethylbenzene[2] = 0.0226 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene[2] = 0.0272 o-Xylene[2] = 0.0158	Acetone = 0.50 Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 1.0 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
11	Olefins #I Stripper Feed 02.11.2004	NE 12678	Acetone = 0.794 Benzene = 0.0143 Ethylbenzene = 0.0103 Naphthalene = 0.977 n-Propylbenzene < LQL Styrene = 0.0620 Toluene = 0.0750 1,2,4-Trimethylbenzene = 0.0209 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.0216 o-Xylene = 0.0129	Acetone = 0.31 Benzene = 0.0050 Ethylbenzene = 0.0050 Naphthalene = 0.013 n-Propylbenzene = 0.0050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
12	Olefins #1 CPI Effluent 02.05.2004	NE 12548	Acetone < LQL Benzene < LQL Chloroform = 0.00930 Ethylbenzene < LQL Hexane < LQL Naphthalene < LQL Toluene < LQL Trichloroethene = 0.00187 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.025 Benzene = 0.0010 Chloroform = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Toluene = 0.0010 Trichloroethene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
12[3]	Olefins #I CPI Effluent 02.09.2004	NE 12607 and NE 12608	Acetone < LQL Benzene < LQL Chloroform[4] = 0.00614 Ethylbenzene < LQL Hexane < LQL Naphthalene < LQL Toluene < LQL Trichloroethene[4] = 0.00201 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene < LQL o-Xylene < LQL	Acetone = 0.010 Benzene = 0.000050 Chloroform = 0.0020 Ethylbenzene = 0.0020 Hexane = 0.0020 Naphthalene = 0.020 Toluene = 0.0020 Trichloroethene = 0.0020 1,2,4-Trimethylbenzene = 0.0020 1,3,5-Trimethylbenzene = 0.0020 m-&/or p-Xylene = 0.0020 o-Xylene = 0.0020
12	Olefins I CPI Effluent 02.11.2004	NE 12676	Acetone = 0.0641 Benzene = 0.00357 Chloroform = 0.00766 Ethylbenzene = 0.00128 Hexane = 0.00190 Naphthalene = 0.0124 Toluene = 0.00204 Trichloroethene = 0.00225 1,2,4-Trimethylbenzene = 0.00547 1,3,5-Trimethylbenzene = 0.00700 m-&/or p-Xylene = 0.00781 o-Xylene = 0.00819	Acetone = 0.025 Benzene = 0.0010 Chloroform = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Naphthalene = 0.0010 Toluene = 0.0010 Trichloroethene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
14[1,5]	Olefins #I Zimpro Effluent 02.05.2004	NE 12552	Acetone = 48.5 Benzene = 1.35	Acetone = 13 Benzene = 0.50
14[5]	Olefins I Zimpro Effluent 02.09.2004	NE 12588	Acetone = 44.9 Benzene ≈ 4	Acetone = 13 Benzene = 0.50
14	Olefins I Zimpro Effluent 02.11.2004	NE 12669	Acetone ≈ 45 Benzene = 1.66	Acetone = 6.3 Benzene = 0.25
15[5]	Olefins #I Zimpro Influent 02.05.2004	NE 12553	Benzene = 185 Toluene = 13.9	Benzene = 5.0 Toluene = 5.0
15[5]	Olefins # Zimpro Influent 02.09.2004	NE 12589	Benzene = 197 Toluene = 15.5	Benzene = 5.0 Toluene = 5.0
15[1,5]	Olefins I Zimpro Influent 02.11.2004	NE 12666	Benzene = 248 Toluene = 20.9	Benzene = 5.0 Toluene = 5.0

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
16	Olefins II VOC Stripper Effluent 02.05.2004	NE 12558	Acetone = 0.0568 Chloroform = 0.00210	Acetone = 0.025 Chloroform = 0.0010
16	Olefins II VOC Stripper Effluent 02.09.2004	NE 12611	Acetone = 0.425 Chloroform < LQL	Acetone = 0.050 Chloroform = 0.0020
16	Olefins II/ VOC Stripper Effluent 02.11.2004	NE 12653	Acetone = 0.0518 Chloroform = 0.00225	Acetone = 0.025 Chloroform = 0.0010
17	Olefins II CPI Effluent Water 02.05.2004	NE 12560	Acetone < LQL Benzene = 0.0291 Bromodichloromethane < LQL Chloroform = 0.0141 Naphthalene = 0.00538 Styrene = 0.00172 Toluene = 0.0113 1,2,4-Trimethylbenzene = 0.00231 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.00448 o-Xylene = 0.00327	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
17	Olefins II CPI Effluent 02.09.2004	NE 12613	Acetone[2] = 0.0376 Benzene[2] = 0.0876 Bromodichloromethane < LQL Chloroform[2] = 0.0144 Naphthalene < LQL Styrene = 0.00840 Toluene[2] = 0.0407 1,2,4-Trimethylbenzene < LQL 1,3,5-Trimethylbenzene < LQL m-&/or p-Xylene = 0.00578 o-Xylene < LQL	Acetone = 0.030 Benzene = 0.0050 Bromodichloromethane = 0.0050 Chloroform = 0.0050 Naphthalene = 0.050 Styrene = 0.0050 Toluene = 0.0050 1,2,4-Trimethylbenzene = 0.0050 1,3,5-Trimethylbenzene = 0.0050 m-&/or p-Xylene = 0.0050 o-Xylene = 0.0050
17	Olefins II CPI Effluent 02.11.2004	NE 12655	Acetone < LQL Benzene = 0.00303 Bromodichloromethane = 0.00165 Chloroform = 0.0146 Naphthalene = 0.00126 Styrene = 0.00171 Toluene = 0.0361 1,2,4-Trimethylbenzene = 0.00353 1,3,5-Trimethylbenzene = 0.00157 m-&/or p-Xylene = 0.00500 o-Xylene = 0.00340	Acetone = 0.025 Benzene = 0.0010 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
18[5]	Olefins #II Zimpro Effluent 02.05.2004	NE 12563	Acetone = 82.4 Benzene = 2.48 Chloroform < LQL 2-Hexanone < LQL 4-Methyl-2-pentanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL	Acetone = 25 Benzene = 0.50 Chloroform = 0.50 2-Hexanone = 0.50 4-Methyl-2-pentanone = 0.50 Naphthalene = 0.50 Styrene = 0.50 Toluene = 0.50
18[5]	Olefins II Zimpro Effluent 02.09.2004	NE 12616	Acetone = 95.1 Benzene = 4.24 Chloroform < LQL 2-Hexanone < LQL 4-Methyl-2-pentanone < LQL Naphthalene < LQL Styrene < LQL Toluene < LQL	Acetone = 25 Benzene = 1.0 Chloroform = 1.0 2-Hexanone = 1.0 4-Methyl-2-pentanone = 1.0 Naphthalene = 1.0 Styrene = 1.0 Toluene = 1.0
18	Olefins II Zimpro Effluent 02.11.2004	NE 12658 NE 12657	Acetone ≈ 90 Benzene[1] = 4.59 Chloroform = 0.00435 2-Hexanone = 0.0146 4-Methyl-2-pentanone = 0.00311 Naphthalene = 0.00605 Styrene = 0.00298 Toluene ≈ 0.2	Acetone = 8.3 Benzene = 0.33 Chloroform = 0.0010 2-Hexanone = 0.0010 4-Methyl-2-pentanone = 0.0010 Naphthalene = 0.0010 Styrene = 0.0010 Toluene = 0.0010
19[5]	Olefins #II Zimpro Influent 02.05.2004	NE 12564	Benzene = 2990 Toluene = 563	Benzene = 50 Toluene = 50
19[5]	Olefins II Zimpro Influent 02.09.2004	NE 12617	Benzene = 2640 Toluene = 502	Benzene = 50 Toluene = 50
19[5]	Olefins II Zimpro Influent 02.11.2004	NE 12659	Benzene = 350 Toluene < LQL	Benzene = 50 Toluene = 50
20	Olefins I CPI Oil Overflow 02.09.2004	NE 12609	Naphthalene[1] = 23,400 (Hydrocarbon sample)	Naphthalene = 1,000
20	Olefins I CPI Oil Overflow 02.11.2004	NE 12697	Naphthalene = 55,800 (Hydrocarbon sample)	Naphthalene = 5,000
21	Olefins II Zimpro Skimmer Oil 02.09.2004	NE 12619	Benzene = 361,000 Hexane = 8,700 Toluene = 33,100 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
21	Olefins II Zimpro Skimmer Oil 02.11.2004	NE 12662	Benzene = 424,000 Hexane = 12,600 Toluene = 35,200 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000

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Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
22	Olefins I Skimmer Oil 02.10.2004	NE 12628	Benzene[1] = 395,000 Hexane[1] = 6,400 Toluene[1] = 109,000 (Hydrocarbon sample)	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
22	Olefins I Skimmer Oil 02.11.2004	NE 12671	Benzene = 404,000 Hexane = 7,390 Toluene = 105,000	Benzene = 5,000 Hexane = 5,000 Toluene = 5,000
23	Olefins II Sump AA 02.11.2004	NE 12663	Naphthalene[1] = 179	Naphthalene = 5.0
24	Olefins I Combined Stripper Feed 02.11.2004	NE 12674 NE 12675	Acetone ≈ 10.5[6] Benzene = 0.283 Ethylbenzene = 0.00892 Naphthalene = 0.695 Styrene = 0.0499 Toluene = 0.0768 1,3,5-Trimethylbenzene = 0.00334 m-&/or p-Xylene = 0.0171 o-Xylene = 0.0101	Acetone = 0.63 Benzene = 0.025 Ethylbenzene = 0.0010 Naphthalene = 0.025 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
25	Olefins I Vessel G440F/Warm Flare Drum 02.11.2004	NE 12690 NE 12689	Benzene = 48.4 Acetone ≈ 200 Ethylbenzene = 5.43 Isopropylbenzene = 0.547 Naphthalene = 10.7 n-Propylbenzene = 4.82 Styrene = 3.42 Toluene = 11.1 1,2,4-Trimethylbenzene = 4.88 1,3,5-Trimethylbenzene = 1.87 m-&/or p-Xylene = 2.82 o-Xylene = 2.35	Benzene = 1.0 Acetone = 13 Ethylbenzene = 0.50 Isopropylbenzene = 0.50 Naphthalene = 0.50 n-Propylbenzene = 0.50 Styrene = 0.50 Toluene = 0.50 1,2,4-Trimethylbenzene = 0.50 1,3,5-Trimethylbenzene = 0.50 m-&/or p-Xylene = 0.50 o-Xylene = 0.50
26	Olefins I Vessel 6710 02.11.2004	NE 12694	Benzene[1] = 31.4 Ethylbenzene[1] = 2.50 Hexane[1] = 16.6 Toluene[1] = 29.1 1,2,4-Trimethylbenzene[1] = 3.10 1,3,5-Trimethylbenzene[1] = 1.65 m-&/or p-Xylene[1] = 14.1 o-Xylene[1] = 4.76	Benzene = 1.0 Ethylbenzene = 1.0 Hexane = 1.0 Toluene = 1.0 1,2,4-Trimethylbenzene = 1.0 1,3,5-Trimethylbenzene = 1.0 m-&/or p-Xylene = 1.0 o-Xylene = 1.0

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
27	Olefins I Sump AA 02.11.2004	NE 12682	Acetone = 0.0739 Bromodichloromethane = 0.00278 Chloroform = 0.0177 Trichloroethene = 0.0280	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
27	Olefins I Sump AA 02.11.2004	NE 12683	Acetone = 0.0684 Bromodichloromethane = 0.00276 Chloroform = 0.0167 Trichloroethene = 0.0277	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
27	Olefins I Sump AA 02.11.2004	NE 12684	Acetone = 0.0660 Bromodichloromethane = 0.00276 Chloroform = 0.0168 Trichloroethene = 0.0275	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
28	Olefins I Sump AB 02.11.2004	NE 12687	Acetone = 0.0346 Bromodichloromethane = 0.00110 Chloroform = 0.00641 Trichloroethene = 0.00168	Acetone = 0.025 Bromodichloromethane = 0.0010 Chloroform = 0.0010 Trichloroethene = 0.0010
29	Olefins I Sump AC 02.11.2004	NE 12691	Benzene = 0.0550 Ethylbenzene = 0.0175 Hexane = 0.0177 Isopropylbenzene = 0.00461 Naphthalene = 0.0570 n-Propylbenzene = 0.00226 Toluene = 0.0843 1,2,4-Trimethylbenzene = 0.0171 1,3,5-Trimethylbenzene = 0.00639 m-&/or p-Xylene = 0.0565 o-Xylene = 0.0247	Benzene = 0.0010 Ethylbenzene = 0.0010 Hexane = 0.0010 Isopropylbenzene = 0.0010 Naphthalene = 0.0010 n-Propylbenzene = 0.0010 Toluene = 0.0010 1,2,4-Trimethylbenzene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12703 NE12704	Naphthalene = 0.838 Acetone ≈ 0.5 Benzene = 0.0156 Ethylbenzene = 0.0119 Styrene = 0.0601 Toluene = 0.0789 1,3,5-Trimethylbenzene = 0.00483 m-&/or p-Xylene = 0.0225 o-Xylene = 0.0122	Naphthalene = 0.050 Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12706	Acetone ≈ 0.5 Benzene = 0.0168 Ethylbenzene = 0.0115 Naphthalene = 0.896 Styrene = 0.0622 Toluene = 0.0847 1,3,5-Trimethylbenzene = 0.00458 m-&/or p-Xylene = 0.0229 o-Xylene = 0.0126	Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Naphthalene = 0.050 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010

Table 1 (continued)

VOC RESULTS FOR WASTEWATER AND HYDROCARBON SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (mg/L)	Lower Quantitation Limit (mg/L)
30	Olefins II VOC Stripper Feed 02.12.2004	NE 12708	Acetone ≈ 0.5 Benzene = 0.0154 Ethylbenzene = 0.0122 Naphthalene = 0.896 Styrene = 0.0621 Toluene = 0.0884 1,3,5-Trimethylbenzene = 0.00428 m-&/or p-Xylene = 0.0230 o-Xylene = 0.0127	Acetone = 0.025 Benzene = 0.0010 Ethylbenzene = 0.0010 Naphthalene = 0.050 Styrene = 0.0010 Toluene = 0.0010 1,3,5-Trimethylbenzene = 0.0010 m-&/or p-Xylene = 0.0010 o-Xylene = 0.0010
31	Olefins II Warm Flare Knockout 02.12.2004	NE 12701	Benzene[1] = 13.2 Hexane[1] = 0.479 Naphthalene[1] = 4.61 Styrene[1] = 2.98 Toluene[1] = 2.39 1,2,4-Trimethylbenzene[1] = 0.647 m-&/or p-Xylene[1] = 0.938 o-Xylene[1] = 0.658	Benzene = 0.33 Hexane = 0.33 Naphthalene = 0.33 Styrene = 0.33 Toluene = 0.33 1,2,4-Trimethylbenzene = 0.33 m-&/or p-Xylene = 0.33 o-Xylene = 0.33
32	Olefins II Sump AB 02.12.2004	NE 12698	Bromodichloromethane = 0.00205 Chloroform = 0.0156	Bromodichloromethane = 0.0010 Chloroform = 0.0010
	Field Blank 02.05.2004	NE 12557	< LQL (Trip Blank)	Target compounds ranged from 0.0010 to 0.025
	Trip Blank 02.12.2004	NE 12709	< LQL	Target compounds ranged from 0.0010 to 0.025

1 *Replicate result; Mean of n = 3.*
2 *Replicate result; Mean of n = 2.*
3 *Results were averaged between tagged samples.*
4 *Replicate result; Mean of n = 4.*
5 *Two-week holding time not met; reported as a minimum value.*

7(B)

VINYL CHLORIDE

Unpreserved wastewater samples were analyzed for vinyl chloride using EPA Method 107 [Determination of Vinyl Chloride Content of In-Process Wastewater Samples, and Vinyl Chloride Content of Polyvinyl Chloride Resin Slurry, Wet Cake, and Latex Samples (40 CFR, Part 61, App. B, Method 107). Analyses were performed by Jing-Fen Chen.

Vinyl Chloride Results

Vinyl chloride results for the wastewater samples are reported in Table 2. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, and the analytical results. Vinyl chloride was not identified in any of the samples above the lower quantitation limit (LQL) of 0.016 mg/L. The LQL is a calculated value that corresponds to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. The vinyl chloride LQL was calculated by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample.

QA/QC measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias, and blanks were analyzed for vinyl chloride. All results were acceptable.

Table 2

VINYL CHLORIDE RESULTS FOR WASTEWATER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Vinyl Chloride (mg/L)
8	VCM Mainline 02.09.2004	NE 12586	< LQL
9	VT-680 02.09.2004	NE 12587	< LQL
9	VT-680 02.09.2004	NE 12602	< LQL

AIR SAMPLES

7(B)

Bob Bohn analyzed the air samples for VOCs according to the NEIC procedure "Air Canister Volatile Organic Analysis by Gas Chromatography/Mass Spectrometry." This procedure is based on Compendium Method TO-15, "Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry." An air canister from station number 27 was received under vacuum, which indicated that a sample was not collected. Therefore, the contents of the air canister were not analyzed.

Air Sample Results

The VOC results for the air samples are reported in Table 3. The table contains station numbers, can numbers, NEIC tag numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, analytical results, and lower quantitation limits (LQLs) for each analyte reported. Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 1 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by dilution factor used to prepare the subsample. Measurement uncertainty is not well characterized for the data reported in Table 3 as approximate (≈) concentrations because the results were below the quantitation range. These results are reported to one significant figure.

Quality assurance and quality control (QA/QC) measures were taken during the analyses. Replicate subsamples and spikes were prepared and analyzed to evaluate analytical precision and bias. The relative standard deviations (RSDs) of the sets of replicate subsample measurements ranged from 1.8 to 3.7 percent. Overall air analysis measurement precision was evaluated from the variability of the surrogates, which ranged from 4.9 to 5.8 percent (RSD). The spike recoveries ranged from 99.6 to 100 percent. The independent quality control standard was within 23 percent of the expected value for reported compounds.

7(B)

Table 3

VOC RESULTS FOR AIR CANISTER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Can Number	NEIC Tag Number	Sample Description	Analytical Result (ppbv)	Lower Quantitation Limit (ppbv)
01	01003	NE 12566	Olefins #1 Inlet 02.09.2004	Benzene ≈ 0.5 Chloroform ≈ 0.1 Chloromethane ≈ 0.7 Dichlorodifluoromethane ≈ 0.5	Benzene = 1.0 Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0
02	00954	NE 12567	Olefins #2 Inlet 02.09.2004	Chloroform ≈ 0.3 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.6	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
04	00987	NE 12568	Degas B Inlet 02.09.2004	Chloroform = 6.70 Chloromethane ≈ 0.8 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.5	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
05	00989	NE 12569	Degas A Inlet 02.09.2004	Chloroform ≈ 0.7 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Vinyl Chloride ≈ 0.7	Chloroform = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl Chloride = 1.0
08	00970	NE 12570	VCM Mainline 02.09.2004	Benzene ≈ 0.3 Chloromethane = 1.00 Dichlorodifluoromethane ≈ 0.6 Vinyl chloride = 1.20	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Vinyl chloride = 1.0
09	00956	NE 12571	VCM VT 680 02.09.2004	Chloroform = 19.8 Chloromethane ≈ 0.9 Dichlorodifluoromethane ≈ 0.6 Methylene Chloride ≈ 0.09 1,2-Dichloroethane ≈ 0.2	Chloroform = 1.4 Chloromethane = 1.4 Dichlorodifluoromethane = 1.3 Methylene Chloride = 1.4 1,2-Dichloroethane = 1.4
10	00966	NE 12573	Olefins #1 VOC Stripper eff. 02.09.2004	Benzene = 3.20 1,3-butadiene = 5.00 Chloromethane ≈ 0.8 Dichlorodifluoromethane ≈ 0.7	Benzene = 1.0 1,3-butadiene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0
14[1]	00995	NE 12572	Olefins #1 Zimpro eff. 02.09.2004	Benzene = 263 1,3-butadiene = 358 Dichlorodifluoromethane ≈ 0.6 Ethylbenzene ≈ 0.2 Toluene = 21.0	Benzene = 21 1,3-butadiene = 21 Dichlorodifluoromethane = 4.0 Ethylbenzene = 4.1 Toluene = 20
16	00984	NE 12575	Olefins #2 VOC Stripper eff. 02.09.2004	Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 1,2-dichloroethane = 1.90	Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 1,2-dichloroethane = 1.0
18	00973	NE 12576	Olefins #2 Zimpro eff. 02.09.2004	Benzene ≈ 0.3 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 1,2-dichloroethane = 4.90	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 1,2-dichloroethane = 1.0
20	00991	NE 12574	Olefins #1 CPI oil overflow 02.09.2004	Benzene = 1.03 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.6	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0

Table 3 (continued)

VOC RESULTS FOR AIR CANISTER SAMPLES
Formosa Plastics
Point Comfort, Texas

Station Number	Can Number	NEIC Tag Number	Sample Description	Analytical Result (ppbv)	Lower Quantitation Limit (ppbv)
23[1]	00985	NE 12665	Olefins 2 Sump AA 02.11.2004	Benzene = 946 Chloroform ≈ 10 Ethylbenzene = 416 4-Ethyltoluene = 309 Styrene = 920 Toluene = 1,910 1,2,4-Trimethylbenzene = 756 1,3,5-Trimethylbenzene = 296 m- &/or p-Xylene = 939 o-Xylene = 377	Benzene = 62 Chloroform = 21 Ethylbenzene = 61 4-Ethyltoluene = 61 Styrene = 62 Toluene = 61 1,2,4-Trimethylbenzene = 62 1,3,5-Trimethylbenzene = 60 m- &/or p-Xylene = 120 o-Xylene = 61
27	00964	NE 12680	Olefins 1 Sump AA 02.11.2004	Not analyzed	
29	00968	NE 12693	Olefins I Sump AC 02.11.2004	Benzene = 2.2 Chloromethane ≈ 0.6 Dichlorodifluoromethane ≈ 0.5 Ethylbenzene ≈ 0.1 Toluene = 1.3 m- &/or p-Xylene ≈ 0.5 o-Xylene ≈ 0.2	Benzene = 1.0 Chloromethane = 1.0 Dichlorodifluoromethane = 1.0 Ethylbenzene = 1.0 Toluene = 1.0 m- &/or p-Xylene = 2.0 o-Xylene = 1.0
32	00945	NE 12712	Olefins II Sump AB 02.12.2004	Benzene ≈ 0.5 Chloroform = 27.4 Dichlorodifluoromethane ≈ 0.6	Benzene = 2.1 Chloroform = 2.1 Dichlorodifluoromethane = 2.0

1 *Replicate result; Mean of n = 3.*

7(B)

PCB CONGENERS

Christine Casey analyzed seven samples for polychlorinated biphenyl (PCB) congeners. EPA Method 1668 was used as guidance for the determination of PCB congeners by gas chromatography/ion trap mass spectrometry. Liquid samples were diluted with isooctane. Solid samples were extracted using an accelerated solvent extractor (ASE) following SW-846 Method 3545 as guidance. A method blank (sand matrix) was extracted and analyzed. Field or matrix blank samples were not available.

PCB Congener Results

PCB congener results are reported in Table 4. The table contains station numbers, sample descriptions, and dates, as recorded on the Chain-of-Custody forms, NEIC tag numbers, the monochlorobiphenyl analytical results, and lower quantitation limits (LQLs) for the

monochlorobiphenyls. Most analytical results are reported to three significant figures. This rounding convention is not intended to reflect the accuracy of the data, and the analytical measurement uncertainty associated with the data in Table 4 is explained below. The LQLs are reported to fewer significant figures. The LQLs are calculated values that correspond to the lowest concentration of analyte in the sample for which measurement uncertainty is well characterized. An LQL is calculated for a given analyte by multiplying the amount of analyte in the lowest calibration standard by the dilution factor used to prepare the subsample.

7(B)

QA/QC measures were taken during the analyses. Replicates and spikes were analyzed to evaluate analytical precision and bias. The RSDs for the sets of replicates ranged from 2.6 to 7.3 percent. The spike recoveries ranged from 103 to 108 percent. Based on an evaluation of the QA/QC data, the primary source of analytical measurement error was determined to be the random error associated with the analytical procedure. An estimate of the RSD associated with the PCB data is about 7 percent based on within-run QC data.

According to 40 CFR § 761.3, "PCBs are defined as the total PCBs calculated following division of the quantity of monochlorinated biphenyls by 50." The results shown in Table 4 have not been divided by 50.

Table 4

PCB CONGENER RESULTS

Formosa Plastics
Point Comfort, Texas

Station Number	Sample Description	NEIC Tag Number	Analytical Result (µg/g)	Lower Quantitation Limit (µg/g)
100	CWTP – Tank 97 02.10.2004	NE 12621	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.29
100	CWTP – Tank 97 02.10.2004	NE 12622	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.25
100	CWTP – Tank 97 02.10.2004	NE 12623	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.25
101	CWTP – TST – 01 copper removal unit sludge 02.10.2004	NE 12624	Chlorobiphenyls < LQL	Chlorobiphenyls = 0.04
102[1]	EDC Distillation Ends from VC-304 02.10.2004	NE 12625	2-Chlorobiphenyl = 5.02 3-Chlorobiphenyl = 16.6 4-Chlorobiphenyl = 10.8	Chlorobiphenyls = 2.3
103	VCM Distillation Ends from DT-407A/B 02.10.2004	NE 12626	Chlorobiphenyls < LQL	Chlorobiphenyls = 2.2
104[2]	VCM Drum HW-04 6631 Strainer Waste 02.10.2004	NE 12627	2-Chlorobiphenyl = 0.45 3-Chlorobiphenyl = 2.60 4-Chlorobiphenyl = 1.34	Chlorobiphenyls = 0.45

1(B)

1 *Replicate result; Mean of n = 3*
2 *Replicate result; Mean of n = 2*