United States
Environmental Protection
Agency

Region 6
1445 Ross Avenue
Dallas, TX 75202

A: PCT
PE3
LA000330

EPA Public Notice

RECEIVED
MAY 30 2000
DEPT. OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES
PERMIT DIVISION

MAIN FILE
DOCUMENT

LOG NO. 17899

FEE REC'D YES NO

AMT. REC'D _____

CHECK NO. _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

Advertising Order Number OT-3097-NNLX
U.S. Environmental Protection Agency and
Louisiana Department of Environmental Quality
Joint Public Notice of Draft EPA/LDEQ NPDES Permit(s) and
State Water Quality Certification
MAY 27, 2000

This is to give notice that the U.S. Environmental Protection Agency, Region 6 has formulated a Draft Permit for the following facility (facilities) under the National Pollutant Discharge Elimination System (NPDES). Development of the draft permit(s) was based on a preliminary staff review by EPA, Region 6 with the State of Louisiana. The State of Louisiana is currently reviewing the draft permit(s) for the purpose of certifying or denying certification of he permit(s). The permit(s) will become effective no sooner than 30 days after the close of the comment period unless:

A. The State of Louisiana denies certification, or requests an extension for certification prior to that date.

B. Comments received by JUNE 27, 2000, in accordance with §124.20, warrant a public notice of EPA's final permit decision.

C. A public hearing is held requiring delay of the effective date.

EPA's contact person for submitting written comments, requesting information regarding the draft permit, and/or obtaining copies of the permit and the Statement of Basis or the Fact Sheet is:

Mrs. Evelyn Rosborough (6WQ-CA)
Customer Service Branch
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733
(214) 665-7515

Additionally, the Department of the Environmental Quality, Sate of Louisiana, gives notice that is has received the draft permit(s) for review for State water quality certification. Public Comments is invited regarding the State's certification of the draft NPDES permit(s). Written comments must be submitted within ten (10) days of the date of publication of this notice. Additional information is on file in the Office of Water Resources, Department of Environmental Quality and may be inspected Monday through Friday between the hours of 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of the cost incurred by the Office of Water Resources.

The State of Louisiana's contact person for submitting written comments on the certification of the permit is:

Assistant Secretary
Louisiana Department of
Environmental Quality
P.O. Box 82215
Baton Rouge, LA 70884-2215

EPA's comments and public hearing procedures may be found at 40 CFR 124 and 124.12 (48 Federal Register 14264, April 1, 1983, as amended at 49 Federal Register 38051, September 26, 1984). The comment period during which written comments on the draft permit may be submitted extends for 30 days from the date of this Notice. During the comment period, any interested person may request a Public Hearing by filing a written request which must state the issues to be raised. A public hearing will be held when EPA finds a significant degree of public interest.

EPA will notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. A final permit decision means a final decision to issue, deny, modify, revoke or reissue, or terminate a permit. Any person may request an Evidentiary Hearing on the Agency's final permit decision. However, the request must be submitted within 33 days of the date of the final permit decision and be in accordance with the requirements of 40 CFR 124.74. Any condition(s) contested in a request for an evidentiary hearing are granted on a New Source, New Discharger, or Recommencing Discharger, the applicant shall be without a permit.

Further information including the administrative record may be viewed at the above address between 8 a.m. and 4:30 p.m., Monday through Friday. It is recommended that you write or call to the contact above for an appointment so the record(s) will be available at your convenience.

AUTHORIZATION TO DISCHARGE TO WATERS OF THE UNITED STATES, NPDES PERMIT NO. LA0003301.

The applicant's mailing address is:

Dow U.S.A.
The Dow Chemical Company
P.O. Box 150
Plaquemine, LA 70765-0150

The discharge(s)from this existing discharger are to receiving water(s) named Mississippi River in Segment No. 070301 of the Mississippi River Basin. The known uses of the receiving water is:

MISSISSIPPI RIVER (WATERBODY SEGMENT CODE NO. 070301)
Primary Contact Recreation
Secondary Contact Recreation
Fish and Wildlife Propagation
Public Water Supply

The facility is located on Louisiana Highway 1 in Plaquemine, Louisiana in both Iberville and West Baton Rouge Parishes. A fact sheet is available. Under the Standard Industrial Classification (SIC) Code(s) 2869 & 2819, the applicant currently manufactures organic and inorganic chemicals.

The major changes from the current permit issued June 17, 1988, with an effective date of June 19, 1988, and an expiration date of May 3, 1992, are:

1. Numerous internal outfalls have been eliminated from the permit due to the closure and decommissioning of plants.

2. Technology based limitations for all internal outfalls have been updated to reflect current regulations and production rates at the facility.

3. Quarterly acute biomonitoring requirements have been established.

4. EPA is proposing a final decision on the Fundamentally Different Factors Variance Request for Internal Outfalls 101 and 1531.

NPDES PERMIT NO. LA0003301
FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT:	The DOW Chemical Company Louisiana Operations Louisiana Highway 1 Post Office Box 150 Plaquemine, Louisiana 70765
ISSUING OFFICE:	U.S. Environmental Protection Agency Region 6 1445 Ross Avenue Dallas, Texas 75202-2733
PREPARED BY:	Brian W. Mueller Environmental Engineer NPDES Permits Branch (6WQ-P) Water Quality Protection Division VOICE: 214-665-7167 FAX: 214-665-2191
PERMIT ACTION:	Proposed reissuance of the current permit issued June 17, 1988 with an effective date of June 19, 1988 and an expiration date of May 3, 1992.
DATE PREPARED:	February 1, 2000
PAGES:	35 (TEXT) 113 (APPENDICES) Appendix A Outfall 001 (Final) pp 2 Appendix B Outfall 101 (Internal) pp 32 Appendix B-1 Outfall 101 (FDF Variance) pp 36 Appendix C Outfall 301 (Internal) pp 39 Appendix D Outfall 451 (Internal) pp 42 Appendix E Outfall 521 (Internal) pp 47

Appendix F Outfall 531 (Internal) pp 52
Appendix G Outfall 741 (Internal) pp 58
Appendix H Outfall 911 (Internal) pp 63
Appendix I Outfall 931 (Internal) pp 68
Appendix J Outfall 1031 (Internal) pp 73
Appendix K Outfall 1041 (Internal) pp 78
Appendix L Outfall 1051 (Internal) pp 83
Appendix M Outfall 1521 (Internal) p 88
Appendix N Outfall 1531 (Internal) pp 92
Appendix N-1 Outfall 1531 (FDF Variance) pp 96
Appendix O Outfall 1711 (Internal) pp 99
Appendix P Outfall 2001 (Internal) pp 103
Appendix Q Outfall 3121 (Internal) pp 109

40CFR CITATIONS: Unless otherwise stated, citations to 40CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of 7/1/99.

CERTIFICATION: The permit is in the process of certification by the State agency following regulations promulgated at 40CFR124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service; and to the National Marine Fisheries Service prior to the publication of that notice.

FINAL DETERMINATION: The public notice describes the procedures for the formulation of final determinations.

I. FACILITY INFORMATION

A. Location - The facility is located on Louisiana Highway 1 in Plaquemine, Louisiana in both Iberville and West Baton Rouge Parishes. The permittee discharges to the Mississippi River at 209 miles A.H.P. The permittee is the closest river water intake to this discharge at 209.9 miles A.H.P. on the west bank. The next west bank intake to this facility is the Peoples Water Service Company at 175.5 miles A.H.P. on the west bank. Allied Signal Corporation at 187.0 miles A.H.P has a water intake on the east bank of the river. Other nearby downstream intakes include Borden at 184.5 miles A.H.P., BASF at 183.8 miles A.H.P. and Shell at 183.0 miles A.H.P.

B. Facility Type - industrial organic chemical, inorganic chemical, and plastics manufacturer. SIC Codes: 2869, 2812, 2821

C. Facility Description - The Louisiana Operation has numerous production plants, power and steam generation units, waste handling facilities and docks for barges and ships. The major raw materials for the facility include brine, hydrocarbon liquids, and fuel gas. From these raw

materials, power, chlorine, caustic, ethylene and propylene are produced as intermediates. Approximately 38 different chemicals are produced for distribution around the world.

D. Water Quality Summary - The receiving stream for the discharge from Outfall 001 and 002 is the Mississippi River in Segment No. 070301 of the Mississippi River Basin. The critical low flow, i.e., the seven day low flow with a return frequency of once in ten years (7Q10), of the Mississippi River is 141,955 cubic feet per second (cfs). The harmonic mean is established at 366,748 cfs. Hardness (145.3 mg/L) and 15% total suspended solids (60 mg/L) values are based on data from Station 58010319 located at the Plaquemine ferry landing in Iberville Parish. The effluent flow rate at Outfall 001 is 550 million gallons per day (MGD).

II. RECEIVING WATER USES

The known uses of the receiving water(s) are:

MISSISSIPPI RIVER (WATERBODY SEGMENT CODE NO. 070301)
Primary Contact Recreation
Secondary Contact Recreation
Fish and Wildlife Propagation
Public Water Supply

III. STREAM STANDARDS

The general criteria and numerical criteria which make up the stream standards are provided in the Louisiana Surface Water Quality Standards, LAC33:IX.11, amended at LR10:745 (OCT 1984); LR15:738 (SEP 1989); LR17:264 (MAR 1991); LR17:966 (OCT 1991); LR20:883 (AUG 1994).

IV. DISCHARGE DESCRIPTION

A quantitative description of the discharge(s) described in the EPA Permit Application Forms 1, 2C, and 2F received in November 1, 1991, and updated continuously since that time.

V. TENTATIVE DETERMINATION

On the basis of preliminary staff review and after consultation with the State of Louisiana, the Environmental Protection Agency has made a tentative determination to reissue a permit for the discharge described in the application.

VI. DRAFT PERMIT RATIONALE

Regulations promulgated at 40CFR122.44(a) require technology-based effluent limitations to be placed in NPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two.

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40CFR122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

FINAL OUTFALL DISCHARGE TO MISSISSIPPI RIVER

Outfall 001

A. Location - Discharge from the Return Canal System.

B. Treatment - none.

C. Flow - 550 MGD.

D. Type of wastewater - combined discharge of process, maintenance and utility wastewater, stormwater, groundwater remediation water, water from fire-water well testing, hydrotest water and once-through noncontact cooling water. The vast majority of this discharge is once-through noncontact cooling water.

E. Receiving water - Mississippi River.

F. Basin and segment - Mississippi River Basin, Segment 070301.

G. Permit Limitations and Requirements - The limitations for Outfall 001 were determined by screening the effluent data against calculated water quality criteria and by screening the summation of the technology limitations of the internal outfalls against water quality criteria. The final permit establishes acute biomonitoring requirements at Outfall 001. Human health screening was performed on the reported effluent data. Appendix A contains the results of the screens and supporting documentation.

Chlorinated Polyethylene

Internal Outfall 101

A. Location - Discharge from the southwest corner of the Chlorinated Polyethylene Plant in Block 19.

B. Treatment - Flocculation, sedimentation, centrifugation (dechlorination only on scrubber effluent).

C. Flow - 1.6 MGD

D. Type of wastewater - Process wastewater, process area stormwater, and scrubber effluent.

E. Receiving water - Return Canal System.

F. Permit limitations - Limitations are based on the OCPSF guidelines Subpart D for conventional pollutants, Subpart J for Toxic pollutants, and the approved FDF variance request for TSS and chloroform daily average limitations. Calculations can be found in Appendices B and B-1.

Internal Outfall 111

A. Location - Discharge from the east side of the Chlorinated Polyethylene Plant in Block 19

B. Treatment - none.

C. Flow - 2.7 MGD.

D. Type of wastewater - Once-through noncontact cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous required reporting of flow only. The reissued permit will continue the requirements of the current permit.

Cellulose

Internal Outfall 211

A. Location - Discharge from the south side of the Cellulose Plant in Block 45.

B. Treatment - none.

C. Flow - 2.84 MGD.

D. Type of wastewater - Once-through noncontact cooling water and backwash water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required that only flow be reported. The reissued permit will require flow to reported and establishes a 1/Day limitation for methyl

chloride based on Subpart J of the OCPSF guidelines. This limitations is established to detect leaks from heat exchangers in the Cellulose unit.

Internal Outfall 231

A. Location - Discharge from the south side of the Cellulose Plant in Block 45.

B. Treatment - none

C. Flow- Intermittent. 0.49 MGD

D. Type of wastewater - Excess process, maintenance and contaminated stormwater from plant sump system consisting of SMP-1 and SMP-31 that exceeds sump capacity and pump out rate.

E. Receiving water - Return Canal System.

F. Permit Limitations - The draft permit establishes concentration based limitations due to the intermittent nature of the discharge. The limitations are based on the OCPSF guidelines. Subpart H for conventional pollutants and Subpart J for toxic pollutants. Monitoring frequencies are 1/Month for conventional pollutants and 1/Year for toxic pollutants with exception of Methyl Chloride which will be set at 1/Week.

Chlor-Alkali II and Chlorine

Internal Outfall 301

Combined Internal Outfalls 311 and 321 from previous permit

A. Location - Internal Outfalls 311 and 321 discharge to the Return Canal System at the same point - 311 discharges to the west side of the canal from the Chlor-Alkali II Plant in Block 36 and 321 discharges to the east side of the canal from the Chlorine Plant in Block 26.

B. Treatment - Process wastewater is neutralized and dechlorinated before commingling with other wastewater streams. Scrubber effluent is dechlorinated, clarifier underflow undergoes total suspended solids (TSS) reduction and spent acid effluent is pH neutralized before commingling with other wastewater streams..

C. Flow - 30.41 MGD

D. Type of wastewater - Treated process wastewater, pump seal purge, condensate, maintenance water, cooling tower blowdown, boiler blowdown, sink water, lab drains,

intermittent stormwater, once-through noncontact cooling water, air conditioner water, scrubber effluent clarifier underflow, safety shower water, and spent acid effluent.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit Limitations are based on Subpart F of the Inorganic Chemical Guidelines (40 CFR 415). The guidelines are production based and the production data provided in the application was used to develop the permit limitations. Appendix C contains the calculations used to derive the permit limitations.

Internal Outfall 331

A. Location - Discharge from the northwest corner of the Chlorine Plant in Block 26.

B. Treatment - none.

C. Flow - 6.1 MGD.

D. Type of wastewater - Rectifier once-through noncontact cooling water (5.55 MGD), air conditioner's once-through noncontact cooling water, cell sewer overflow, cell effluent sumps and intermittent stormwater.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Caustic

Internal Outfall 341

A. Location - Discharge from the south side of the Caustic Plant in Block 29.

B. Treatment - none.

C. Flow - 40.12 MGD.

D. Type of wastewater - Once-through noncontact cooling water from the evaporators and salt removal unit (34.2 MGD), process area stormwater, tank farm stormwater, air conditioner's once-through noncontact cooling water and condensate.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Internal Outfall 351

A. Location - Discharge from the west side of the Caustic Plant in Block 29.

B. Treatment - none.

C. Flow - 4.33 MGD.

D. Type of wastewater - once-through noncontact cooling water from the metal removal unit (3.94 MGD), air conditioner's once-through noncontact cooling water, and compressor once-through noncontact cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Internal Outfall 361

A. Location - Discharge from the south side of the Caustic Plant in Block 29.

B. Treatment - none.

C. Flow - 1.44 MGD.

D. Type of wastewater - once-through noncontact cooling water from the evaporators and salt removal unit.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Internal Outfall 371

A. Location - Discharge from the west side of the Caustic Plant in Block 29.

B. Treatment - none.

C. Flow - 10.97 MGD.

D. Type of wastewater - once-through noncontact cooling water from the finishing unit.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Internal Outfall 381

A. Location - Discharge from the south side of the Caustic Plant in Block 29.

B. Treatment - none.

C. Flow - 29.89 MGD.

D. Type of wastewater - once-through noncontact cooling water from the evaporators and salt removal unit.

E. Receiving water - Return Canal System.

F. Permit Limitations - The previous permit required monitoring of flow only. The reissued permit continues the requirements of the current permit.

Glycol I

Internal Outfall 411

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 15.5 MGD.

D. Type of wastewater - once-through noncontact cooling water.

E Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow to reported and establishes a 1/Day limitation for 1,2 Dichloropropane based on Subpart J of the OCPSF guidelines. This limitation is established to detect leaks from heat exchangers in the Glycol unit.

Internal Outfall 421

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 19 MGD.

D. Type of wastewater - once through cooling water from propylene oxide and intermediates manufacturing, diluted brine/water softener water, and clarified river water

E. Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow to reported and establishes a 1/Day limitation for 1,2 Dichloropropane based on Subpart J of the OCPSF guidelines. This limitations is established to detect leaks from heat exchangers in the Glycol unit.

Internal Outfall 431

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 0.334 MGD.

D. Type of wastewater - Water filter backwash and water softener drain water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow to be reported.

Internal Outfall 441

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 0.1 MGD.

D. Type of wastewater - intermittent plant drainage overflow.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes concentration based limitations due to the intermittent nature of the discharge. The limitations are based on the OCPSF guidelines. Subparts G and F for conventional pollutants and Subpart J for toxic pollutants. Monitoring frequencies are 1/Month for conventional pollutants and 1/Year for toxic pollutants with exception of 1,2 Dichloropropane which will be set at 1/Week.

Internal Outfall 451

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 0.672 MGD

D. Type of wastewater - once-through noncontact cooling water and lab drains, noncontact stormwater, throx scrubber water, and cooling tower blowdown.

E. Receiving water - Return Canal System.

F. Permit Limitations - Limitations are based on the OCPSF guidelines Subparts F and G for conventional pollutants and Subpart J for Toxic pollutants. Calculations can be found in Appendix D.

Internal Outfall 461

A. Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 22.11 MGD.

D. Type of wastewater - once-through noncontact cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow to be reported and establishes a 1/Day limitation for 1,2 Dichloropropane based on Subpart J of the OCPSF guidelines. This limitations is established to detect leaks from heat exchangers in the Glycol unit.

Internal Outfall 471

A Location - Discharge from the Glycol I Plant in Block 15.

B. Treatment - none.

C. Flow - 0.66 mgd

D Type of Wastewater - noncontact stormwater, loading area washdown, and maintenance water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit will require flow to reported and establishes a 1/Day limitation for 1,2 Dichloropropane based on Subpart J of the OCPSF guidelines.

Internal Outfall 6201

A. Location - Discharge from Glycol I Plant tank farm at the southwest corner of Block 6.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - clarified non-contact cooling and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes monitoring requirements for flow only.

Internal Outfall 7401

A. Location - Discharge from Glycol I Plant tank farm at the southwest corner of Block 5.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - clarified non-contact cooling and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes monitoring requirements for flow only.

Internal Outfall 2931

A. Location - Discharge from Glycol I Plant tank farm at the southwest corner of Block 5.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - stormwater and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes limitations for pH and TOC based on BPJ and similar discharges.

Internal Outfall 2941

A. Location - Discharge from Glycol I Plant tank farm at the southeast corner of Block 6.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - stormwater and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes limitations for pH and TOC based on BPJ and similar discharges.

Internal Outfall 2961

A. Location - Discharge from Glycol I Plant tank farm at the northeast corner of Block 5.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - stormwater and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes limitations for pH and TOC based on BPJ and similar discharges.

Internal Outfall 2971

A. Location - Discharge from Glycol I Plant tank farm at the northeast corner of Block 6.

B. Treatment - none.

C. Flow - intermittent.

D. Type of wastewater - stormwater and maintenance water from the secondary containment area around the tank farm that serves the Glycol I Plant.

E. Receiving water - Return Canal System.

F. Permit Limitations - The permit establishes limitations for pH and TOC based on BPJ and similar discharges.

Solvents and EDC

Internal Outfall 511

A. Location - Discharge from the Solvents/EDC I Plant in the northwest corner of Block 15.

B. Treatment - none

C. Flow - 18.814 MGD.

D. Type of wastewater - Once through cooling water, stormwater, maintenance water and previously monitored effluents.

E. Receiving water - Return Canal System

F. Permit limitations - The reissued permit will require flow to be reported and establishes a 1/Day limitation for 1,2 Dichloroethane based on Subpart J of the OCPSF guidelines. This limitation is established to detect leaks from heat exchangers.

Internal Outfall 521

A. Location - Discharge from the Solvents/EDC I Plant in the northeast corner of Block 15.

B. Treatment - TOX AHCL Absorption effluent is neutralized and chlorine scrubber effluent is dechlorinated and neutralized prior to commingling with other wastewater. Recovered groundwater is steam stripped.

C. Flow - 2.175 MGD.

D. Type of wastewater - maintenance water, TTU AHCL Absorption wastewater and chlorine scrubber wastewater, once through cooling clarified river water, HCL vent scrubber wastewater, non-process area stormwater, and recovered ground wateer.

E. Receiving water - Return Canal System

F. Permit limitations - Limitations are based on the OCPSF guidelines Subparts F and G for conventional pollutants and Subpart J for Toxic pollutants. Calculations can be found in Appendix E.

Internal Outfall 531

A. Location - Discharge from the Solvents/EDC I Plant in the westside of Block 16.

B. Treatment - Block 49 recovered groundwater, plant washdown, and process area stormwater is steam stripped. The HCL scrubber effluent is neutralized before commingling with other wastewater.

C. Flow - 10.54 MGD.

D. Type of wastewater - Plant washdown, maintenance water, process area stormwater, HCL scrubber effluent, and once through cooling river water.

E. Receiving water - Return Canal System

F. Permit limitations - Limitations are based on the OCPSF guidelines Subparts F and G for conventional pollutants and Subpart J for Toxic pollutants. Calculations can be found in Appendix F.

Internal Outfall 551

A. Location - Discharge from the Solvents/EDC I Plant in the southwest corner in Block 16.

B. Treatment - Package treatment plant

C. Flow - 0.001 MGD.

D. Type of wastewater - sanitary effluent

E. Receiving water - Return Canal System

F. Permit limitations - Limitations are based on secondary treatment standards

Internal Outfall 2911

A. Location - Discharge from the Tankfarm #1 on the north side of Block 6.

B. Treatment - none.

C. Flow - intermittent

D. Type of wastewater - Maintenance water and potentially contaminated stormwater from Tankfarm #1 in Block 6.

E. Receiving water - Return Canal System

F. Permit limitations - Daily maximum limitations established by BPJ for methylene chloride, carbon tetrachloride, chloroform, 1,2-Dichloroethane, and Tetrachloretheylene are established with a monitoring frequency of 1/Week based on 40 CFR 414 Subpart J.

Internal Outfall 2951

A. Location - Discharge from the Tankfarm #1 in the northwest corner in Block 6.

B. Treatment - none.

C. Flow - intermittent

D. Type of wastewater - Maintenance water and potentially contaminated stormwater from Tankfarm #1 in Block 6.

E. Receiving water - Return Canal System

F. Permit limitations - Daily maximum limitations established by BPJ for methylene chloride, carbon tetrachloride, chloroform, 1,2-Dichloroethane, and Tetrachloretheylene are established with a monitoring frequency of 1/Week based on 40 CFR 414 Subpart J.

Light Hydrocarbons #2 (LHC-2)

Internal Outfall 711

A. Location - Discharge from LHC-2 Plant, western side of Cellulose Road of Block 48.

B. Treatment - none.

C. Flow - 300 MGD.

D. Type of wastewater - once through non-contact cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow to be reported and establishes a 1/Day limitation for Benzene, Ethylbenzene, and Toulene based on Subpart J of the OCPSF guidelines. This limitations is established to detect leaks from heat exchangers in the LHC-2 unit.

Internal Outfall 741

A. Location - Discharge from the LHC-2 Plant on the western side of Block 48.

B. Treatment - none.

C. Flow - 4.0 MGD

D. Type of wastewater - maintenance wastewater, process area stormwater, plant washdown, pump seal purge wastewater condensate, lab sink drains,and liquid analyzer blowdown.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are established based on Subparts F and J of the OCPSF guidelines. Appendix G contains the calculations used to establish permit limitations.

Internal Outfall 751

A. Location - Discharge from the LHC-2 Plant on the western side of Block 38.

B. Treatment - none.

C. Flow - intermittent

D. Type of wastewater -intermittent OCPSF maintenance wastewater, stormwater, and plant washdown and continuous noncontact once through cooling water and condensate.

E. Receiving water - Return Canal System.

F. Permit Limitations - Concentration based limitations for toxic organic chemicals are established based on 414 Subpart J and conventional pollutants based on 414 Subpart F.

Glycol II

Internal Outfall 811

A. Location - Discharge from the northwestern corner of the Glycol 2 Plant in Block 53.

B. Treatment - none.

C. Flow - Variable

D. Type of wastewater - intermittent cooling tower blowdown, and OCPSF plant washdown and stormwater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Concentration based limitations for toxic organic chemicals are established based on 414 Subpart J and conventional pollutants based on 414 Subpart F.

Polyethylene B

Internal Outfall 911(A&B)

A. Location -Discharge located at the southwest corner of the Polyethylene B Plant, at the corner of North Canal and the railroad track in Block 9.

B. Treatment - all wastestreams are sent through flotation followed by baffled skimmers prior to discharge.

C. Flow - 1.59 MGD.

D. Type of wastewater - purification process wastewater, reactor process wastewater, extrusion process wastewater, catalyst process wastewater, plant washdown wastewater, process area stormwater, cooling tower blowdown, once through cooling/plant air

system, and Vector SBC pilot plant once through cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on the OCPSF guidelines Subpart D for conventional pollutants and Subpart J for toxic organics. Appendix H contains the calculations for deriving the permit limitations.

Internal Outfall 921 deleted and combined with Internal Outfall 1031

A. Location - Discharge located at the southside of North Canal Road across from the main driveway into the Polyethylene B plant in Block 9.

B. Treatment - all wastestreams are sent through flotation followed by baffled skimmers prior to discharge.

C. Flow - 2.49 MGD.

D. Type of wastewater - once through cooling/plant air system water, process area stormwater, plant washdown wastewater, and extrusion once through cooling water.

E. Receiving water - Internal Outfall 1031 thence to Return Canal System.

Internal Outfall 931

A. Location - Discharge located at the southeast corner of the Polyethylene B Plant, just west of the fence line in Block 9.

B. Treatment - all wastestreams are sent through flotation followed by baffled skimmers prior to discharge.

C. Flow - 0.80 MGD. OCPSF (Subpart D) flow is 0.15 MGD and consist of plant washdown wastewater and process area stormwater.

D. Type of wastewater - air condition once through cooling water, extrusion once through cooling water, plant washdown wastewater and process area stormwater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on the OCPSF guidelines Subpart D for conventional pollutants and Subpart J for toxic organics. Appendix I contains the calculations for deriving the permit limitations.

Polyethylene A

Internal Outfall 1011

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - none.

C. Flow - 6.5 MGD.

D. Type of wastewater - once through non-contact cooling water (summation of 8 pipes)

E. Receiving water - Return Canal System.

F. Permit Limitations- The reissued permit continues the requirements of the current permit to report flow only.

Internal Outfall 1031 (Note: This includes former Internal Outfall 921 from Poly B permit)

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - oil/water separator

C. Flow - 2.13 MGD.

D. Type of wastewater - plant washdown wastewater, process area stormwater, air conditioner once through cooling water, and extrusion once through cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are calculated in Appendix J.

Internal Outfall 1041

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - oil/water separator

C. Flow - 0.07 MGD.

D. Type of wastewater - plant washdown wastewater, process area stormwater, once

through non-contact cooling water, maintenance stream, condensed steam, pellet cooling water overflow, and process wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are calculated in Appendix K.

Internal Outfall 1051

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - oil/water separator

C. Flow - 0.12 MGD.

D. Type of wastewater - plant washdown wastewater, process area stormwater, once through non-contact cooling water, and maintenance stream.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are calculated in Appendix L.

Internal Outfall 1061

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - oil/water separator

C. Flow - intermittent.

D. Type of wastewater - plant washdown wastewater and process area stormwater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is intermittent.

Internal Outfall 1071

A. Location - Block 8 Polyethylene A Plant.

B. Treatment - oil/water separator

C. Flow - intermittent

D. Type of wastewater - plant washdown wastewater, process area stormwater and maintenance streams.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is intermittent.

Sanitary Sewer

Internal Outfall 1101

A. Location - Discharge from the Sanitary Sewage Treatment Plant in the Power and Utilities Sanitary Sewer Block 40.

B. Treatment - The sanitary sewer plant is composed of a spiragester, a biological filter, and a spiralflow (final clarifier). The final effluent is chlorinated.

C. Flow - 0.51 MGD.

D. Type of wastewater - treated sanitary wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limits are based on secondary treatment.

Power I

Internal Outfall 1311

A. Location - Discharge from the southwestern corner in Power I in Block 28.

B. Treatment - none

C. Flow - 131.5 mgd.

D. Type of wastewater - once through non-contact cooling water, clarified river cooling water and, maintenance streams.

E. Receiving water - Return Canal System.

F. Permit limitations - Report flow only

Internal Outfall 1321 and Internal Outfall 1401 (deleted)

A. Location - Discharge from the northwestern corner in Power I in Block 28.

B. Treatment - none.

C. Flow - 6.505 MGD.

D. Type of wastewater - stormwater, boiler blowdown, maintenance water, and clarifier blowdown from former Internal Outfall 1401..

E. Receiving water - Return Canal System.

F. Permit limitations - Report flow and TOC based on BPJ.

Water Treating

Internal Outfall 1411

A. Location - Block 35

B Treatment - none.

C. Flow - 7.6 MGD.

D Type of wastewater - clarifier blowdown, water used to clean river water screens, and other maintenance streams.

E. Receiving water - Return Canal System.

F. Permit Limitations - The reissued permit will require flow reporting only.

Chlorinated Methanes

Internal Outfall 1521

A. Location - Southwest side of Chlorinated Methanes Plant in Block 46.

B. Treatment - air stripping of process area stormwater, TTU AHCL Absorption effluent is neutralized and chlorine scrubber effluent is dechlorinated and neutralized prior to commingling with other wastewater.

C. Flow - 0.7 MGD.

D. Type of wastewater - TTU AHCL Absorption wastewater, chlorine scrubber water, and cooling tower blowdown.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart G for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitation calculations can be found in Appendix M.

Internal Outfall 1531

A. Location - West side of Chlorinated Methanes Plant in Block 46.

B. Treatment - Steam stripping and either discharged or sent to the Environmental Operations for further treatment depending upon analytical laboratory results prior to discharge.

C. Flow - 0.08 MGD.

D. Type of wastewater - spent acid wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart G for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines and the approved FDF request for methyl chloride. Permit limitation calculations can be found in Appendix N and N-1

Vinyl 2

Internal Outfall 1711

A. Location - Discharge from the northeastern corner of the Vinyl #2 Plant in Block 66.

B. Treatment - Process area stormwater is directed to a holding pond and tanks, followed by a steam stripper as needed, and then neutralization prior to discharge. Recovered groundwater is sent to holding tanks, followed by a steam stripper, and neutralization prior to discharge. Cooling tower blowdown and boiler effluent are neutralized prior to discharge. HCL scrubber effluent is neutralized prior to discharge.

C. Flow 3.61 MGD.

D. Type of wastewater - process area stormwater, once through cooling water recovered groundwater, cooling tower blowdown and boiler effluent and scrubber effluent.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart F for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitation calculations can be found in Appendix O.

Dowanols (Ethanolamines/Glycol Ethers)

Internal Outfall 1841

A. Location - Discharge from the Area I and area II, and PEG Area collection sumps located in the southeast corner of the Dowanols Plant in Block 55.

B. Treatment - Water is initially collected in the Area I, area II, and PEG Area sumps. Depending on results of analysis, the stormwater in the sumps can be pumped to the Environmental Operations Plant for treatment prior to discharge or released directly to the Return Canal System through outfall 1841.

C. Flow - intermittent.

D. Type of wastewater - process area stormwater, washdown water, and maintenance water from Area I, Area II, and PEG Area collection sumps.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subparts G for conventional

pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is intermittent.

Internal Outfall 1851

A. Location - Discharge from the northeastern corner of the Dowanols Plant in Block 55.

B. Treatment - none.

C. Flow - intermittent

D. Type of wastewater - cooling tower blowdown, process area and loading area stormwater, plant washdown and condensate blowdown, blowdown from underground electrical system, off-spec condensate.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subparts G for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is intermittent.

Power II

Internal Outfall 1901

A. Location - Discharge from the southeastern corner of the Power II Plant in Block 37.

B. Treatment - oil/water separators.

C. Flow - 0.4 MGD.

D. Type of wastewater - cooling tower blowdown, boiler blowdown, equipment washwater, maintenance streams, stormwater and dumps and overflow wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are continued from the previous permit.

Environmental Operations

Internal Outfall 2001

A. Location - Discharge from Environmental Operations in Block 80.

B. Treatment - equalization followed by biological aeration/clarifier unit.

C. Flow - 22.81 MGD

D. Type of wastewater - process wastewaters*, sanitary wastewater, stormwater, cooling tower blowdown, rotary kiln quench water, and fire training area waters.

E. Receiving water - Return Canal System.

* Process wastewaters are composed of feeder streams from the following units: Glycol I & II, Cellulose, Dowanols, Cell Service, Tankcar Cleaning Area, Vinyl II, LHC-II & III, Vector SBC, and Transport Services

F. Permit Limitations - Calculation of permit limitations can be found in Appendix P.

Light Hydrocarbons III (LHC III)

Internal Outfall 2231

A. Location - Discharge located at the southeast corner of the LHC-III Plant in Block 68.

B. Treatment - none.

C. Flow - 1.5 MGD.

D. Type of wastewater - cooling tower blowdown, recovered groundwwater, firewater, and boiler blowdown.

E. Receiving water - Return Canal System.

F. Permit Limitations - Monitoring requirements for flow are established in permit.

Internal Outfall 2241

A. Location - Discharge located at the southeast corner of the LHC-III Plant in Block 68.

B. Treatment -none.

C. Flow - 4.81 MGD.

D. Type of wastewater - process area stormwater, condensate, maintenance water and slab wash down wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subparts G and H for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is intermittent.

Research and Development (R&D)

Internal Outfall 2401

A. Location - Discharge from the location of the Research Pilot Plant in Block 25.

B. Treatment - sump, pump and filter system.

C. Flow - Variable.

D. Type of wastewater - Methocel Pilot Plant and CPE Pilot Plant once through non-contact cooling water, CPE Pilot Plant process wastewater, plant washdown water, process and nonprocess area stormwater, and wastewater cooling water.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is variable.

Vector SBC (Styrene, Butadiene, Copolymer) Plant

Internal Outfall 2501

A. Location - Discharge from the northeast corner of the Vector SBC Plant in Block 43.

B. Treatment - Over/under weir and containment.

C. Flow - Variable

D. Type of wastewater - cooling tower blowdown, process and nonprocess area stormwater, and plant washdown wastewater.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subparts D and H for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitations are concentration based because the flow is variable.

Polyethylene C

Internal Outfall 3121

A. Location - Discharge from the northern side of the Polyethylene C Plant in Block 86.

B. Treatment - none.

C. Flow - 0.54 MGD.

D. Type of wastewater - process wastewater, condensate, and cooling tower blowdown.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations are based on Subpart D for conventional pollutants and Subpart J for toxic organics of the OCPSF guidelines. Permit limitation calculations can be found in Appendix Q.

Northwest Landfill

Internal Outfall 3001

A. Location - Northwest Landfill

B. Treatment - Activated Carbon

C. Flow - variable

D. Type of wastewater - Treated groundwater and landfill leachate

E. Receiving water - Return Canal System

F. Permit Limitations - TOC and pH at monitoring frequency of 1/month

Railcar Cleaning

Internal Outfall 4031

A. Location - Southside of Block 40

B. Treatment - none.

C. Flow - intermittent.
D. Type of wastewater - Intermittent discharge of polyethylene rail car cleaning water.

E. Receiving water - Return Canal System.

F. Permit Limitations - Permit limitations for TSS are established by Best Professional Judgement and are based on 40 CFR 414 Subpart D with a monitoring frequency of 1/month.

Block 110 Tankfarm

Outfall 002

A. Location - Discharge from the Tankfarm Block 110.

B. Treatment - none.

C. Flow - Intermittent

D. Type of wastewater - Maintenance water and potentially contaminated stormwater from Tankfarm in Block 110.

E. Receiving water - Mississippi River

F. Permit limitations - Limitations for TOC and pH are established by BPJ based on requirements for similar types of discharges.

Stormwater from Industrial Activity

The permittee has applied for numerous outfalls that contain stormwater from industrial activity such as loading and storage areas. The outfalls discharge stormwater and maintenance waters and do not contain any process wastewaters or cooling waters. The permit limitations for these outfalls are based on Best Professional Judgement for stormwater discharges from similar facilities. The limitations and monitoring frequencies are as follows:

	STORET	MONTHLY	DAILY		SAMPLE	SAMPLE
PARAMETER	NUMBER	AVERAGE	MAXIMUM	UNITS	FREQUENCY	TYPE
FLOW	50050	REPORT	REPORT	MGD	1/MONTH	ESTIMATE
TOC	00680	N/A	55	MG/L	1/MONTH	GRAB
		MINIMUM	MAXIMUM			
pH	00400	6	9	S.U.	1/MONTH	GRAB

The outfalls covered by these limitations are :

Internal Outfalls
241 Cellulose
251 Cellulose
481 Glycol
491 Glycol
2921 Block 5 Tankfarm
3101 Chlor Alkali II
3331 Chlorine
3351 Chlorine
3361 Chlorine
3911 Block 39
5811 Light Hydrocarbons III
5821 Light Hydrocarbons III
2511 Vector
1551 Chlorinated Methanes
1731 Vinyl II
3131 Polyethylene C
1831 Dowanols/Ethanolamines
1861 Dowanols/Ethanolamines

OUTFALLS DELETED FROM PREVIOUS PERMIT

Internal Outfall 221 No longer used
Internal Outfall 311 Combined with Internal Outfall 321 to form Internal Outfall 301
Internal Outfall 321 Combined with Internal Outfall 311 to form Internal Outfall 301
Internal Outfall Sum 511 & 521 Regulated as separate outfalls Internal Outfall 531, 521, & 511

Internal Outfall 721	Deleted sent to Internal Outfall 2001
Internal Outfall 921	Deleted sent to Internal Outfall 1031
Internal Outfall 1021	Combined with other Poly A internal outfalls
Internal Outfall 1401	Deleted sent to Internal Outfall 1321
Internal Outfall 1511	Deleted no longer used
Internal Outfall 1541	Deleted no longer used
Internal Outfall 1601	Deleted no longer used
Internal Outfall 1741	Deleted sent to Internal Outfall 2001
Internal Outfall 1811	Deleted combined with Internal Outfall 1841
Internal Outfall 1821	Deleted combined with Internal Outfall 1841
Internal Outfall 2201	Deleted sent to Internal Outfall 2001
Internal Outfall 2221	Deleted sent to Internal Outfall 2001
Internal Outfall 2801	Deleted no longer used
Internal Outfall 3111	Deleted combined with Internal Outfall 3121
Internal Outfall 3211	Deleted no longer used
Internal Outfall 3221	Deleted no longer used
Internal Outfall 104	Covered by General Permit
Internal Outfall 204	Covered by General Permit
Internal Outfall 105	Covered by General Permit
Internal Outfall 205	Covered by General Permit
Internal Outfall 108	Covered by General Permit
Internal Outfall 208	Covered by General Permit
Internal Outfall 308	Covered by General Permit
Internal Outfall 408	Covered by General Permit
Internal Outfall 109	Covered by General Permit
Internal Outfall 209	Covered by General Permit
Outfall 007	Covered by General Permit
Outfall 010	Deleted no longer used
Outfall 011	Deleted no longer used
Outfall 012	Covered by General Permit

VII. ENDANGERED SPECIES

The Environmental Protection Agency has concluded that issuance of this NPDES permit will have no effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VIII. VARIANCE REQUESTS

The permittee requested a Fundamentally Different Factors (FDF) variance on May 2, 1988. Dow requested a variance from the OCPSF guidelines for the TSS and chloroform limitations at its Chlorinated Polyethylene (CPE) Plant (Internal Outfall 101) and the methyl chloride limits at its Chlorinated Methanes (CM) plant (Internal Outfall 1531) and other wastestreams and plants. A tentative decision was published by EPA on October 20, 1989, to grant Dow's FDF request for TSS and methyl chloride and deny the request for chloroform. Dow was required to submit additional data to determine alternate limitations for TSS and methylene chloride and provide an opportunity to submit additional information on the chloroform. Dow submitted the additional data in September, 1992. EPA did not take action to finalize the FDF decision at that time. This has allowed Dow to collect the additional data that was submitted to EPA in April, 1999.

Outfall 101

The permittee currently uses flocculation and clarification at Outfall 101 to reduce the discharge of pollutants. Dow requested a FDF for the daily average limitations for chloroform and TSS at Outfall 101. EPA has reviewed the data submitted by DOW in 1992 and 1998 and has decided to grant the FDF variance for daily average limitations for chloroform and TSS at Outfall 101. The daily average limitation are based on the 95th percentile as provided in the development document of the OCPSF guidelines in 1987.

TSS

The daily average limitation for TSS is based on the 95th percentile of the data provided in April 1999. A non-parametric approach to derive the 95th percentile and is based on 216 samples collected from January 1994, to April 1998. The 95th percentile of the sample data collected is 114 mg/l and is used to set the daily average mass limitations Appendix B-1 contains the data provide by Dow to set the limitations for TSS at Outfall 101.

Chloroform

The tentative decision on Dow's FDF request for chloroform was denied by EPA. The denial stated that sample data was not provided to demonstate that the wastestream was unique. The FDF variance for chloroform could be approved if the following information was provided:

1. The documentation demonstrating the relationship between temperature and the PCPE physical properties

2. All information demonstrating that chloroform adsorbs to the talc particles as well as support for the assertion that if adsorption occurs, that desorption would occur following steam stripping.

3. The bench scale or pilot information demonstrating that filtration is infeasible.

4. The bench scale or pilot information demonstrating that dissolved air flotation is infeasible.

Dow provided the additional information requested in September 1992, for EPA's review. The information provided by Dow adequately addressed each of the concerns listed above. After reviewing the information, EPA has determined that the FDF variance request for chloroform is warranted and should be approved. Dow also provided information to determine the 95th percentile for chloroform in September 1992 The 95th percentile for chloroform at Outfall 101 is 140 ug/L and is used to calculate the daily average chloroform mass based limitations for Outfall 101 in the draft permit.

Outfall 1531

The permittee currently uses a steam stripper at Outfall 1531 to reduce the discharge of pollutants. Dow requested a FDF for the daily average and daily maximum limitations for methyl chloride at Outfall 1531. In the tentative approval of the FDF for methyl chloride for Outfall 1531, EPA requested that Dow submit data for the purpose of setting the daily average and daily maximum limitations. EPA has reviewed the data submitted by Dow in September 1992, and March 1998, and has used a non-parametric approach to set the daily average and daily maximum limitations for methyl chloride at Outfall 1531. The daily average limitation based on 95th percentile of the data set is 1.66 mg/L and the daily maximum limitation on the 99th percentile of the data set is 4.04 mg/L and are used to calculate the daily average and daily maximum mass limitations.

DRAFT PERMIT LIMITATIONS INCORPORATING FDF VARIANCE

PARAMETER	INTERNAL OUTFALL	PERMIT LIMITATIONS AVERAGE	MAXIMUM	UNITS
TSS	101	1458	1663	LB/DAY
CHLOROFORM	101	1.79	4.16	LB/DAY
METHYL CHLORIDE	1531	1.11	2.7	LB/DAY

IX. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by 40CFR124.9:

A. PERMIT(S)

NPDES Permit No. LA0003301 issued June 17, 1988 with an effective date of June 18, 1988 and an expiration date of May 3, 1992 .

B. APPLICATION(S)

EPA Application Forms 1, 2C, and 2F dated November 1, 1991

C. CLEAN WATER ACT CITATIONS

Section 101
Section 101(a)(3)
Section 303
Section 304(e)
Section 308
Section 401(a)(1)
Section 401(a)(2)

D. 40CFR CITATIONS

STANDARD CITATIONS
122.44
122.44(a)
122.44(d)
122.44(d)(1)
122.44(i)(1)
122.44(i)(2)
122.44(l)(2)(ii)
122.45(c)(3)
122.46(a)
122.48
122.48(b)
124.5
124.53
131 amended at 57FR60848, 12/22/92

ADDITIONAL CITATIONS
414
415

E. STATE WATER QUALITY REFERENCES

STATE ADMINSTRATIVE CODE

Louisiana Surface Water Quality Standards, LAC33:IX.11, amended at LR10:745 (OCT 1984); LR15:738 (SEP 1989); LR17:264 (MAR 1991); LR17:966 (OCT 1991); LR20:883 (AUG 1994)

WATER QUALITY STANDARDS IMPLEMENTATION

"Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, Office of Water Resources, 4/15/94

F. MISCELLANEOUS REFERENCES

Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants [49FR9016-9019, 3/9/84]

EPA Region 6 "Policy for Post Third Round NPDES Permitting" and "Post Third Round NPDES Permit Implementation Strategy," 10/1/92

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA/600/4-90/027, September 1991

National Toxics Rule, 57FR60848, 12/22/92

Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water - Part 1 (Revised - 1985), Pages 535-536, EPA/600/6-85/002a

APPENDICES DIRECTORY

APPENDIX A	OUTFALL 001 (FINAL) pp 2
APPENDIX B	OUTFALL 101 (INTERNAL) pp 32
APPENDIX B-1	OUTFALL 101 (FDF VARIANCE) pp 36
APPENDIX C	OUTFALL 301 (INTERNAL) pp 39
APPENDIX D	OUTFALL 451 (INTERNAL) pp 42
APPENDIX E	OUTFALL 521 (INTERNAL) pp 47
APPENDIX F	OUTFALL 531 (INTERNAL) pp 52
APPENDIX G	OUTFALL 741 (INTERNAL) pp 58
APPENDIX H	OUTFALL 911 (INTERNAL) pp 63
APPENDIX I	OUTFALL 931 (INTERNAL) pp 68
APPENDIX J	OUTFALL 1031 (INTERNAL) pp 73
APPENDIX K	OUTFALL 1041 (INTERNAL) pp 78
APPENDIX L	OUTFALL 1051 (INTERNAL) pp 83
APPENDIX M	OUTFALL 1521 (INTERNAL) pp 88
APPENDIX N	OUTFALL 1531 (INTERNAL) pp 92
APPENDIX N-1	OUTFALL 1531 (FDF VARIANCE) pp 96
APPENDIX O	OUTFALL 1711 (INTERNAL) pp 99
APPENDIX P	OUTFALL 2001 (INTERNAL) pp 103
APPENDIX Q	OUTFALL 3121 (INTERNAL) pp 109

APPENDIX A OUTFALL 001 (FINAL)

Effluent limitations and/or conditions established in the draft permit are in compliance with State water quality standards and the applicable water quality management plan.

POST THIRD ROUND POLICY AND STRATEGY

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" (3/11/87) and the "Post Third Round NPDES Permit Implementation Strategy" (10/1/92). The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40CFR122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

IMPLEMENTATION

The Region is currently implementing its post third round policy in conformance with the Regional strategy. The 5-year NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

Where a technology-based limit is established for a pollutant, the more stringent of either the technology-based limit or the state water quality numerical standard-based limit is established in the permit.

Where no technology-based limit is established in the permit, a state water quality numerical standard-based limit and/or monitoring requirement is established in the permit if there is a reasonable potential for the effluent discharge to cause an exceedance of the state water quality numerical standards-based limit after mixing in the receiving stream.

Calculated state water quality numerical standards-based effluent limitations are screened against pollutant effluent discharge levels (estimated 95% percentile assuming lognormal distribution) not limited by technology.

TECHNOLOGY LIMITATIONS

Following regulations promulgated at 40CFR122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to 40CFR122.44(a) or on State water quality standards and requirements pursuant to 40CFR122.44(d), whichever are more stringent.

Technology limitations have been applied at various internal outfalls. Listed below are all internal outfalls that have mass based limitations for parameters that have a corresponding State water quality standard. The table also lists the basis for the technology requirement. The total mass authorized by the internal outfalls will be compared to the total mass allowed to be discharged without violating a water quality standard. If the total mass allowed by technology requirements is greater than that allowed by the State water quality standards a water quality based permit limitation will be placed at final Outfall 001.

TABLE 1
SUMMARY OF TECHNOLOGY REQUIREMENTS
AT INTERNAL OUTFALLS

40CFR GUIDELINE(S)	INTERNAL OUTFALL	FLOW (MGD)
414.101	101	1.5
	531	2.8
	521	1.71
	741	2.77
	911	0.81
	931	0.8
	1031	0.032
	1041	0.018
	1051	0.133
	1521	0.67
	1531	0.08
	1711	3.51
	3121	0.174
	TOTAL	4.5
414.100		
	2001	22.81
415.63	301	NA

CALCULATION OF NUMERICAL WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS

I. FACILITY INFORMATION

Permittee	DOW Chemical
NPDES Permit No.	LA0003301
Outfall No.	001
Plant effluent flow, Monthly Avg Maximum (MGD)	550
Plant effluent flow, Monthly Avg Maximum (cfs)	851

II. RECEIVING STREAM INFORMATION

Receiving Stream Name	Mississippi River
Basin Name	Mississippi River
Waterbody Segment Code No.	070301
Water Body Category No.	1
TSS (mg/L) 15% percentile	42
Hardness (mg/l as CACO3)	151.5
7Q10 Flow (cfs)	141955
Harmonic Mean Flow (cfs)	366748
Freshwater Drinking Water Supply	

III. LOUISIANA WATER QUALITY STANDARDS

TABLE 2
APPLICABLE LOUISIANA WATER QUALITY STANDARDS

				DRINKING
		FRESHWATER	FRESHWATER	WATER
		ACUTE	CHRONIC	SUPPLY
D = DISSOLVED		(ug/L)	(ug/L)	(ug/L)
CHLORINE (GOLDBOOK)				
Chlorine (Total Res.)		19	11	NA
NONCONVENTIONAL				
TOTAL PHENOLS (4AAP)		700	350	5
3-CHLOROPHENOL		NA	NA	0.1
4-CHLOROPHENOL		383	192	0.1
2,3-DICHLOROPHENOL		NA	NA	0.04
2,5-DICHLOROPHENOL		NA	NA	0.5
2,6-DICHLOROPHENOL		NA	NA	0.2
3,4-DICHLOROPHENOL		NA	NA	0.3

2,4-D		NA	NA	100
2,4,5-TP (SILVEX)		NA	NA	10
METALS AND CYANIDE				
ARSENIC (D)		360	190	50
CADMIUM (D)	NOTE (1)	53.829443	1.5717094	10
CHROMIUM (T)		NA	NA	NA
CHROMIUM (3+)	NOTE (1)	2440.2594	290 86511	50
CHROMIUM (6+)		16	11	50
COPPER (D)	NOTE (1)	28.388831	18.248637	1000
LEAD (D)	NOTE (1)	138.54643	5.3989555	50
MERCURY (D)		2.4	0.012	2
NICKEL (D)	NOTE (1)	2015 4856	224.06035	NA
ZINC (D)	NOTE (1)	166.39129	150.7077	5000
CYANIDE (D)		45.9	5.4	663.8
DIOXIN				
2,3,7,8-TCDD		NA	NA	0 0000007
VOLATILE ORGANICS				
BENZENE		2249	1125	1.1
BROMOFORM		2930	1495	3.9
CARBON TETRACHLORIDE		2730	1365	0.22
CHLORODIBROMOMETHANE		NA	NA	0.39
CHLOROFORM		2890	1445	5.3
DICHLOROBROMOMETHANE		NA	NA	0.2
1,2-DICHLOROETHANE		11800	5900	0.36
1,1-DICHLOROETHYLENE		1160	580	0.05
1,3-DICHLOROPROPYLENE		606	303	9.86
ETHYLBENZENE		3200	1600	2390
METHYL CHLORIDE		55000	27500	NA
METHYLENE CHLORIDE		19300	9650	4.4
1,1,2,2-TETRACHLOROETHANE		923	462	0 16
TETRACHLOROETHYLENE		1290	645	0.65
TOLUENE		1270	635	6100
1,1,1-TRICHLOROETHANE		5280	2640	200
1,1,2-TRICHLOROETHANE		1800	900	0.56
TRICHLOROETHYLENE		3900	1950	2.8
VINYL CHLORIDE		NA	NA	1.9
ACID COMPOUNDS				
2-CHLOROPHENOL		258	129	0.1
2,4-DICHLOROPHENOL		202	101	0.3
BASE/NEUTRAL COMPOUNDS				
BENZIDINE		250	125	0 00008

HEXACHLOROBENZENE	NA	NA	0.00025
HEXACHLOROBUTADIENE	5.1	1.02	0.09
PESTICIDES AND PCBS			
ALDRIN	3	NA	0.00004
GAMMA-BHC (LINDANE)	5.3	0 21	0.11
CHLORDANE	2.4	0 0043	0.00019
4,4'-DDT	1.1	0.001	0.00019
4,4'-DDE	52 5	10 5	0 00019
4,4'-DDD	0 03	0.006	0 00027
DIELDRIN	2.5	0.0019	0.00005
ENDOSULFAN (TOTAL)	0.22	0.056	0.47
ENDRIN	0.18	0.0023	0.26
HEPTACHLOR	0.52	0.0038	0.00007
PCBS (TOTAL)	2	0.014	0.00001
TOXAPHENE	0.73	0.0002	0.00024

NOTE (1): HARDNESS DEPENDENT FRESHWATER CRITERIA FOR CERTAIN METALS

Dissolved freshwater criteria are calculated using the following equations.
The receiving stream hardness is used to calculate the water quality standards in Table 2. The following equations are used to calculate hardness dependent water quality standards:

Cadmium (D)	Acute	@EXP((1.128*(@LN(HARD)))-1.6774)
	Chronic	@EXP((0.7852*(@LN(HARD)))-3.49)
Chromium (3+)	Acute	@EXP((0.819*(@LN(HARD)))+3.688)
	Chronic	@EXP((0.819*(@LN(HARD)))+1.561)
Copper (D)	Acute	@EXP((0.9422*(@LN(HARD)))-1.3844)
	Chronic	@EXP((0 8545*(@LN(HARD)))-1.386)
Lead (D)	Acute	@EXP((1.273*(@LN(HARD)))-1.46)
	Chronic	@EXP((1.273*(@LN(HARD)))-4.705)
Nickel (D)	Acute	@EXP((0.846*(@LN(HARD)))+3.3612)
	Chronic	@EXP((0.846*(@LN(HARD)))+1.1645)
Zinc (D)	Acute	@EXP((0.8473*(@LN(HARD)))+0.8604)
	Chronic	@EXP((0.8473*(@LN(HARD)))+0.7614)

TABLE 3
HARDNESS BASED WATER QUALITY STANDARDS

	Acute (ug/L)	Chronic (ug/L)
Cadmium (D)	54	1.57
Chromium (3+)	2440	291
Copper (D)	28	18
Lead (D)	139	5.40
Nickel (D)	2015	224
Zinc (D)	166	151

NPDES permits require that limitations be in total recoverable form. This requires that the dissolved metals criteria be converted to total form (expect for cr 6+)

The TSS value used in the Ct/Cd ratio equation is that listed for the receiving stream of 42 mg/l.

Louisiana surface water quality standards, conversion of numerical standards for certain toxic priority pollutant metals from dissolved form to total recoverable form [freshwater streams and lakes]

Total Recoverable (μg/L) = Dissolved (μg/L) * (Ct/Cd)

Ct/Cd = Total/Dissolved Ratio

Ct/Cd = $1 + [N * TSS^{(\alpha + 1)}]$

TABLE 4
CT/CD EQUATION PARAMETER FOR STREAMS

METAL	N	α
Arsenic	0.48	-0.73
Cadmium	4.00	-1 13
Chromium (3+)	3.36	-0.93
Chromium (6+) 1/	----	----
Copper	1.04	-0.74
Lead	2.80	-0.80
Mercury	2.90	-1.14
Nickel	0.49	-0.57
Zinc	1.25	-0.70

1/ 40CFR122.45(c)(3): The approved analytical method measures only the dissolved form. Therefore, permit limits are dissolved form.

SOURCE REFERENCE DOCUMENTS

Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water - Part 1 (Revised - 1985), Pages 535-536, EPA/600/6-85/002a

Guidance Document Concerning Permitting Implementation of Louisiana Surface Water Quality Standards, LDEQ, 4/15/94 (Version 2).

DERIVATION OF Ct/Cd EQUATION

The source reference documents express the ratio of the total recoverable form to the dissolved form as follows:

$$Ct/Cd = 1 + [Kp * TSS * 10^{-6}]$$

$$Kp = Kpo * TSS^{\alpha}$$

$$Ct/Cd = 1 + [Kpo * TSS^{\alpha} * TSS * 10^{-6}]$$

Substituting $Kpo = N * 10^{+6}$ where N is the integer in the Kpo values listed in the reference documents:

$$Ct/Cd = 1 + [N * 10^{+6} * TSS^{\alpha} * TSS * 10^{-6}]$$

$$= 1 + [N * TSS^{(\alpha + 1)}]$$

TABLE 5
TOTAL RECOVERABLE WATER QUALITY STANDARDS

	TOTAL TO DISSOLVED RATIO Ct/Cd	ACUTE (ug/L)	CHRONIC (ug/L)	DRINKING WATER SUPPLY (ug/L)
Arsenic (T)	2.316	834	440	116
Cadmium (T)	3.460	186	5	35
Chromium (T)	NA	NA	NA	NA
Chromium (3+)	5.364	13091	1560	268
Chromium (6+)	1	16	11	50
Copper (T)	3.748	106	68	3748
Lead (T)	6.913	957	37	346
Mercury (T)	2.718	6.52	0.03	5.437
Nickel (T)	3.444	6942	772	0
Zinc (T)	4.836	804	729	24180
Cyanide (T)	1	45	5	663

IV. CALCULATION OF WASTELOAD ALLOCATIONS (WLAs) AT END-OF-PIPE (EOP)

COMPLETE MIX MASS BALANCE MODEL (GENERIC)

WLA = Ce (Cd/DF) - ((Cu*Fu)/Fe) Wasteload Allocation @ EOP

DF = Fe/(Fe + Fu) Dilution Factor

SPECIFIC WASTELOAD ALLOCATION (WLAs) EQUATIONS

WLAac =	(Cdac/DFac) - ((Cu*Fac)/Fe)	Acute Aquatic Life
WLAch =	(Cdch/DFch) - ((Cu*Fch)/Fe)	Chronic Aquatic Life
WLAhn =	(Cdhn/DFhn) - ((Cu*Fhn)/Fe)	Human Health [Noncarcinogen]
WLAhc =	(Cdhc/DFhc) - ((Cu*Fhc)/Fe)	Human Health [Carcinogen]

SPECIFIC DILUTION FACTOR EQUATIONS

DFac =	Fe/(Fe + Fac)	Acute Aquatic Life
DFch =	Fe/(Fe + Fch)	Chronic Aquatic Life
DFhn =	Fe/(Fe + Fhn)	Human Health [Noncarcinogen]
DFhc =	Fe/(Fe + Fhc)	Human Health [Carcinogen]

KEY TO SYMBOLS

Fe	Flow: Plant Effluent(s) @ EOP (cfs)
Fu	Flow: Upstream - Available for Mixing (Generic - cfs)
Fac	Flow: Upstream - Available for Mixing (Zone of Initial Dilution - cfs)
Fch	Flow: Upstream - Available for Mixing (Mixing Zone - cfs)
Fhn	Flow: Upstream - Available for Mixing (Human Health, Noncarcinogen - cfs)
Fhc	Flow: Upstream - Available for Mixing (Human Health, Carcinogen - cfs)
Ce	Concentration, Effluent(s) @ EOP
Cu	Concentration, Upstream (Background)
Cd	Concentration, Downstream after Mixing (i.e., Instream Criterion)
Cdac	Instream Criterion - Acute Aquatic
Cdcc	Instream Criterion - Chronic Aquatic
Cdhn	Instream Criterion - Human Health, Noncarcinogen
Cdhc	Instream Criterion - Human Health, Carcinogen
DF	Dilution Factor after Mixing
DFac	Dilution Factor @ ZID (Acute Aquatic Criteria)
DFch	Dilution Factor @ MZ (Chronic Aquatic Criteria)
DFhn	Dilution Factor @ HHN (Human Health Criteria)
DFhc	Dilution Factor @ HCN (Human Health Criteria, Carcinogen)

FLOW		VALUE
Plant Effluent(s) - cfs	Fe	355 cfs
Upstream Flow Applying @ ZID - cfs	Fac	4732 cfs
Upstream Flow Applying @ MZ - cfs	Fch	47318 cfs
Upstream Flow Applying @ HHN - cfs	Fhn	141955 cfs
Upstream Flow Applying @ HHC - cfs	Fhc	366748 cfs

DILUTION FACTOR	VALUE	
Dilution Factor @ ZID - Fraction	DFac	0.07
Dilution Factor @ MZ - Fraction	DFch	0.007
Dilution Factor @ HHN - Fraction	DFhn	0.0025
Dilution Factor @ HHC - Fraction	DFhc	0.001

BACKGROUND CONCENTRATION DATA

	Cu (ug/L)
CHLORINE (GOLDBOOK)	
Chlorine (Total Res.)	0
NONCONVENTIONAL	
Total Phenols (4AAP)	0
3-Chlorophenol	0
4-Chlorophenol	0
2,3-Dichlorophenol	0
2,5-Dichlorophenol	0
2,6-Dichlorophenol	0
3,4-Dichlorophenol	0
2,4-D	0
2,4,5-TP (Silvex)	0
METALS AND CYANIDE	
Arsenic (T)	0
Cadmium (T)	0
Chromium (T)	0
Chromium (3+)	0
Chromium (6+)	0
Copper (T)	0
Lead (T)	0
Mercury (T)	0
Nickel (T)	0
Zinc (T)	0
Cyanide (T)	0
DIOXIN	
2,3,7,8-TCDD	0.00E+000
VOLATILE ORGANICS	
Benzene	0
Bromoform	0
Carbon Tetrachloride	0
Chlorodibromomethane	0
Chloroform	0
Dichlorobromomethane	0
1,2-Dichloroethane	0
1,1-Dichloroethylene	0
1,3-Dichloropropylene	0

Ethylbenzene	0
Methyl Chloride	0
Methylene Chloride	0
1,1,2,2-Tetrachloroethane	0
Tetrachloroethylene	0
Toluene	0
1,1,1-Trichloroethane	0
1,1,2-Trichloroethane	0
Trichloroethylene	0
Vinyl Chloride	0
ACID COMPOUNDS	
2-Chlorophenol	0
2,4-Dichlorophenol	0
BASE/NEUTRAL COMPOUNDS	
Benzidine	0
Hexachlorobenzene	0
Hexachlorobutadiene	0
PESTICIDES AND PCBs	
Aldrin	0
Gamma-BHC (Lindane)	0
Chlordane	0
4,4'-DDT	0
4,4'-DDE	0
4,4'-DDD	0
Dieldrin	0
* Alpha-Endosulfan	
* Beta-Endosulfan	
* Endosulfan Sulfate	
Endosulfan (Total)	0
Endrin	0
Heptachlor	0
* PCB-1242	
* PCB-1254	
* PCB-1221	
* PCB-1232	
* PCB-1248	
* PCB-1260	
* PCB-1016	
PCBs (Total)	0
Toxaphene	0

TABLE 6
WASTELOAD ALLOCATIONS

						HUMAN
			HUMAN	ACUTE	CHRONIC	HEALTH
	ACUTE	CHRONIC	HEALTH	WLAac	WLAch	WLAh
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CHLORINE (GOLDBOOK)						
CHLORINE (TOTAL RES.)	19	11	NA	272	1476	NA
NONCONVENTIONAL						
TOTAL PHENOLS (4AAP)	700	350	5	10022	46962	2003
METALS AND CYANIDE						
ARSENIC (T)	360	190	50	5154	25494	20027
CADMIUM (T)	54	2	10	771	211	4005
CHROMIUM (3+)	2440	291	50	34939	39028	20027
CHROMIUM (6+)	C 16	11	50	229	1476	51661
COPPER (T)	28	18	1000	406	2449	400536
LEAD (T)	139	5	50	1984	724	20027
MERCURY (T)	2.4	0 012	2.00	34	2	801
NICKEL (T)	2015	224		28857	30064	NA
ZINC (T)	166	151	5000	2382	20222	2002678
CYANIDE (T)	46	5	664	657	725	265876
DIOXIN						
2,3,7,8-TCDD	C NA	NA	0 000000 7	NA	NA	0.000733 6
VOLATILE ORGANICS						
BENZENE	C 2249	1125	1.1	32201	150951	1137
BROMOFORM	C 2930	1495	3.9	41951	200597	4030
CARBON TETRACHLORIDE	C 2730	1365	0 22	39088	183154	227
CHLORODIBROMOMETHANE	C NA	NA	0.39	NA	NA	403
CHLOROFORM	C 2890	1445	5.3	41379	193888	5476
DICHLOROBROMOMETHANE	C NA	NA	0.2	NA	NA	207
1,2-DICHLOROETHANE	C 11800	5900	0.36	168951	791653	372
1,1-DICHLOROETHYLENE	C 1160	580	0.05	16609	77824	52
1,3-DICHLOROPROPYLENE	606	303	9.86	8677	40656	3949
ETHYLBENZENE	3200	1600	2390	45817	214686	957280
METHYL CHLORIDE	55000	27500	NA	787482	3689910	NA
METHYLENE CHLORIDE	C 19300	9650	4.4	276335	1294823	4546
1,1,2,2-TETRACHLOROETHANE	C 923	462	0.16	13215	61990	165
TETRACHLOROETHYLENE	C 1290	645	0 65	18470	86545	672
TOLUENE	1270	635	6100	18184	85203	2443267
1,1,1-TRICHLOROETHANE	5280	2640	200	75598	354231	80107

1,1,2-TRICHLOROETHANE	C	1800	900	0.56	25772	120761	579
TRICHLOROETHYLENE	C	3900	1950	2.8	55840	261648	2893
VINYL CHLORIDE	C	NA	NA	1.9	NA	NA	1963
ACID COMPOUNDS							
2-CHLOROPHENOL		258	129	0.1	3694	17309	40
2,4-DICHLOROPHENOL		202	101	0.3	2892	13552	120
BASE/NEUTRAL COMPOUNDS							
BENZIDINE	C	250	125	0.00008	3579	16772	0
HEXACHLOROBENZENE	C			0.00025	NA	NA	0 26
HEXACHLOROBUTADIENE	C	5.1	1 02	0 09	73	137	93
PESTICIDES AND PCBS							
ALDRIN	C	3	NA	0.00004	43	NA	0.04
GAMMA-BHC (LINDANE)	C	5.3	0.21	0.11	76	28	114
CHLORDANE	C	2.4	0.0043	0.00019	34	0.58	0.20
4,4'-DDT	C	1.1	0.001	0 00019	16	0	0.20
4,4'-DDE	C	53	10.5	0.00019	752	1409	0.20
4,4'-DDD	C	0.03	0 006	0.00027	0.43	0.81	0.28
DIELDRIN	C	2.5	0.0019	0.00005	36	0.25	0.05
ENDOSULFAN (TOTAL)		0.22	0.056	0.47	3.15	7.51	188
ENDRIN		0.18	0.0023	0 26	2.58	0.31	104
HEPTACHLOR	C	0 52	0 0038	0.00007	7.45	0.51	0.07
PCBS (TOTAL)	C	2	0.014	0.00001	29	1.88	0.01
TOXAPHENE	C	0.73	0.0002	0 00024	10	0.03	0.25

CALCULATE LONG TERM AVERAGES (LTAa, LTAc, LTAh) AND SELECT LIMITING LONG TERM AVERAGE (LTAl)

LONG TERM AVERAGE EQUATIONS

LTAa	Step 3 WLAa * 0.32	Long Term Average (Acute)
LTAc	Step 3 WLAc * 0.53	Long Term Average (Chronic)
LTAh	Step 3 WLAh * 1.00	Long Term Average (Human Health)

LTAl Most restrictive value of LTAa, LTAc, or LTAh

TABLE 7
CALCULATION OF LTAs AND LIMITING LTA

	ACUTE LTAa (ug/L)	CHRONIC LTAc (ug/L)	HEALTH LTAh (ug/L)	LIMITING LTAl (ug/L)
CHLORINE (GOLDBOOK)				
CHLORINE (TOTAL RES)	87	782	NA	87
NONCONVENTIONAL				
TOTAL PHENOLS (4AAP)	3207	24890	2003	2003
METALS AND CYANIDE				
ARSENIC (T)	1649	13512	20027	1649
CADMIUM (T)	247	112	4005	112
CHROMIUM (T)NA	NA	NA	NA	NA
CHROMIUM (3+)	11181	20685	20027	11181
CHROMIUM (6+)	73	782	51661	73
COPPER (T)	130	1298	400536	130
LEAD (T)	635	384	20027	384
MERCURY (T)	11	0 85	801.07	0.85
NICKEL (T)	9234	15934	NA	9234
ZINC (T)	762	10718	2002678	762
CYANIDE (T)	210	384	265876	210
DIOXIN				
2,3,7,8-TCDD	NA	NA	0.000734	0.00073
VOLATILE ORGANICS				
BENZENE	10304	80004	1137	1137
BROMOFORM	13424	106316	4030	4030
CARBON TETRACHLORIDE	12508	97071	227	227
CHLORODIBROMOMETHANE	NA	NA	403	403
CHLOROFORM	13241	102761	5476	5476
DICHLOROBROMOMETHANE	NA	NA	207	207
1,2-DICHLOROETHANE	54064	419576	372	372
1,1-DICHLOROETHYLENE	5315	41246	52	52
1,3-DICHLOROPROPYLENE	2777	21548	3949	2777
ETHYLBENZENE	14661	113783	957280	14661
METHYL CHLORIDE	251994	1955652	NA	251994
METHYLENE CHLORIDE	88427	686256	4546	4546
1,1,2,2-TETRACHLOROETHANE	4229	32855	165	165
TETRACHLOROETHYLENE	5910	45869	672	672
TOLUENE	5819	45158	2443267	5819

1,1,1-TRICHLOROETHANE	24191	187743	80107	24191
1,1,2-TRICHLOROETHANE	8247	64003	579	579
TRICHLOROETHYLENE	17869	138674	2893	2893
VINYL CHLORIDE	NA	NA	1963	1963
ACID COMPOUNDS				
2-CHLOROPHENOL	1182	9174	40	40
2,4-DICHLOROPHENOL	926	7183	120	120
BASE/NEUTRAL COMPOUNDS				
BENZIDINE	1145	8889	0.08	0.08
HEXACHLOROBENZENE	NA	NA	0.26	0.26
HEXACHLOROBUTADIENE	23	73	93	23
PESTICIDES AND PCBS				
ALDRIN	14	NA	0.04	0 04
GAMMA-BHC (LINDANE)	24	15	114	15
CHLORDANE	11	0	0.20	0.20
4,4'-DDT	5.04	0.07	0.20	0.07
4,4'-DDE	241	747	0.20	0.20
4,4'-DDD	0.14	0.43	0.28	0.14
DIELDRIN	11	0.14	0.05	0.05
ENDOSULFAN (TOTAL)	1.01	3.98	188	1.01
ENDRIN	0.82	0.16	104	0.16
HEPTACHLOR	2.38	0.27	0.07	0.07
PCBS (TOTAL)	9.16	1.00	0.01	0.01
TOXAPHENE	3.34	0.01	0.25	0.01

CALCULATE WATER QUALITY STANDARD BASED CONCENTRATION BASIS (ug/L)

If Step 4 Type of LTAl = AQ:

Monthly Avg (ug/L) Step 4 LTAl * 1.31
Daily Max (ug/L) Step 4 LTAl * 3.11

If Step 4 Type of LTAl = HH:

Monthly Avg (ug/L) Step 4 LTAl * 1.00
Daily Max (ug/L) Step 4 LTAl * 2.38

TABLE 8
CALCULATION OF END OF PIPE WATER QUALITY STANDARDS
CONCENTRATION BASED

	LIMITING LTA1 (ug/L)	MONTHLY AVERAGE (ug/L)	DAILY MAXIMUM (ug/L)
CHLORINE (GOLDBOOK)			
CHLORINE (TOTAL RES.)	87	114	271
NONCONVENTIONAL			
TOTAL PHENOLS (4AAP)	2003	2003	4766
METALS AND CYANIDE			
ARSENIC (T)	1649	2161	5130
CADMIUM (T)	112	146	348
CHROMIUM (3+)	11181	14647	34772
CHROMIUM (6+)	73	96	228
COPPER (T)	130	170	405
LEAD (T)	384	503	1194
MERCURY (T)	0.9	1.12	2.7
NICKEL (T)	9234	12097	28719
ZINC (T)	762	999	2371
CYANIDE (T)	210	275	654
DIOXIN			
2,3,7,8-TCDD	0.0007	0.0007336	0.0017
VOLATILE ORGANICS			
BENZENE	1137	1137	2705
BROMOFORM	4030	4030	9590
CARBON TETRACHLORIDE	227	227	541
CHLORODIBROMOMETHANE	403	403	959
CHLOROFORM	5476	5476	13033
DICHLOROBROMOMETHANE	207	207	492
1,2-DICHLOROETHANE	372	372	885
1,1-DICHLOROETHYLENE	52	52	123
1,3-DICHLOROPROPYLENE	2777	3637	8635
ETHYLBENZENE	14661	19207	45597
METHYL CHLORIDE	251994	330112	783702
METHYLENE CHLORIDE	4546	4546	10820
1,1,2,2-TETRACHLOROETHANE	165	165	393
TETRACHLOROETHYLENE	672	672	1598
TOLUENE	5819	7623	18096
1,1,1-TRICHLOROETHANE	24191	31691	75235

1,1,2-TRICHLOROETHANE	579	579	1377
TRICHLOROETHYLENE	2893	2893	6885
VINYL CHLORIDE	1963	1963	4672
ACID COMPOUNDS			
2-CHLOROPHENOL	40	40	95
2,4-DICHLOROPHENOL	120	120	286
BASE/NEUTRAL COMPOUNDS			
BENZIDINE	0.08	0.08	0.20
HEXACHLOROBENZENE	0.26	0.26	0.61
HEXACHLOROBUTADIENE	23	31	73
PESTICIDES AND PCBS			
ALDRIN	0.04	0.04	0.10
GAMMA-BHC (LINDANE)	15	20	46
CHLORDANE	0.20	0.20	0.47
4,4'-DDT	0.07	0.09	0.22
4,4'-DDE	0.20	0.20	0.47
4,4'-DDD	0.14	0.18	0.43
DIELDRIN	0.05	0.05	0.12
ENDOSULFAN (TOTAL)	1.01	1.32	3.13
ENDRIN	0.16	0.21	0 51
HEPTACHLOR	0.07	0 07	0.17
PCBS (TOTAL)	0.01	0.01	0.02
TOXAPHENE	0 01	0.05	0.04

V. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

TABLE 9
TECHNOLOGY VS WATER QUALITY STANDARD LIMITATIONS

			WQ STANDARDS-BASED	
			NUMERICAL MASS	
			EFFLUENT LIMIT	
	TECHNOLOGY	TECHNOLOGY	MONTHLY	DAILY
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
	(LB/DAY)	(LB/DAY)	(LB/DAY)	(LB/DAY)
CHLORINE (GOLDBOOK)				
CHLORINE (TOTAL RES)	76	125	523	1242
METALS AND CYANIDE				
COPPER (T)	47	115	782	1856
LEAD (T)	23	57	2307	5477
NICKEL (T)	36	93	55489	131734
VOLATILE ORGANICS				
BENZENE	12.83	38.14	5213.3215	12408
CARBON TETRACHLORIDE	19.87	51.53	1042 6643	2482
CHLOROFORM	16.67	46 27	25118.731	59783
1,2-DICHLOROETHANE	32.56	102.86	1706.1779	4061
1,1-DICHLOROETHYLENE	5.24	11.23	236 96916	564
1,3-DICHLOROPROPYLENE	28 11	101.92	16684 014	39609
ETHYLBENZENE	22.15	62 93	88100.405	209154
METHYL CHLORIDE	27.14	66.15	1514225.7	3594841
METHYLENE CHLORIDE	10 82	34.79	20853.286	49631
TETRACHLOROETHYLENE	9.79	28.69	3080.5991	7332
TOLUENE	7.57	21.86	34964.848	83008
1,1,1-TRICHLOROETHANE	6.05	15.84	145365.67	345105
1,1,2-TRICHLOROETHANE	7.24	23 95	2654.0546	6317
TRICHLOROETHYLENE	6.52	17 03	13270.273	31583
VINYL CHLORIDE	28.51	64.17	9004.828	21431
ACID COMPOUNDS				
2-CHLOROPHENOL	5.05	15.96	183.72568	437
2,4-DICHLOROPHENOL	6.35	18.24	551.17704	1312
BASE/NEUTRAL COMPOUNDS				
HEXACHLOROBENZENE	25 83	99 31	1.1848458	2.82
HEXACHLOROBUTADIENE	20.2	53 32	140.41002	333.34

In all cases, the technology-based draft permit effluent limits (where established) are more stringent than those based on state numerical water quality numerical standards except for the following pollutants: Hexachlorobenzene.

VI. COMPARE 95TH PERCENTILE OF EFFLUENT DATA WITH WQ DAILY AVERAGE CONCENTRATION BASIS

ESTIMATE OF 95TH PERCENTILE VALUE (ASSUMING LOGNORMAL DISTRIBUTION)

95%TILE = Geometric Mean * (2.13)
Geometric Mean = (X1 * X2 * X3 * ... * Xn)^(1/n)
X = Effluent Datum Value
n = Effluent Datum Number

If all data values are not available, the highest datum value reported is used for the geometric mean value.

Effluent data values reported less than the MQL values are assigned an absolute value of zero (0) for screening purposes.

Effluent data values reported at or above the MQL values are assigned the absolute value as reported for screening purposes.

TABLE 10
FORM 2C EFFLUENT ANALYSIS FOR OUTFALL 001

FORM 2C DATA			DAILY
	2C NO.	UNITS	MAX
CONVENTIONAL			
BOD5	A.1.a	mg/L	0
TSS	A.1.d	mg/L	52
Oil & Grease	B.1.h	mg/L	0
Fecal Coliform	B.1.d	#/100 ml	0
NONCONVENTIONAL			
Flow	A 1.f	MGD	550
COD	A.1.b	mg/L	0
TOC	A 1 c	mg/L	6
Ammonia (as N)	A 1 e	mg/L	0
Bromide	B.1.a	ug/L	NA
Chlorine (Total Residual)	B.1.b	ug/L	0

Color	B.1 c	nM	NA
Fluoride	B.1.e	ug/L	0
Nitrate-Nitrite (N)	B.1 f	ug/L	NA
Organic Nitrogen, Total (as N)	B.1.G	ug/L	NA
Phosphorus, Total (as P)	B.1.i	ug/L	NA
Radioactivity: Alpha, Total	B.1.j.(1)	pCi/L	NA
Radioactivity: Beta, Total	B 1.j.(2)	pCi/L	NA
Radioactivity: Radium, Total	B.1.j.(3)	pCi/L	NA
Radioactivity: Radium 226, Total	B 1.j (4)	pCi/L	NA
Sulfate (as SO4)	B.1.k	ug/L	0
Sulfide (as S)	B.1.i	ug/L	NA
Sulfite (as SO3)	B.1.m	ug/L	NA
Surfactants	B.1.n	ug/L	NA
Aluminum (T)	B 1.o	ug/L	0
Barium (T)	B.1.p	ug/L	0
Boron (T)	B.1.q	ug/L	NA
Cobalt (T)	B.1.r	ug/L	NA
Iron (T)	B.1.s	ug/L	NA
Magnesium (T)	B.1.t	ug/L	NA
Molybdenum (T)	B 1.u	ug/L	NA
Manganese (T)	B.1 v	ug/L	NA
Tin (T)	B 1.w	ug/L	NA
Titanium (T)	B.1 x	ug/L	NA
Phenolics (Total Recoverable)	15M	ug/L	0
METALS AND CYANIDE			
Antimony (T)	1M	ug/L	0
Arsenic (T)	2M	ug/L	0
Beryllium (T)	3M	ug/L	0
Cadmium (T)	4M	ug/L	0
Chromium (T)	5M	ug/L	0
Chromium (3+)	--	ug/L	0
Chromium (6+)	--	ug/L	0
Copper (T)	6M	ug/L	59
Lead (T)	7M	ug/L	0
Mercury (T)	8M	ug/L	0
Nickel (T)	9M	ug/L	359
Selenium (T)	10M	ug/L	2
Silver (T)	11M	ug/L	0
Thallium (T)	12M	ug/L	0
Zinc (T)	13M	ug/L	0
Cyanide (T)	14M	ug/L	2
Cyanide (Amenable)	--	ug/L	2
DIOXIN			
2,3,7,8-TCDD	DIOXIN	ug/L	1.00e-05

VOLATILE COMPOUNDS			
Acrolein	1V	ug/L	0
Acrylonitrile	2V	ug/L	0
Benzene	3V	ug/L	0
Bromoform	5V	ug/L	0
Carbon Tetrachloride	6V	ug/L	0
Chlorobenzene	7V	ug/L	0
Chlorodibromomethane	8V	ug/L	0
Chloroethane	9V	ug/L	0
2-Chloroethyl Vinyl Ether	10V	ug/L	0
Chloroform	11V	ug/L	0
Dichlorobromomethane	12V	ug/L	0
1,1-Dichloroethane	14V	ug/L	0
1,2-Dichloroethane	15V	ug/L	0
1,1-Dichloroethylene	16V	ug/L	0
1,2-Dichloropropane	17V	ug/L	0
1,3-Dichloropropylene	18V	ug/L	0
Ethylbenzene	19V	ug/L	0
Methyl Bromide	20V	ug/L	0
Methyl Chloride	21V	ug/L	0
Methylene Chloride	22V	ug/L	0
1,1,2,2-Tetrachloroethane	23V	ug/L	0
Tetrachloroethylene	24V	ug/L	0
Toluene	25V	ug/L	0
1,2-trans-Dichloroethylene	26V	ug/L	0
1,1,1-Trichloroethane	27V	ug/L	0
1,1,2-Trichloroethane	28V	ug/L	0
Trichloroethylene	29V	ug/L	0
Vinyl Chloride	31V	ug/L	0
ACID COMPOUNDS			
2-Chlorophenol	1A	ug/L	0
2,4-Dichlorophenol	2A	ug/L	0
2,4-Dimethylphenol	3A	ug/L	0
4,6-Dinitro-o-Cresol	4A	ug/L	0
2,4-Dinitrophenol	5A	ug/L	0
2-Nitrophenol	6A	ug/L	0
4-Nitrophenol	7A	ug/L	0
p-Chloro-m-Cresol	8A	ug/L	0
Pentachlorophenol	9A	ug/L	0
Phenol	10A	ug/L	0
2,4,6-Trichlorophenol	11A	ug/L	0

BASE/NEUTRAL COMPOUNDS			
Acenaphthene	1B	ug/L	0
Acenaphthylene	2B	ug/L	0
Anthracene	3B	ug/L	0
Benzidine	4B	ug/L	0
Benzo(a)anthracene	5B	ug/L	0
Benzo(a)pyrene	6B	ug/L	0
3,4-Benzofluoranthene	7B	ug/L	0
Benzo(ghi)perylene	8B	ug/L	0
Benzo(k)fluoranthene	9B	ug/L	0
Bis(2-chloroethoxy) Methane	10B	ug/L	0
Bis(2-chloroethyl) Ether	11B	ug/L	0
Bis(2-chloroisopropyl) Ether	12B	ug/L	0
Bis(2-ethylhexyl) Phthalate	13B	ug/L	0
4-Bromophenyl Phenyl Ether	14B	ug/L	0
Butyl Benzyl Phthalate	15B	ug/L	0
2-Chloronapthalene	16B	ug/L	0
4-Chlorophenyl Phenyl Ether	17B	ug/L	0
Chrysene	18B	ug/L	0
Dibenzo(a,h)anthracene	19B	ug/L	0
1,2-Dichlorobenzene	20B	ug/L	0
1,3-Dichlorobenzene	21B	ug/L	0
1,4-Dichlorobenzene	22B	ug/L	0
3,3'-Dichlorobenzidine	23B	ug/L	0
Diethyl Phthalate	24B	ug/L	0
Dimethyl Phthalate	25B	ug/L	0
Di-n-Butyl Phthalate	26B	ug/L	0
2,4-Dinitrotoluene	27B	ug/L	0
2,6-Dinitrotoluene	28B	ug/L	0
Di-n-octyl Phthalate	29B	ug/L	0
1,2-Diphenylhydrazine	30B	ug/L	0
Fluoranthene	31B	ug/L	0
Fluorene	32B	ug/L	0
Hexachlorobenzene	33B	ug/L	0
Hexachlorobutadiene	34B	ug/L	0
Hexachlorocyclopentadiene	35B	ug/L	0
Hexachloroethane	36B	ug/L	0
Indeno (1,2,3-cd) Pyrene	37B	ug/L	0
Isophorone	38B	ug/L	0
Naphthalene	39B	ug/L	0
Nitrobenzene	40B	ug/L	0
n-Nitrosodimethylamine	41B	ug/L	0
n-Nitrosodi-n-Propylamine	42B	ug/L	0
n-Nitrosodiphenylamine	43B	ug/L	0
Phenanthrene	44B	ug/L	0
Pyrene	45B	ug/L	0

1,2,4-Trichlorobenzene	46B	ug/L	0
PESTICIDES AND PCBs			
Aldrin	1P	ug/L	0
Alpha-BHC	2P	ug/L	0
Beta-BHC	3P	ug/L	0
Gamma-BHC [Lindane]	4P	ug/L	0
Delta-BHC	5P	ug/L	0
Chlordane	6P	ug/L	0
4,4'-DDT	7P	ug/L	0
4,4'-DDE [p,p-DDX]	8P	ug/L	0
4,4'-DDD [p,p-TDE]	9P	ug/L	0
Dieldrin	10P	ug/L	0
Alpha-Endosulfan	11P	ug/L	0
Beta-Endosulfan	12P	ug/L	0
Endosulfan Sulfate	13P	ug/L	0
Endrin	14P	ug/L	0
Endrin Aldehyde	15P	ug/L	0
Heptachlor	16P	ug/L	0
Heptachlor Epoxide	17P	ug/L	0
PCB-1242	18P	ug/L	0
PCB-1254	19P	ug/L	0
PCB-1221	20P	ug/L	0
PCB-1232	21P	ug/L	0
PCB-1248	22P	ug/L	0
PCB-1260	23P	ug/L	0
PCB-1016	24P	ug/L	0
Toxaphene	25P	ug/L	0

TABLE 11
EFFLUENT DATA VS MQL

	DAILY MAX	MQL	GEO.MEAN
CHLORINE (GOLDBOOK)	(ug/L)	(ug/L)	(ug/L)
Chlorine (TRC)	0	100	0
NONCONVENTIONAL			
Total Phenols (4AAP)	0	5	0
3-Chlorophenol		10	
4-Chlorophenol		10	
2,3-Dichlorophenol		10	
2,5-Dichlorophenol		10	
2,6-Dichlorophenol		10	
3,4-Dichlorophenol		10	
2,4-D		10	

2,4,5-TP (Silvex)		4	
METALS AND CYANIDE			
Arsenic (T)	0	10	0
Cadmium (T)	0	1	0
Chromium (T)	0	10	0
Chromium (3+)	0	10	0
Chromium (6+)	0	10	0
Copper (T)	59	10	59
Lead (T)	0	5	0
Mercury (T)	0	0.2	0
Nickel (T)	359	5	359
Zinc (T)	0	20	0
Cyanide (T)	2	20	0
DIOXIN			
2,3,7,8-TCDD	1.00e-05	1.00e-05	0
VOLATILE ORGANICS			
Benzene	0	10	0
Bromoform	0	10	0
Carbon Tetrachloride	0	10	0
Chlorodibromomethane	0	10	0
Chloroform	0	10	0
Dichlorobromomethane	0	10	0
1,2-Dichloroethane	0	10	0
1,1-Dichloroethylene	0	10	0
1,3-Dichloropropylene	0	10	0
Ethylbenzene	0	10	0
Methyl Chloride	0	50	0
Methylene Chloride	0	20	0
1,1,2,2-Tetrachloroethane	0	10	0
Tetrachloroethylene	0	10	0
Toluene	0	10	0
1,1,1-Trichloroethane	0	10	0
1,1,2-Trichloroethane	0	10	0
Trichloroethylene	0	10	0
Vinyl Chloride	0	10	0
ACID COMPOUNDS			
2-Chlorophenol	0	10	0
2,4-Dichlorophenol	0	10	0

BASE/NEUTRAL COMPOUNDS			
Benzidine	0	50	0
Hexachlorobenzene	0	10	0
Hexachlorobutadiene	0	10	0
PESTICIDES AND PCBs			
Aldrin	0	0.05	0
Gamma-BHC (Lindane)	0	0 05	0
Chlordane	0	0.2	0
4,4'-DDT	0	0.1	0
4,4'-DDE	0	0.1	0
4,4'-DDD	0	0.1	0
Dieldrin	0	0.1	0
* Alpha-Endosulfan	0	0.1	0
* Beta-Endosulfan	0	0.1	0
* Endosulfan Sulfate	0	0.1	0
Endosulfan (Total)			0
Endrin	0	0.1	0
Heptachlor	0	0.05	0
* PCB-1242	0	1	0
* PCB-1254	0	1	0
* PCB-1221	0	1	0
* PCB-1232	0	1	0
* PCB-1248	0	1	0
* PCB-1260	0	1	0
* PCB-1016	0	1	0
PCBs (Total)			0
Toxaphene	0	5	0

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40CFR136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to EPA Region 6 a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$MQL = 3.3 \times MDL$$

Upon written approval by EPA Region 6, the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

TABLE 12
95th PERCENTILE EFFLUENT VS END OF PIPE WATER QUALITY STANDARDS

	FORM 2C NUMBER	GEOMETRIC MEAN (ug/L)	95%TILE VALUE (ug/L)	WQ CONC MONTHLY AVERAGE (ug/L)
CHLORINE (GOLDBOOK)				
Chlorine (Total Res.)	B.1.b	0	0	114
NONCONVENTIONAL				
Total Phenols (4AAP)	15M	0	0	2003
METALS AND CYANIDE				
Arsenic (T)	1M	0	0	2161
Cadmium (T)	4M	0	0	146
Chromium (3+)		0	0	14647
Chromium (6+)		0	0	96
Copper (T)	6M	59	125.67	170
Lead (T)	7M	0	0	503
Mercury (T)	8M	0	0	1.12
Nickel (T)	9M	359	765	12097
Zinc (T)	13M	0	0	999
Cyanide (T)	14M	0	0	275
DIOXIN				
2,3,7,8-TCDD	DIOXIN	0	0	7.34e-04
VOLATILE ORGANICS				
Benzene	3V	0	0	1137
Bromoform	5V	0	0	4030
Carbon Tetrachloride	6V	0	0	227
Chlorodibromomethane	8V	0	0	403
Chloroform	11V	0	0	5476
Dichlorobromomethane	12V	0	0	207
1,2-Dichloroethane	15V	0	0	372
1,1-Dichloroethylene	16V	0	0	52
1,3-Dichloropropylene	18V	0	0	3637
Ethylbenzene	19V	0	0	19207
Methyl Chloride	21V	0	0	330112
Methylene Chloride	22V	0	0	4546
1,1,2,2-Tetrachloroethane	23V	0	0	165
Tetrachloroethylene	24V	0	0	672
Toluene	25V	0	0	7623
1,1,1-Trichloroethane	27V	0	0	31691
1,1,2-Trichloroethane	28V	0	0	579

Trichloroethylene	29V	0	0	2893
Vinyl Chloride	31V	0	0	1963
ACID COMPOUNDS				
2-Chlorophenol	1A	0	0	40
2,4-Dichlorophenol	2A	0	0	120
BASE/NEUTRAL COMPOUNDS				
Benzidine	4B	0	0	0.08
Hexachlorobenzene	33B	0	0	0 26
Hexachlorobutadiene	34B	0	0	31
PESTICIDES AND PCBs				
Aldrin	1P	0	0	0.04
Gamma-BHC (Lindane)	4P	0	0	19.56
Chlordane	6P	0	0	0.20
4,4'-DDT	7P	0	0	0.09
4,4'-DDE	8P	0	0	0.20
4,4'-DDD	9P	0	0	0.18
Dieldrin	10P	0	0	0.05
Endosulfan (Total)		0	0	1.32
Endrin	14P	0	0	0.21
Heptachlor	16P	0	0	0.07
PCBs (Total)		0	0	0.01
Toxaphene	25P	0	0	0.05

VII. BIOMONITORING REQUIREMENTS

The provisions of this section apply to Final Outfall(s) 001.

EPA has determined that there may be pollutants present in the effluent(s) which have the reasonable potential to cause, or contribute to, an instream excursion above the narrative criterion within the applicable State water quality standards in violation of Section 101(a)(3) of the Clean Water Act. In addition, EPA is required under 40CFR122.44(d)(1) to include conditions as necessary to achieve the States' water quality standards as established under Section 303 of the Clean Water Act. The State has established narrative criteria which, in part, state that "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life"

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

TESTING AND REPORTING REQUIREMENTS

The draft permit establishes the following testing and reporting requirements:

TABLE 13
BIOMONITORING SAMPLING AND FREQUENCY

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	1/Quarter
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	1/Quarter

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600/4-90/027, September 1991." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards.

The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at 40CFR122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. This full report need not be submitted unless requested. However, the full report is to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of 40CFR124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.10%, 0.07%, 0.06%, 0.05%, and 0.03% based on a 0.75 dilution series with the low-flow effluent concentration (critical low-flow dilution) defined as 0.07% effluent. The effluent dilution series are calculated in Table 14.

TABLE 14

EFFLUENT DILUTION SERIES BASED ON 0.75 DILUTION SERIES

Dilution No. 1	0.10
Dilution No. 2	0.07
Dilution No. 3	0.06
Dilution No. 4	0 04
Dilution No. 5	0 03

VIII. WATER QUALITY SCREENING FOR EPA HUMAN HEALTH PROTECTION BIOACCUMULATION CRITERIA

Where an exceedance of the EPA bioaccumulation water quality criteria for aquatic organism consumption is discovered and no state human health standard has been promulgated for that pollutant, the permitting sections will take the following three actions:

1. Notify the EPA Region 6 Watershed Management Section (6WQ-EW) of the potential exceedance upon issuance of the final permit.

2. Require effluent monitoring in the permit for the parameter of concern at a frequency of 1/Month. Then monitoring requirements shall expire one (1) year after the effective date of the permit.

3. Place a reopener clause in the permit. This will allow EPA to modify the permit for inclusion of a limit for the parameter of concern after the state has adopted an appropriate a water quality standard.

The Watershed Management Section (6WQ-EW) will be provided the information generated through the effluent monitoring to assist in determining where additional state standards are necessary.

In conducting effluent screening, the permitting sections will utilize all EPA human health criteria for which the state has not adopted standards. Specifically, EPA will use the values promulgated by the National Toxics Rule (57 FR 60848, 12/22/92). This is currently the most reliable toxicity information available presented in a readily accessible format. The National Toxics Rule criteria

have been based on Gold Book values updated by IRIS. These values have the added advantage of public notice and comment.

For evaluation purposes, the permitting sections will utilize the state assigned values for carcinogen risk factor and fish consumption rate. The EPA default assumptions for a 10^{-6} risk factor for carcinogens and a fish consumption rate of 6.5 g/day will be used in their absence. The permitting sections will utilize the appropriate critical dilution at the edge of the human health mixing zone.

PERMIT ACTION

The effluent data presented in Table 10 (Form 2C Data) indicates that there are no detectable pollutants of concern in Outfall 001 discharge. Since there are no exceedance of EPA human health protection bioaccumulation criteria, no monitoring requirements are established.

APPENDIX B OUTFALL 101 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Process Area Reaction Water	1.46	12.18
Process Area Contact Stormwater	0.072	0.60
Scrubber Effluent	0.002	0.02
OCPSF FLOW	1.53	12.79
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF FLOW	1.53	12.79
TOTAL FLOW	1.53	12.79

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	114	114
		TOTAL	114
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	12.794	24	64	307.05	818.79
		TOTAL	===>	307.05	819
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	12.794	114	130	1458.5	1663.2
		TOTAL		1458.5	1663.2
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	307	819		
TSS	00530	1458	1663		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	UG/L	UG/L	LB/DAY	LB/DAY
Acrylonitrile	34215	12.794	94	232	1.2	2.97
Benzene	34030	12.794	57	134	0.73	1.71
Carbon Tetrachloride	32102	12.794	142	380	1.82	4.86
Chlorobenzene	34301	12.794	142	380	1 82	4.86
Chloroethane	34311	12.794	110	295	1.41	3.77
Chloroform	32106	12 794	140	325	1.79	4.16
1,1-Dichloroethane	34496	12.794	22	59	0.28	0.75
1,2-Dichloroethane	34531	12.794	180	574	2.3	7.34
1,1-Dichloroethylene	34501	12.794	22	60	0.28	0 77
1,2-Dichloropropane	34541	12.794	196	794	2.51	10.16
1,3-Dichloropropylene	34561	12.794	196	794	2.51	10.16
Ethylbenzene	34371	12 794	142	380	1.82	4.86
Methyl Chloride	34418	12.794	110	295	1.41	3.77
Methylene Chloride	34423	12 794	36	170	0 46	2.17
Tetrachloroethylene	34475	12.794	52	164	0.67	2 1

Toluene	34010	12 794	28	74	0.36	0.95
1,2-trans-Dichloroethylene	34546	12.794	25	66	0.32	0.84
1,1,1-Trichloroethane	34506	12.794	22	59	0.28	0.75
1,1,2-Trichloroethane	34511	12 794	32	127	0.41	1.62
Trichloroethylene	39180	12.794	26	69	0.33	0.88
Vinyl Chloride	39175	12.794	97	172	1.24	2.2
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	12 794	19	47	0.24	0.6
4,6-Dinitro-o-Cresol	34657	12.794	78	277	1	3.54
2,4-Dinitrophenol	34616	12.794	1207	4291	15.44	54.9
2-Nitrophenol	34591	12.794	65	231	0.83	2.96
4-Nitrophenol	34646	12.794	162	576	2.07	7.37
Phenol	34694	12.794	19	47	0.24	0.6
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	12.794	19	47	0.24	0 6
Acenaphthylene	34200	12.794	19	47	0 24	0.6
Anthracene	34220	12.794	19	47	0.24	0.6
Benzo(a)anthracene	34526	12.794	19	47	0.24	0.6
Benzo(a)pyrene	34247	12.794	20	48	0.26	0.61
3,4-Benzofluoranthene	34230	12.794	20	48	0.26	0.61
Benzo(k)fluoranthene	34242	12.794	19	47	0 24	0.6
Bis(2-Ethylhexyl)Phthalate	39100	12.794	95	258	1.22	3.3
Chrysene	34320	12 794	19	47	0.24	0.6
1,2-Dichlorobenzene	34536	12.794	196	794	2.51	10.16
1,3-Dichlorobenzene	34566	12 794	142	380	1.82	4.86
1,4-Dichlorobenzene	34571	12.794	142	380	1.82	4.86
Diethyl Phthalate	34336	12 794	46	113	0.59	1.45
Dimethyl Phthalate	34341	12.794	19	47	0.24	0.6
Di-n-Butyl Phthalate	39110	12.794	20	43	0.26	0.55
Fluoranthene	34376	12 794	22	54	0 28	0 69
Fluorene	34381	12.794	19	47	0.24	0.6
Hexachlorobenzene	39700	12.794	196	794	2.51	10.16
Hexachlorobutadiene	34391	12.794	142	380	1.82	4 86
Hexachloroethane	34396	12 794	196	794	2.51	10.16
Naphthalene	34696	12 794	19	47	0.24	0.6
Nitrobenzene	34447	12.794	2237	6402	28.62	81.9
Phenanthrene	34461	12.794	19	47	0.24	0.6
Pyrene	34469	12 794	20	48	0.26	0.61
1,2,4-Trichlorobenzene	34551	12.794	196	794	2.51	10 16

APPENDIX B-1 OUTFALL 101 (FDF VARIANCE REQUEST)

The following data was submitted by the permittee to set daily average limitations for Total Suspended Solids for Outfall 101. A non-parametric approach was used to derive the daily average from the data set. The daily average limitation for TSS is the 95th percentile of the data. The 95th percentile of the data set is 114 mg/L TSS. The data set contains effluent data from January 1994 through March 1998.

Date	TSS ppm	TSS lbs	Date	TSS ppm	TSS lbs
01/05/94	18	41	01/31/96	11.00	50
01/12/94	14	110	02/07/96	36.00	15
01/19/94	23	115	02/14/96	181.00	996
01/26/94	27	140	02/21/96	53.00	554
02/02/94	20	113	02/28/96	37.00	414
02/09/94	38	548	03/06/96	173	2,173
02/16/94	33	185	03/13/96	20	183
02/23/94	8	91	03/20/96	41	318
03/02/94	10	81	03/27/96	30	205
03/09/94	18	225	04/03/96	33	174
03/16/94	31	284	04/10/96	76	498
03/23/94	64	780	04/17/96	54	497
03/30/94	164	1,127	04/24/96	6	58
04/06/94	46	572	05/08/96	21	303
04/15/94	17	99	05/15/96	25	94
04/20/94	10	67	05/22/96	39	205
4/27/94	18	107	05/29/96	29	167
05/04/94	26	202	06/05/96	52	325
05/11/94	35	461	06/12/96	42	173
05/18/94	56	510	06/19/96	6	40
05/25/94	25	260	06/26/96	10	116
05/31/94	50	651	07/03/96	8	59
06/01/94	56	738	07/10/96	21	163
06/08/94	24	266	07/17/96	10	142
06/15/94	82	1,464	07/24/96	52	416
06/22/94	38	397	07/31/96	12	81
07/06/94	60	585	08/07/96	12	118
07/13/94	43	653	08/14/96	19	142
07/20/94	58	706	08/21/96	19	188
07/27/94	31	365	08/28/96	40	254
08/03/94	34	298	09/04/96	12	67
08/10/94	30	298	09/11/96	17	150
08/17/94	15	176	09/18/96	27	74
08/24/94	51	539	09/25/96	13	80
08/31/94	43	383	10/02/96	9	66
09/07/94	23	163	10/09/96	29	140
09/14/94	21	207	10/16/96	56	322
09/21/94	67	574	10/23/96	14	78
09/28/94	42	306	10/30/96	37	317
10/05/94	30	335	11/05/96	56	285

10/12/94	55	523	11/12/96	81	331
10/19/94	17	259	11/19/96	60	278
10/26/94	34	218	11/25/96	14	90
11/02/94	53	253	12/03/96	38	333
11/09/94	65	396	12/10/96	28	184
11/16/94	23	200	12/17/96	39	267
11/23/94	22	202	12/23/96	67	581
11/30/94	47	454	12/30/96	46	418
12/07/94	21	217	01/07/97	76	545
12/14/94	33	279	01/14/97	73	493
12/21/94	27	134	01/21/97	65	542
12/28/94	18	200	01/28/97	20	108
01/04/95	42	343	02/05/97	34	298
01/11/95	28	288	02/12/97	49	339
01/18/95	34	241	02/19/97	46	315
01/25/95	27	394	02/26/97	23	152
02/02/95	18	155	03/04/97	48	592
02/07/95	15	106	03/11/97	70	549
02/14/95	74	136	03/18/97	7	63
02/21/95	79	851	03/25/97	16	189
02/28/95	38	276	04/02/97	58	435
03/07/95	73	654	04/09/97	166	969
03/14/95	44	297	04/16/97	118	1053
03/21/95	11	156	04/23/97	68	431
03/28/95	25	179	04/30/97	122	153
04/04/95	54	374	05/07/97	92	292
04/11/95	30	370	05/14/97	129	1054
04/18/95	23	223	05/21/97	133	1039
04/25/95	93	679	05/28/97	64	486
05/02/95	32	224	06/04/97	81	615
05/09/95	24	284	06/11/97	93	628
05/16/95	15	151	06/18/97	75	920
05/23/95	13	69	06/25/97	93	714
05/30/95	43	301	07/02/97	76	399
06/06/95	28	227	07/09/97	113	1187
06/13/95	105	829	07/16/97	21	252
06/20/95	10	90	07/23/97	24	206
06/27/95	222	206	07/30/97	44	320
07/04/95	53	255	08/06/97	12	82
07/11/95	17	145	08/13/97	63	137
07/18/95	31	219	08/20/97	10	15
07/25/95	19	235	08/27/97	36	258
08/01/95	28	283	09/03/97	6	57
08/08/95	30	167	09/10/97	24	144
08/15/95	55	232	09/17/97	35	187
08/22/95	58	504	09/24/97	44	305
08/29/95	39	328	09/30/97	73	603
09/05/95	22	246	10/07/97	38	38
09/12/95	11	74	10/14/97	61	61
09/19/95	13	81	10/21/97	40	40
09/26/95	19	159	10/28/97	27	27

10/03/95	11	151	11/04/97	29	177
10/10/95	33	333	11/11/97	59	192
10/17/95	17	98	11/18/97	122	1034
10/24/95	27	277	11/25/97	60	380
10/31/95	42	354	12/02/97	52	421
11/07/95	12	66	12/09/97	60	470
11/14/95	31	329	12/16/97	89	583
11/21/95	13	107	12/23/97	86	446
11/28/95	76	482	12/30/97	126	946
12/05/95	23	119	01/07/98	93	566
12/12/95	38	362	01/14/98	104	885
12/19/95	28	188	01/21/98	105	911
12/26/95	58	537	01/28/98	55	417
01/03/96	33	317	02/04/98	36	150
01/10/96	57	641	02/11/98	14	22
01/17/96	70	609	02/18/98	6	3
01/24/96	13	11	02/25/98	25	152

APPENDIX C OUTFALL 301 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

LIST CHLORINE PRODUCTION RATES

	CHLORINE
	PRODUCTION
CHLOR-ALKALI	K LB/DAY
Diaphragm Cell	9600

Conventional Pollutant Guideline Factor 40 CFR 415.62(b)
Nonconventional Pollutant Guideline Factor 40 CFR 415.63(b)
Guideline Factor [GLF] = [Pound Pollutant per K lb/day Production]
Chlorine Production [ClP] = (K lb/day)
Mass (lb/day) = Production (K lb/day) * GLF

CALCULATE CONVENTIONAL POLLUTANT MASS LIMITS (TSS)

Conventional Pollutant Guideline Factor 40 CFR 415.62(b)

		DAILY	DAILY	DAILY	DAILY
		AVG	MAX	AVG	MAX
CHLOR-ALKALI	CLP	GLF	GLF	LB/DAY	LB/DAY
Diaphragm Cell	9600	0.51	1.1	4896	10560
			TOTAL	4896	10560

CALCULATE NONCONVENTIONAL POLLUTANT MASS LIMITS TOTAL RESIDUAL CHLORINE

		DAILY	DAILY	DAILY	DAILY
		AVG	MAX	AVG	MAX
CHLOR-ALKALI	CLP	GLF	GLF	LB/DAY	LB/DAY
Diaphragm Cell	9600	0.0079	0.013	75.84	124.8
			TOTAL	75.84	124.8

CALCULATE TOXIC PRIORITY POLLUTANT MASS LIMITS TOTAL COPPER

Nonconventional Pollutant Guideline Factor 40 CFR 415.63(b)

		DAILY	DAILY	DAILY	DAILY
		AVG	MAX	AVG	MAX
CHLOR-ALKALI	CLP	GLF	GLF	LB/DAY	LB/DAY
Diaphragm Cell	9600	0.0049	0.012	47.04	115.2
			TOTAL	47.04	115.2

CALCULATE TOXIC PRIORITY POLLUTANT MASS LIMITS TOTAL LEAD

Nonconventional Pollutant Guideline Factor 40 CFR 415.63(b)

		DAILY	DAILY	DAILY	DAILY
		AVG	MAX	AVG	MAX
CHLOR-ALKALI	CLP	GLF	GLF	LB/DAY	LB/DAY
Diaphragm Cell	9600	0.0024	0.0059	23.04	56.64
			TOTAL	23.04	56.64

CALCULATE TOXIC PRIORITY POLLUTANT MASS LIMITS TOTAL NICKEL

Nonconventional Pollutant Guideline Factor 40 CFR 415.63(b)

		DAILY	DAILY	DAILY	DAILY
		AVG	MAX	AVG	MAX
CHLOR-ALKALI	K LB/DAY	GLF	GLF	LB/DAY	LB/DAY
Diaphragm Cell	9600	0.0037	0.0097	35.52	93.12
			TOTAL	35.52	93.12

SUMMARIZE PERMIT LIMITS

	DAILY AVG	DAILY MAX
CONVENTIONAL	LB/DAY	LB/DAY
TSS	4896	10560
NONCONVENTIONAL		
Chlorine (Total Residual)	75.84	124.8
METALS		
Copper (Total)	47.04	115.2
Lead (Total)	23.04	56.64
Nickel (Total)	35.52	93.12

APPENDIX D OUTFALL 451 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTEWATER	MGD	LB/DAY
THROX Scrubber Water	0.12	1.00
TOTAL	0.12	1.00
UTILITY WASTEWATER		
Cooling Tower Blowdown	0.04	0.36
TOTAL	0.04	0.36
MISCELLANEOUS WASTEWATER		
Non Contact River Water	0.27	2.25
Storm Water	0.06	0.50
Lab Drains	0.002	0.02
TOTAL	0.33	2.77
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.12	1.00
Utility Wastewater	0.04	0.36
Miscellaneous Wastewater	0.33	2.77
TOTAL	0.50	4.13

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART FRACTION OF TOTAL
40 CFR PART 414 SUBPART CATEGORY	OCPSF PRODUCT
Subpart F - Commodity Organic Chemicals	0.712
Subpart G - Bulk Organic Chemicals	0.288
TOTAL	1

BOD5 AND TSS REQUIREMENTS

	SUBPART FRACTION OF TOTAL OCPSF PRODUCTION	414 DAILY AVERAGE (mg/L)	WEIGHTED DAILY AVERAGE (mg/L)
BOD5 AVERAGE			
Subpart F - Commodity Organic Chemicals	0.712	30	21.36
Subpart G - Bulk Organic Chemicals	0.288	34	9.792
	TOTAL		31.152
	SUBPART FRACTION OF TOTAL OCPSF PRODUCTION	414 DAILY MAXIMUM (mg/L)	WEIGHTED DAILY MAXIMUM (mg/L)
BOD5 MAXIMUM			
Subpart F - Commodity Organic Chemicals	0.712	80	56.96
Subpart G - Bulk Organic Chemicals	0.288	92	26.496
	TOTAL		83.456
	SUBPART FRACTION OF TOTAL OCPSF PRODUCTION	414 DAILY AVERAGE (mg/L)	WEIGHTED DAILY AVERAGE (mg/L)
TSS AVERAGE			
Subpart F - Commodity Organic Chemicals	0.712	46	32 752

Subpart G - Bulk Organic Chemicals	0.288	49	14.112
	TOTAL		46.864
	SUBPART	414	WEIGHTED
	FRACTION OF	DAILY	DAILY
	TOTAL OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCTION	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.712	149	106.088
Subpart G - Bulk Organic Chemicals	0.288	159	45.792
	TOTAL		151.88

BOD5 AND TSS REQUIREMENTS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

CALCULATE BOD5 LIMITS					
	FLOW	DAILY	DAILY	DAILY	DAILY
	E+6	AVG	MAX	AVG	MAX
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.00	31	83	31.02	83.07
Utility Wastewater	0.36	0	0	0.00	0.00
Miscellaneous Wastewater	2.77	0	0	0.00	0.00
		TOTAL		31.025	83.066
CALCULATE TSS LIMITS					
	FLOW	DAILY	DAILY	DAILY	DAILY
	E+6	AVG	MAX	AVG	MAX
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.00	47	152	47.04	152
Utility Wastewater	0.36	0	0	0.00	0.00
Miscellaneous Wastewater	2.77	0	0	0.00	0.00
		TOTAL		47.038	152.12

PERMIT LIMITATIONS		PERMIT	LIMITS		
		DAILY	DAILY		
	STORET	AVG	MAX		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	31	83		
TSS	00530	47	152		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation (ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	DAILY	DAILY	DAILY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
Acrylonitrile	34215	1.00	96	242	0.1	0.24
Benzene	34030	1.00	37	136	0.04	0.14
Carbon Tetrachloride	32102	1.00	18	38	0.02	0.04
Chlorobenzene	34301	1.00	15	28	0.02	0.03
Chloroethane	34311	1.00	104	268	0.1	0.27
Chloroform	32106	1.00	21	46	0.02	0.05
1,1-Dichloroethane	34496	1.00	22	59	0.02	0.06
1,2-Dichloroethane	34531	1.00	68	211	0.07	0.21
1,1-Dichloroethylene	34501	1.00	16	25	0.02	0.03
1,2-Dichloropropane	34541	1.00	153	230	0.15	0.23
1,3-Dichloropropylene	34561	1.00	29	44	0.03	0.04
Ethylbenzene	34371	1.00	32	108	0.03	0.11
Methyl Chloride	34418	1.00	86	190	0.09	0.19
Methylene Chloride	34423	1.00	40	89	0.04	0.09
Tetrachloroethylene	34475	1.00	22	56	0.02	0.06
Toluene	34010	1.00	26	80	0.03	0.08
1,2-trans-Dichloroethylene	34546	1.00	21	54	0.02	0.05
1,1,1-Trichloroethane	34506	1.00	21	54	0.02	0.05
1,1,2-Trichloroethane	34511	1.00	21	54	0.02	0.05
Trichloroethylene	39180	1.00	21	54	0.02	0.05
Vinyl Chloride	39175	1.00	104	268	0.1	0.27
ACID COMPOUNDS						
2-Chlorophenol	34586	1.00	31	98	0.03	0.1
2,4-Dichlorophenol	34601	1.00	39	112	0.04	0.11
2,4-Dimethylphenol	34606	1.00	18	36	0.02	0.04
4,6-Dinitro-o-Cresol	34657	1.00	78	277	0.08	0.28
2,4-Dinitrophenol	34616	1.00	71	123	0.07	0.12
2-Nitrophenol	34591	1.00	41	69	0.04	0.07

4-Nitrophenol	34646	1 00	72	124	0.07	0.12
Phenol	34694	1.00	15	26	0.02	0.03
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	1.00	22	59	0.02	0.06
Acenaphthylene	34200	1.00	22	59	0.02	0.06
Anthracene	34220	1.00	22	59	0.02	0.06
Benzo(a)anthracene	34526	1.00	22	59	0.02	0.06
Benzo(a)pyrene	34247	1 00	23	61	0.02	0.06
3,4-Benzofluoranthene	34230	1.00	23	61	0.02	0.06
Benzo(k)fluoranthene	34242	1.00	22	59	0.02	0.06
Bis(2-Ethylhexyl) Phthalate	39100	1.00	103	279	0.1	0.28
Chrysene	34320	1.00	22	59	0.02	0.06
1,2-Dichlorobenzene	34536	1.00	77	163	0.08	0.16
1,3-Dichlorobenzene	34566	1.00	31	44	0.03	0.04
1,4-Dichlorobenzene	34571	1.00	15	28	0.02	0.03
Diethyl Phthalate	34336	1.00	81	203	0.08	0.2
Dimethyl Phthalate	34341	1.00	19	47	0.02	0.05
Di-n-Butyl Phthalate	39110	1.00	27	57	0.03	0.06
2,4-Dinitrotoluene	34611	1.00	113	285	0.11	0.29
2,6-Dinitrotoluene	34626	1.00	255	641	0.26	0.64
Fluoranthene	34376	1.00	25	68	0.03	0 07
Fluorene	34381	1.00	22	59	0.02	0.06
Hexachlorobenzene	39700	1.00	15	28	0.02	0.03
Hexachlorobutadiene	34391	1.00	20	49	0.02	0.05
Hexachloroethane	34396	1.00	21	54	0.02	0.05
Naphthalene	34696	1.00	22	59	0.02	0.06
Nitrobenzene	34447	1.00	27	68	0.03	0.07
Phenanthrene	34461	1.00	22	59	0.02	0.06
Pyrene	34469	1.00	25	67	0.03	0.07
1,2,4-Trichlorobenzene	34551	1.00	68	140	0.07	0 14

APPENDIX E OUTFALL 521 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Thermal Treatment Unit	1.32	11.0088
Maintenance	0.04	0.3336
Block 49 Groundwater	0.432	3.60288
OCPSF FLOW	1.792	14.94528
MISCELLANEOUS WASTEWATER		
HCL Vent Scrubber	0.18	1.5012
Rainfall Runoff from Clean Areas	0.103	0.85902
Once Through Cooling	0.1	0.834
MISCELLANEOUS FLOW	0.383	3.19422
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	1.792	14.94528
Miscellaneous Wastewater	0.383	3.19422
TOTAL FLOW	2.175	18.1395

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart F - Commodity Organic Chemicals	0.88
Subpart G - Bulk Organic Chemicals	0.12

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	30	26.4
Subpart G - Bulk Organic Chemicals	0.12	34	4.08
		TOTAL	30.48
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	80	70.4
Subpart G - Bulk Organic Chemicals	0.12	92	11.04
		TOTAL	81.44
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	46	40.48
Subpart G - Bulk Organic Chemicals	0.12	49	5.88
		TOTAL	46.36

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	149	131.12
Subpart G - Bulk Organic Chemicals	0.12	159	19.08
		TOTAL	150.2

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Utility Wastewater	0	0	0	0	
Miscellaneous Wastewater	0	0	0.5	0.5	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	14.945	30.48	81.44	455.53	1217.1
		TOTAL		455.53	1217.1
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	14.945	46.36	150.2	692.86	2244.8
Miscellaneous Wastewater	3.1942	23.18	75.1	74.042	239.89
		TOTAL		766.91	2484.7

PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	456	1217		
TSS	00530	767	2485		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation (ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	14.945	94	232	1.4	3.47
Benzene	34030	14.945	57	134	0.85	2
Carbon Tetrachloride	32102	14.945	142	380	2.12	5.68
Chlorobenzene	34301	14.945	142	380	2.12	5.68
Chloroethane	34311	14.945	110	295	1.64	4 41
Chloroform	32106	14.945	111	325	1.66	4.86
1,1-Dichloroethane	34496	14.945	22	59	0.33	0.88
1,2-Dichloroethane	34531	14.945	180	574	2.69	8.58
1,1-Dichloroethylene	34501	14.945	22	60	0.33	0.9
1,2-Dichloropropane	34541	14.945	196	794	2.93	11.87
1,3-Dichloropropylene	34561	14.945	196	794	2.93	11.87
Ethylbenzene	34371	14.945	142	380	2.12	5.68
Methyl Chloride	34418	14.945	110	295	1.64	4.41
Methylene Chloride	34423	14.945	36	170	0.54	2.54
Tetrachloroethylene	34475	14.945	52	164	0.78	2.45
Toluene	34010	14.945	28	74	0.42	1.11
1,2-trans-Dichloroethylene	34546	14.945	25	66	0.37	0.99
1,1,1-Trichloroethane	34506	14 945	22	59	0.33	0.88
1,1,2-Trichloroethane	34511	14 945	32	127	0.48	1.9
Trichloroethylene	39180	14.945	26	69	0.39	1 03
Vinyl Chloride	39175	14.945	97	172	1.45	2.57
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	14.945	19	47	0.28	0.7
4,6-Dinitro-o-Cresol	34657	14.945	78	277	1.17	4.14
2,4-Dinitrophenol	34616	14.945	1207	4291	18.04	64.13
2-Nitrophenol	34591	14.945	65	231	0.97	3.45
4-Nitrophenol	34646	14.945	162	576	2.42	8.61
Phenol	34694	14 945	19	47	0.28	0 7

BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	14.945	19	47	0.28	0.7
Acenaphthylene	34200	14.945	19	47	0.28	0.7
Anthracene	34220	14.945	19	47	0.28	0.7
Benzo(a)anthracene	34526	14 945	19	47	0.28	0.7
Benzo(a)pyrene	34247	14.945	20	48	0.3	0.72
3,4-Benzofluoranthene	34230	14.945	20	48	0.3	0.72
Benzo(k)fluoranthene	34242	14.945	19	47	0.28	0.7
Bis(2-Ethylhexyl)Phthalate	39100	14.945	95	258	1.42	3.86
Chrysene	34320	14.945	19	47	0.28	0.7
1,2-Dichlorobenzene	34536	14.945	196	794	2 93	11.87
1,3-Dichlorobenzene	34566	14.945	142	380	2.12	5.68
1,4-Dichlorobenzene	34571	14.945	142	380	2.12	5.68
Diethyl Phthalate	34336	14.945	46	113	0.69	1.69
Dimethyl Phthalate	34341	14.945	19	47	0.28	0.7
Di-n-Butyl Phthalate	39110	14.945	20	43	0 3	0.64
Fluoranthene	34376	14.945	22	54	0.33	0.81
Fluorene	34381	14.945	19	47	0.28	0.7
Hexachlorobenzene	39700	14.945	196	794	2.93	11.87
Hexachlorobutadiene	34391	14.945	142	380	2.12	5.68
Hexachloroethane	34396	14.945	196	794	2.93	11.87
Naphthalene	34696	14.945	19	47	0.28	0.7
Nitrobenzene	34447	14.945	2237	6402	33.43	95.68
Phenanthrene	34461	14.945	19	47	0 28	0.7
Pyrene	34469	14.945	20	48	0.3	0.72
1,2,4-Trichlorobenzene	34551	14.945	196	794	2.93	11.87

APPENDIX F OUTFALL 531 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
HCL Scrubber Effluent	2.26	18.8464
HCL Scrubber Effluent	0.504	4.20336
Maintenance Water	0.06	0.5004
OCPSF FLOW	2.824	23.55216
MISCELLANEOUS WASTEWATER		
Once Through Cooling River	7.74	64.5516
MISCELLANEOUS FLOW	7.74	64.5516
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	2.824	23.55216
Miscellaneous Wastewater	7.74	64.5516
TOTAL FLOW	10 564	88.10376

OCPSF SUBPART INFORMATION FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart F - Commodity Organic Chemicals	0.88
Subpart G - Bulk Organic Chemicals	0.12

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Cc nmodity Organic Chemicals	0.88	30	26.4
Subpart G - Bulk Organic Chemicals	0.12	34	4.08
		TOTAL	30.48
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	80	70.4
Subpart G - Bulk Organic Chemicals	0.12	92	11.04
		TOTAL	81.44

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	46	40.48
Subpart G - Bulk Organic Chemicals	0.12	49	5.88
		TOTAL	46.36
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	0.88	149	131.12
Subpart G - Bulk Organic Chemicals	0.12	159	19.08
		TOTAL	150.2

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Once Through River Water	0	0	0.5	0.5	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	23.552	30.48	81.44	717.87	1918.1
Once Through River Water	129.7	0	0	0	0
		TOTAL		718	1918.1

CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	23.552	46.36	150.2	1091.9	3537.5
Once Through River Water	129.7	42	42	5447.4	5447.4
		TOTAL		6539.3	8984.9
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	718	1918		
TSS	00530	6539	8985		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAG	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
Acrylonitrile	34215	14.27	94	232	1.34	3.31
Benzene	34030	14.27	57	134	0.81	1.91
Carbon Tetrachloride	32102	14.27	142	380	2.03	5.42
Chlorobenzene	34301	14.27	142	380	2.03	5.42
Chloroethane	34311	14.27	110	295	1.57	4.21
Chloroform	32106	14 27	111	325	1.58	4.64
1,1-Dichloroethane	34496	14.27	22	59	0.31	0.84
1,2-Dichloroethane	34531	14.27	180	574	2.57	8.19
1,1-Dichloroethylene	34501	14.27	22	60	0.31	0.86
1,2-Dichloropropane	34541	14.27	196	794	2.8	11.33
1,3-Dichloropropylene	34561	14 27	196	794	2.8	11.33
Ethylbenzene	34371	14 27	142	380	2 03	5.42
Methyl Chloride	34418	14.27	110	295	1.57	4.21
Methylene Chloride	34423	14.27	36	170	0.51	2 43
Tetrachloroethylene	34475	14.27	52	164	0.74	2.34
Toluene	34010	14.27	28	74	0.4	1.06
1,2-trans-Dichloroethylene	34546	14 27	25	66	0.36	0 94
1,1,1-Trichloroethane	34506	14.27	22	59	0.31	0.84
1,1,2-Trichloroethane	34511	14.27	32	127	0.46	1.81
Trichloroethylene	39180	14.27	26	69	0.37	0.98
Vinyl Chloride	39175	14.27	97	172	1.38	2 45
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	14.27	19	47	0.27	0.67
4,6-Dinitro-o-Cresol	34657	14.27	78	277	1.11	3.95
2,4-Dinitrophenol	34616	14.27	1207	4291	17.22	61.23
2-Nitrophenol	34591	14.27	65	231	0.93	3.3
4-Nitrophenol	34646	14.27	162	576	2.31	8.22
Phenol	34694	14.27	19	47	0.27	0.67
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	14.27	19	47	0 27	0.67
Acenaphthylene	34200	14.27	19	47	0.27	0.67
Anthracene	34220	14.27	19	47	0.27	0.67
Benzo(a)anthracene	34526	14 27	19	47	0.27	0.67
Benzo(a)pyrene	34247	14.27	20	48	0.29	0.68
3,4-Benzofluoranthene	34230	14.27	20	48	0.29	0.68
Benzo(k)fluoranthene	34242	14 27	19	47	0.27	0.67

Bis(2-Ethylhexyl)Phthalate	39100	14.27	95	258	1.36	3.68
Chrysene	34320	14.27	19	47	0.27	0.67
1,2-Dichlorobenzene	34536	14.27	196	794	2.8	11.33
1,3-Dichlorobenzene	34566	14.27	142	380	2.03	5.42
1,4-Dichlorobenzene	34571	14.27	142	380	2.03	5.42
Diethyl Phthalate	34336	14.27	46	113	0.66	1.61
Dimethyl Phthalate	34341	14.27	19	47	0.27	0.67
Di-n-Butyl Phthalate	39110	14.27	20	43	0.29	0.61
Fluoranthene	34376	14.27	22	54	0.31	0.77
Fluorene	34381	14.27	19	47	0.27	0.67
Hexachlorobenzene	39700	14.27	196	794	2.8	11.33
Hexachlorobutadiene	34391	14.27	142	380	2.03	5.42
Hexachloroethane	34396	14.27	196	794	2.8	11.33
Naphthalene	34696	14.27	19	47	0.27	0.67
Nitrobenzene	34447	14.27	2237	6402	31.92	91.35
Phenanthrene	34461	14.27	19	47	0.27	0.67
Pyrene	34469	14.27	20	48	0.29	0.68
1,2,4-Trichlorobenzene	34551	14.27	196	794	2.8	11.33

APPENDIX G OUTFALL 741 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Maintenance Streams	0.3	2.502
Process Area Contact Stormwater	0.3	2.502
Pumps Seal Purges	2	16.68
Plant Wash Down	0.17	1.4178
OCPSF FLOW	2.77	23.1018
MISCELLANEOUS WASTEWATER		
Condensate	0.22	1.8348
MISCELLANEOUS FLOW	0.22	1.8348
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	2.77	23.1018
Miscellaneous Wastewater	0.22	1.8348
TOTAL FLOW	2.99	24.9366

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart F - Commodity Organic Chemicals	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	1	30	30
		TOTAL	30
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	1	80	80
		TOTAL	80

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	1	46	46
		TOTAL	46
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	1	149	149
		TOTAL	149

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5			
	MONTHLY	DAILY			
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM			
Miscellaneous Wastewater	0.5	0 5			
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	23.102	30	80	693.05	1848.1
Miscellaneous Wastewater	1.8348	15	40	27.522	73.392
		TOTAL		720.58	1921.5

CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	23.102	46	149	1062.7	3442.2
		TOTAL		1062.7	3442.2
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	721	1922		
TSS	00530	1063	3442		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
Acrylonitrile	34215	23.102	94	232	2.17	5.36
Benzene	34030	23.102	57	134	1.32	3.1
Carbon Tetrachloride	32102	23.102	142	380	3.28	8.78
Chlorobenzene	34301	23.102	142	380	3.28	8.78
Chloroethane	34311	23.102	110	295	2.54	6.82
Chloroform	32106	23.102	111	325	2.56	7.51
1,1-Dichloroethane	34496	23.102	22	59	0.51	1.36
1,2-Dichloroethane	34531	23.102	180	574	4.16	13.26
1,1-Dichloroethylene	34501	23.102	22	60	0.51	1.39
1,2-Dichloropropane	34541	23.102	196	794	4.53	18.34
1,3-Dichloropropylene	34561	23.102	196	794	4.53	18.34
Ethylbenzene	34371	23.102	142	380	3.28	8.78
Methyl Chloride	34418	23.102	110	295	2.54	6.82
Methylene Chloride	34423	23.102	36	170	0.83	3.93
Tetrachloroethylene	34475	23.102	52	164	1.2	3.79
Toluene	34010	23.102	28	74	0.65	1.71
1,2-trans-Dichloroethylene	34546	23.102	25	66	0.58	1.52
1,1,1-Trichloroethane	34506	23.102	22	59	0.51	1.36

1,1,2-Trichloroethane	34511	23.102	32	127	0.74	2.93
Trichloroethylene	39180	23.102	26	69	0.6	1.59
Vinyl Chloride	39175	23.102	97	172	2.24	3.97
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	23.102	19	47	0.44	1.09
4,6-Dinitro-o-Cresol	34657	23.102	78	277	1.8	6.4
2,4-Dinitrophenol	34616	23.102	1207	4291	27.88	99.13
2-Nitrophenol	34591	23.102	65	231	1.5	5.34
4-Nitrophenol	34646	23.102	162	576	3.74	13.31
Phenol	34694	23.102	19	47	0.44	1.09
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	23.102	19	47	0.44	1.09
Acenaphthylene	34200	23.102	19	47	0.44	1.09
Anthracene	34220	23.102	19	47	0.44	1.09
Benzo(a)anthracene	34526	23.102	19	47	0.44	1.09
Benzo(a)pyrene	34247	23.102	20	48	0.46	1.11
3,4-Benzofluoranthene	34230	23.102	20	48	0.46	1.11
Benzo(k)fluoranthene	34242	23.102	19	47	0.44	1.09
Bis(2-Ethylhexyl)Phthalate	39100	23.102	95	258	2.19	5.96
Chrysene	34320	23.102	19	47	0.44	1.09
1,2-Dichlorobenzene	34536	23.102	196	794	4.53	18.34
1,3-Dichlorobenzene	34566	23.102	142	380	3.28	8.78
1,4-Dichlorobenzene	34571	23.102	142	380	3.28	8.78
Diethyl Phthalate	34336	23.102	46	113	1.06	2.61
Dimethyl Phthalate	34341	23.102	19	47	0.44	1.09
Di-n-Butyl Phthalate	39110	23.102	20	43	0.46	0.99
Fluoranthene	34376	23.102	22	54	0.51	1.25
Fluorene	34381	23.102	19	47	0.44	1.09
Hexachlorobenzene	39700	23.102	196	794	4.53	18.34
Hexachlorobutadiene	34391	23.102	142	380	3.28	8.78
Hexachloroethane	34396	23.102	196	794	4.53	18.34
Naphthalene	34696	23.102	19	47	0.44	1.09
Nitrobenzene	34447	23.102	2237	6402	51.68	147.9
Phenanthrene	34461	23.102	19	47	0.44	1.09
Pyrene	34469	23.102	20	48	0.46	1.11
1,2,4-Trichlorobenzene	34551	23.102	196	794	4.53	18.34

APPENDIX H OUTFALL 911 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Purification Process	0.726	6.05484
Extrusion	0.077	0.64218
Catalyst	0.029	0.24186
Process Stormwater	0.032	0.26688
Plant Washdown	0.129	1.07586
OCPSF FLOW	0.993	8.28162
MISCELLANEOUS WASTEWATER		
Vector Once Through Cooling	0.432	3.60288
MISCELLANEOUS FLOW	0.432	3.60288
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.993	8.28162
Miscellaneous Wastewater	0.432	3.60288
TOTAL FLOW	1.425	11.8845

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Miscellaneous Wastewater	0	0	0	0	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	8.2816	24	64	198.76	530.02
Miscellaneous Wastewater	3.6029	0	0	0	0
		TOTAL		198.76	530.02
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	8.2816	40	130	331.26	1076.6
Miscellaneous Wastewater	3.6029	0	0	0	0
		TOTAL		331.26	1076.6

PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	199	530		
TSS	00530	331	1077		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	8.2816	94	232	0.78	1.92
Benzene	34030	8.2816	57	134	0.47	1.11
Carbon Tetrachloride	32102	8.2816	142	380	1.18	3.15
Chlorobenzene	34301	8.2816	142	380	1.18	3.15
Chloroethane	34311	8.2816	110	295	0.91	2.44
Chloroform	32106	8 2816	111	325	0.92	2.69
1,1-Dichloroethane	34496	8.2816	22	59	0.18	0.49
1,2-Dichloroethane	34531	8.2816	180	574	1.49	4.75
1,1-Dichloroethylene	34501	8.2816	22	60	0.18	0.5
1,2-Dichloropropane	34541	8.2816	196	794	1.62	6.58
1,3-Dichloropropylene	34561	8.2816	196	794	1.62	6.58
Ethylbenzene	34371	8.2816	142	380	1.18	3.15
Methyl Chloride	34418	8.2816	110	295	0.91	2.44
Methylene Chloride	34423	8.2816	36	170	0.3	1.41
Tetrachloroethylene	34475	8.2816	52	164	0.43	1.36
Toluene	34010	8.2816	28	74	0.23	0.61
1,2-trans-Dichloroethylene	34546	8.2816	25	66	0.21	0.55
1,1,1-Trichloroethane	34506	8 2816	22	59	0.18	0.49
1,1,2-Trichloroethane	34511	8.2816	32	127	0.27	1.05
Trichloroethylene	39180	8.2816	26	69	0.22	0.57
Vinyl Chloride	39175	8.2816	97	172	0.8	1.42
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	8.2816	19	47	0.16	0.39
4,6-Dinitro-o-Cresol	34657	8.2816	78	277	0.65	2.29
2,4-Dinitrophenol	34616	8 2816	1207	4291	10	35.54
2-Nitrophenol	34591	8.2816	65	231	0.54	1.91
4-Nitrophenol	34646	8.2816	162	576	1.34	4.77
Phenol	34694	8.2816	19	47	0.16	0.39

BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	8.2816	19	47	0.16	0.39
Acenaphthylene	34200	8.2816	19	47	0.16	0.39
Anthracene	34220	8.2816	19	47	0.16	0.39
Benzo(a)anthracene	34526	8.2816	19	47	0.16	0.39
Benzo(a)pyrene	34247	8.2816	20	48	0.17	0.4
3,4-Benzofluoranthene	34230	8.2816	20	48	0.17	0.4
Benzo(k)fluoranthene	34242	8.2816	19	47	0.16	0.39
Bis(2-Ethylhexyl)Phthalate	39100	8.2816	95	258	0.79	2.14
Chrysene	34320	8.2816	19	47	0.16	0.39
1,2-Dichlorobenzene	34536	8.2816	196	794	1.62	6.58
1,3-Dichlorobenzene	34566	8.2816	142	380	1.18	3.15
1,4-Dichlorobenzene	34571	8.2816	142	380	1.18	3.15
Diethyl Phthalate	34336	8.2816	46	113	0.38	0.94
Dimethyl Phthalate	34341	8.2816	19	47	0.16	0.39
Di-n-Butyl Phthalate	39110	8.2816	20	43	0.17	0.36
Fluoranthene	34376	8.2816	22	54	0.18	0.45
Fluorene	34381	8.2816	19	47	0.16	0.39
Hexachlorobenzene	39700	8.2816	196	794	1.62	6.58
Hexachlorobutadiene	34391	8.2816	142	380	1.18	3.15
Hexachloroethane	34396	8 2816	196	794	1.62	6.58
Naphthalene	34696	8 2816	19	47	0.16	0.39
Nitrobenzene	34447	8.2816	2237	6402	18.53	53.02
Phenanthrene	34461	8.2816	19	47	0.16	0.39
Pyrene	34469	8.2816	20	48	0.17	0.4
1,2,4-Trichlorobenzene	34551	8.2816	196	794	1.62	6.58

APPENDIX I OUTFALL 931 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Plant Washdown	0.07	0.57
Reactor Process Water	0.06	0.48
Process Area Contact Stormwater	0.03	0.22
OCPSF FLOW	0.15	1.26
MISCELLANEOUS WASTEWATER		
Cooling Tower Blowdown	0.62	5.15
Nonprocess Area Stormwater	0.04	0.29
MISCELLANEOUS FLOW	0.65	5.44
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.15	1.26
Miscellaneous Wastewater	0.65	5.44
TOTAL FLOW	0.80	6.70

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

CALCULATION OF BOD5 & TSS LIMITATIONS	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Miscellaneous Wastewater	0	0	0	0	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.2643	24	64	30.344	80.918
Miscellaneous Wastewater	5.4377	0	0	0	0
		TOTAL		30.344	80.918
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.2643	40	130	50.574	164.36
Miscellaneous Wastewater	5.4377	0	0	0	0
		TOTAL		50.574	164.36
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	30	81		
TSS	00530	51	164		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	1.2643	94	232	0.12	0.29
Benzene	34030	1.2643	57	134	0.07	0.17
Carbon Tetrachloride	32102	1.2643	142	380	0.18	0.48
Chlorobenzene	34301	1.2643	142	380	0.18	0.48
Chloroethane	34311	1.2643	110	295	0.14	0 37
Chloroform	32106	1.2643	111	325	0.14	0.41
1,1-Dichloroethane	34496	1.2643	22	59	0.03	0.07
1,2-Dichloroethane	34531	1.2643	180	574	0.23	0.73
1,1-Dichloroethylene	34501	1.2643	22	60	0.03	0.08
1,2-Dichloropropane	34541	1.2643	196	794	0.25	1
1,3-Dichloropropylene	34561	1.2643	196	794	0.25	1
Ethylbenzene	34371	1.2643	142	380	0.18	0.48
Methyl Chloride	34418	1.2643	110	295	0.14	0.37
Methylene Chloride	34423	1.2643	36	170	0.05	0.21
Tetrachloroethylene	34475	1.2643	52	164	0.07	0.21
Toluene	34010	1.2643	28	74	0.04	0.09
1,2-trans-Dichloroethylene	34546	1.2643	25	66	0.03	0.08
1,1,1-Trichloroethane	34506	1.2643	22	59	0.03	0.07
1,1,2-Trichloroethane	34511	1 2643	32	127	0.04	0.16
Trichloroethylene	39180	1.2643	26	69	0.03	0.09
Vinyl Chloride	39175	1.2643	97	172	0.12	0.22
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	1.2643	19	47	0.02	0.06
4,6-Dinitro-o-Cresol	34657	1.2643	78	277	0.1	0.35
2,4-Dinitrophenol	34616	1.2643	1207	4291	1.53	5.43
2-Nitrophenol	34591	1.2643	65	231	0.08	0.29
4-Nitrophenol	34646	1.2643	162	576	0.2	0.73
Phenol	34694	1.2643	19	47	0.02	0.06
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	1.2643	19	47	0.02	0.06
Acenaphthylene	34200	1.2643	19	47	0.02	0.06
Anthracene	34220	1.2643	19	47	0.02	0.06
Benzo(a)anthracene	34526	1.2643	19	47	0 02	0.06
Benzo(a)pyrene	34247	1.2643	20	48	0.03	0.06
3,4-Benzofluoranthene	34230	1.2643	20	48	0.03	0.06
Benzo(k)fluoranthene	34242	1.2643	19	47	0 02	0 06

Bis(2-Ethylhexyl)Phthalate	39100	1.2643	95	258	0.12	0.33
Chrysene	34320	1.2643	19	47	0.02	0.06
1,2-Dichlorobenzene	34536	1.2643	196	794	0.25	1
1,3-Dichlorobenzene	34566	1.2643	142	380	0.18	0.48
1,4-Dichlorobenzene	34571	1.2643	142	380	0.18	0.48
Diethyl Phthalate	34336	1.2643	46	113	0.06	0.14
Dimethyl Phthalate	34341	1.2643	19	47	0.02	0.06
Di-n-Butyl Phthalate	39110	1.2643	20	43	0.03	0.05
Fluoranthene	34376	1 2643	22	54	0.03	0.07
Fluorene	34381	1.2643	19	47	0.02	0.06
Hexachlorobenzene	39700	1.2643	196	794	0.25	1
Hexachlorobutadiene	34391	1.2643	142	380	0.18	0.48
Hexachloroethane	34396	1.2643	196	794	0.25	1
Naphthalene	34696	1.2643	19	47	0.02	0.06
Nitrobenzene	34447	1.2643	2237	6402	2.83	8.09
Phenanthrene	34461	1.2643	19	47	0.02	0.06
Pyrene	34469	1.2643	20	48	0 03	0.06
1,2,4-Trichlorobenzene	34551	1.2643	196	794	0.25	1

APPENDIX J OUTFALL 1031 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Plant Washdown	0.0024	0.020016
Process Area Contact Stormwater	0.041	0.34194
Process Wastewater	0.023	0.19182
OCPSF FLOW	0.0664	0.553776
MISCELLANEOUS WASTEWATER		
Noncontact Cooling Water	2.065	17.2221
MISCELLANEOUS FLOW	2.065	17.2221
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.0664	0.553776
Miscellaneous Wastewater	2.065	17.2221
TOTAL FLOW	2.1314	17.775876

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

BOD AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	0.5538	94	232	0.05	0.13
Benzene	34030	0.5538	57	134	0.03	0.07
Carbon Tetrachloride	32102	0.5538	142	380	0.08	0.21
Chlorobenzene	34301	0.5538	142	380	0.08	0.21
Chloroethane	34311	0.5538	110	295	0.06	0.16
Chloroform	32106	0.5538	111	325	0.06	0.18
1,1-Dichloroethane	34496	0.5538	22	59	0.01	0.03
1,2-Dichloroethane	34531	0.5538	180	574	0.1	0.32
1,1-Dichloroethylene	34501	0.5538	22	60	0.01	0.03
1,2-Dichloropropane	34541	0.5538	196	794	0.11	0.44
1,3-Dichloropropylene	34561	0.5538	196	794	0.11	0.44
Ethylbenzene	34371	0.5538	142	380	0.08	0.21
Methyl Chloride	34418	0.5538	110	295	0.06	0.16
Methylene Chloride	34423	0.5538	36	170	0.02	0.09
Tetrachloroethylene	34475	0.5538	52	164	0.03	0.09
Toluene	34010	0.5538	28	74	0.02	0.04
1,2-trans-Dichloroethylene	34546	0.5538	25	66	0.01	0.04
1,1,1-Trichloroethane	34506	0.5538	22	59	0.01	0.03
1,1,2-Trichloroethane	34511	0.5538	32	127	0.02	0.07
Trichloroethylene	39180	0.5538	26	69	0.01	0.04
Vinyl Chloride	39175	0.5538	97	172	0.05	0.1
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	0.5538	19	47	0.01	0.03
4,6-Dinitro-o-Cresol	34657	0.5538	78	277	0.04	0.15
2,4-Dinitrophenol	34616	0.5538	1207	4291	0.67	2.38
2-Nitrophenol	34591	0.5538	65	231	0.04	0.13
4-Nitrophenol	34646	0.5538	162	576	0.09	0.32
Phenol	34694	0.5538	19	47	0.01	0.03
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	0.5538	19	47	0.01	0.03
Acenaphthylene	34200	0.5538	19	47	0.01	0.03
Anthracene	34220	0.5538	19	47	0.01	0.03
Benzo(a)anthracene	34526	0.5538	19	47	0.01	0.03
Benzo(a)pyrene	34247	0.5538	20	48	0.01	0.03
3,4-Benzofluoranthene	34230	0.5538	20	48	0.01	0.03
Benzo(k)fluoranthene	34242	0.5538	19	47	0.01	0.03

Bis(2-Ethylhexyl)Phthalate	39100	0.5538	95	258	0.05	0 14
Chrysene	34320	0.5538	19	47	0 01	0 03
1,2-Dichlorobenzene	34536	0.5538	196	794	0.11	0.44
1,3-Dichlorobenzene	34566	0.5538	142	380	0.08	0 21
1,4-Dichlorobenzene	34571	0.5538	142	380	0.08	0 21
Diethyl Phthalate	34336	0.5538	46	113	0.03	0.06
Dimethyl Phthalate	34341	0 5538	19	47	0.01	0.03
Di-n-Butyl Phthalate	39110	0.5538	20	43	0.01	0.02
Fluoranthene	34376	0.5538	22	54	0.01	0 03
Fluorene	34381	0.5538	19	47	0.01	0.03
Hexachlorobenzene	39700	0.5538	196	794	0.11	0.44
Hexachlorobutadiene	34391	0.5538	142	380	0.08	0.21
Hexachloroethane	34396	0.5538	196	794	0.11	0.44
Naphthalene	34696	0.5538	19	47	0.01	0.03
Nitrobenzene	34447	0.5538	2237	6402	1.24	3.55
Phenanthrene	34461	0.5538	19	47	0.01	0.03
Pyrene	34469	0.5538	20	48	0.01	0.03
1,2,4-Trichlorobenzene	34551	0.5538	196	794	0.11	0.44

APPENDIX K OUTFALL 1041 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Plant Washdown	0.003	0.02502
Process Area Contact Stormwater	0.0094	0.078396
Process Wastewater	0.0034	0.028356
Maintenance Stream	0.0018	0.015012
Pellet Water Overflow	0.0004	0.003336
OCPSF FLOW	0.018	0.15012
MISCELLANEOUS WASTEWATER		
Condensed Steam	0.0027	0.022518
Noncontact Cooling	0.0504	0.420336
MISCELLANEOUS FLOW	0.0531	0.442854
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.018	0.15012
Miscellaneous Wastewater	0.0531	0.442854
TOTAL FLOW	0.0711	0.592974

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Miscellaneous Wastewater	0.25	0.25	0.25	0.25	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	0.1501	24	64	3.6029	9.6077
Miscellaneous Wastewater	0.4429	6	16	2.6571	7.0857
		TOTAL		6.26	16.693
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	0.1501	40	130	6.0048	19.516
Miscellaneous Wastewater	0.4429	10	32.5	4.4285	14.393
		TOTAL		10.433	33.908
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	6	17		
TSS	00530	10	34		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	0.1501	94	232	0.01	0.03
Benzene	34030	0.1501	57	134	0.01	0.02
Carbon Tetrachloride	32102	0.1501	142	380	0.02	0.06
Chlorobenzene	34301	0.1501	142	380	0.02	0.06
Chloroethane	34311	0.1501	110	295	0.02	0.04
Chloroform	32106	0.1501	111	325	0.02	0.05
1,1-Dichloroethane	34496	0.1501	22	59	0.003	0.01
1,2-Dichloroethane	34531	0.1501	180	574	0.03	0.09
1,1-Dichloroethylene	34501	0.1501	22	60	0.003	0.01
1,2-Dichloropropane	34541	0.1501	196	794	0.03	0.12
1,3-Dichloropropylene	34561	0.1501	196	794	0.03	0.12
Ethylbenzene	34371	0.1501	142	380	0.02	0.06
Methyl Chloride	34418	0.1501	110	295	0.02	0.04
Methylene Chloride	34423	0.1501	36	170	0.01	0.03
Tetrachloroethylene	34475	0.1501	52	164	0.01	0.02
Toluene	34010	0.1501	28	74	0.004	0.01
1,2-trans-Dichloroethylene	34546	0.1501	25	66	0.004	0.01
1,1,1-Trichloroethane	34506	0.1501	22	59	0.003	0.01
1,1,2-Trichloroethane	34511	0.1501	32	127	0.005	0.02
Trichloroethylene	39180	0.1501	26	69	0.004	0.01
Vinyl Chloride	39175	0.1501	97	172	0.01	0.03
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	0.1501	19	47	0.003	0.01
4,6-Dinitro-o-Cresol	34657	0.1501	78	277	0.01	0.04
2,4-Dinitrophenol	34616	0.1501	1207	4291	0.18	0.64
2-Nitrophenol	34591	0.1501	65	231	0.01	0.03
4-Nitrophenol	34646	0.1501	162	576	0.02	0.09
Phenol	34694	0.1501	19	47	0.003	0.01
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	0.1501	19	47	0.003	0.01
Acenaphthylene	34200	0.1501	19	47	0.003	0.01
Anthracene	34220	0.1501	19	47	0.003	0.01
Benzo(a)anthracene	34526	0.1501	19	47	0.003	0.01

Benzo(a)pyrene	34247	0.1501	20	48	0.003	0.01
3,4-Benzofluoranthene	34230	0.1501	20	48	0.003	0.01
Benzo(k)fluoranthene	34242	0.1501	19	47	0.003	0.01
Bis(2-Ethylhexyl)Phthalate	39100	0.1501	95	258	0.01	0.04
Chrysene	34320	0.1501	19	47	0.003	0.01
1,2-Dichlorobenzene	34536	0.1501	196	794	0.03	0.12
1,3-Dichlorobenzene	34566	0.1501	142	380	0.02	0.06
1,4-Dichlorobenzene	34571	0.1501	142	380	0.02	0.06
Diethyl Phthalate	34336	0.1501	46	113	0.01	0.02
Dimethyl Phthalate	34341	0.1501	19	47	0.003	0.01
Di-n-Butyl Phthalate	39110	0.1501	20	43	0.003	0.01
Fluoranthene	34376	0.1501	22	54	0.003	0.01
Fluorene	34381	0.1501	19	47	0.003	0.01
Hexachlorobenzene	39700	0.1501	196	794	0.03	0.12
Hexachlorobutadiene	34391	0.1501	142	380	0.02	0.06
Hexachloroethane	34396	0.1501	196	794	0.03	0.12
Naphthalene	34696	0.1501	19	47	0.003	0.01
Nitrobenzene	34447	0.1501	2237	6402	0.34	0.96
Phenanthrene	34461	0.1501	19	47	0.003	0.01
Pyrene	34469	0.1501	20	48	0.003	0.01
1,2,4-Trichlorobenzene	34551	0.1501	196	794	0.03	0.12

APPENDIX L OUTFALL 1051 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Process Area Reaction Water	0.0736	0.613824
Process Area Contact Stormwater	0.0413	0.344442
Maintenance Streams	0.0053	0.044202
Steam Condensate	0.0107	0.089238
Pellet Cooling Water Overflow	0.0007	0.005838
Plant Washdown	0.0015	0.01251
OCPSF FLOW	0.1331	1.110054
MISCELLANEOUS WASTEWATER		
Noncontact Cooling	0.0504	0.420336
Boiler Blowdown	0.0002	0.001668
MISCELLANEOUS FLOW	0.0506	0.422004
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.1331	1.110054
Miscellaneous Wastewater	0.0506	0.422004
TOTAL FLOW	0 1837	1.532058

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
		TOTAL	24
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	64	64
		TOTAL	64
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	40	40
		TOTAL	40
	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	MAXIMUM	MAXIMUM
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	130	130
		TOTAL	130

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Miscellaneous Wastewater	0.25	0.25	0.25	0.25	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.1101	24	64	26.641	71.043
Miscellaneous Wastewater	0.422	6	16	2.532	6.7521
		TOTAL		29.173	77.796
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.1101	40	130	44.402	144.31
Miscellaneous Wastewater	0.422	10	32.5	4.22	13.715
		TOTAL		48.622	158.02
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	29	78		
TSS	00530	49	158		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	1.1101	94	232	0.1	0.26
Benzene	34030	1.1101	57	134	0.06	0.15
Carbon Tetrachloride	32102	1.1101	142	380	0.16	0.42
Chlorobenzene	34301	1.1101	142	380	0.16	0.42
Chloroethane	34311	1.1101	110	295	0.12	0.33
Chloroform	32106	1.1101	111	325	0.12	0.36
1,1-Dichloroethane	34496	1.1101	22	59	0.02	0.07
1,2-Dichloroethane	34531	1.1101	180	574	0.2	0.64
1,1-Dichloroethylene	34501	1.1101	22	60	0.02	0.07
1,2-Dichloropropane	34541	1.1101	196	794	0.22	0.88
1,3-Dichloropropylene	34561	1.1101	196	794	0.22	0.88
Ethylbenzene	34371	1.1101	142	380	0.16	0.42
Methyl Chloride	34418	1.1101	110	295	0.12	0.33
Methylene Chloride	34423	1.1101	36	170	0.04	0.19
Tetrachloroethylene	34475	1.1101	52	164	0.06	0.18
Toluene	34010	1.1101	28	74	0.03	0.08
1,2-trans-Dichloroethylene	34546	1.1101	25	66	0.03	0.07
1,1,1-Trichloroethane	34506	1.1101	22	59	0.02	0.07
1,1,2-Trichloroethane	34511	1.1101	32	127	0.04	0.14
Trichloroethylene	39180	1.1101	26	69	0.03	0.08
Vinyl Chloride	39175	1.1101	97	172	0.11	0.19
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	1.1101	19	47	0.02	0.05
4,6-Dinitro-o-Cresol	34657	1.1101	78	277	0.09	0.31
2,4-Dinitrophenol	34616	1.1101	1207	4291	1.34	4.76
2-Nitrophenol	34591	1.1101	65	231	0.07	0.26
4-Nitrophenol	34646	1.1101	162	576	0.18	0.64
Phenol	34694	1.1101	19	47	0.02	0.05
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	1.1101	19	47	0.02	0.05
Acenaphthylene	34200	1.1101	19	47	0.02	0.05
Anthracene	34220	1.1101	19	47	0.02	0.05
Benzo(a)anthracene	34526	1.1101	19	47	0.02	0.05

Benzo(a)pyrene	34247	1.1101	20	48	0.02	0.05
3,4-Benzofluoranthene	34230	1.1101	20	48	0.02	0.05
Benzo(k)fluoranthene	34242	1.1101	19	47	0.02	0.05
Bis(2-Ethylhexyl)Phthalate	39100	1.1101	95	258	0.11	0.29
Chrysene	34320	1.1101	19	47	0.02	0.05
1,2-Dichlorobenzene	34536	1.1101	196	794	0.22	0.88
1,3-Dichlorobenzene	34566	1.1101	142	380	0.16	0.42
1,4-Dichlorobenzene	34571	1.1101	142	380	0.16	0.42
Diethyl Phthalate	34336	1.1101	46	113	0.05	0.13
Dimethyl Phthalate	34341	1.1101	19	47	0.02	0.05
Di-n-Butyl Phthalate	39110	1.1101	20	43	0.02	0.05
Fluoranthene	34376	1.1101	22	54	0.02	0.06
Fluorene	34381	1.1101	19	47	0.02	0.05
Hexachlorobenzene	39700	1.1101	196	794	0.22	0.88
Hexachlorobutadiene	34391	1.1101	142	380	0.16	0.42
Hexachloroethane	34396	1.1101	196	794	0.22	0.88
Naphthalene	34696	1.1101	19	47	0.02	0.05
Nitrobenzene	34447	1.1101	2237	6402	2.48	7.11
Phenanthrene	34461	1.1101	19	47	0.02	0.05
Pyrene	34469	1.1101	20	48	0.02	0.05
1,2,4-Trichlorobenzene	34551	1.1101	196	794	0.22	0.88

APPENDIX M OUTFALL 1521 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Thermal Treatment Unit	0.19	1.5846
Maintenance Water	0.04	0.3336
Process Area Contact Stormwater	0.44	3.6696
OCPSF FLOW	0.67	5.5878
UTILITY WASTEWATER		
Cooling Tower Blowdown	0.03	0.2502
UTILITY FLOW	0.03	0.2502
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.67	5.5878
Utility Wastewater	0.03	0.2502
TOTAL FLOW	0.7	5.838

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart G - Bulk Organic Chemicals	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart G - Bulk Organic Chemicals	1	34	34
BOD5 MAXIMUM			
Subpart G - Bulk Organic Chemicals	1	92	92
TSS AVERAGE			
Subpart G - Bulk Organic Chemicals	1	49	49
TSS MAXIMUM			
Subpart G - Bulk Organic Chemicals	1	159	159

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Utility Wastewater	0.5	0.5	0.5	0.5	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	5.5878	34	92	189.99	514.08
Utility Wastewater	0.2502	17	46	4.2534	11.509
		TOTAL	====>	194.24	525.59

CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	5.5878	49	159	273.8	888.46
Utility Wastewater	0.2502	24.5	79.5	6.1299	19.891
		TOTAL		279.93	908.35
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	194	526		
TSS	00530	280	908		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	5.5878	94	232	0.53	1.3
Benzene	34030	5.5878	57	134	0.32	0.75
Carbon Tetrachloride	32102	5.5878	142	380	0.79	2.12
Chlorobenzene	34301	5.5878	142	380	0.79	2.12
Chloroethane	34311	5.5878	110	295	0.61	1.65
Chloroform	32106	5.5878	111	325	0.62	1.82
1,1-Dichloroethane	34496	5.5878	22	59	0.12	0.33
1,2-Dichloroethane	34531	5.5878	180	574	1.01	3.21
1,1-Dichloroethylene	34501	5.5878	22	60	0.12	0.34
1,2-Dichloropropane	34541	5.5878	196	794	1.1	4.44
1,3-Dichloropropylene	34561	5.5878	196	794	1.1	4.44
Ethylbenzene	34371	5.5878	142	380	0.79	2.12
Methyl Chloride	34418	5.5878	110	295	0.61	1.65
Methylene Chloride	34423	5.5878	36	170	0.2	0.95
Tetrachloroethylene	34475	5.5878	52	164	0.29	0.92
Toluene	34010	5.5878	28	74	0.16	0.41

1,2-trans-Dichloroethylene	34546	5.5878	25	66	0.14	0.37
1,1,1-Trichloroethane	34506	5.5878	22	59	0.12	0.33
1,1,2-Trichloroethane	34511	5.5878	32	127	0.18	0.71
Trichloroethylene	39180	5.5878	26	69	0.15	0.39
Vinyl Chloride	39175	5.5878	97	172	0.54	0.96
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	5.5878	19	47	0.11	0.26
4,6-Dinitro-o-Cresol	34657	5.5878	78	277	0.44	1.55
2,4-Dinitrophenol	34616	5.5878	1207	4291	6.74	23.98
2-Nitrophenol	34591	5.5878	65	231	0.36	1.29
4-Nitrophenol	34646	5.5878	162	576	0.91	3.22
Phenol	34694	5.5878	19	47	0.11	0.26
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	5.5878	19	47	0.11	0.26
Acenaphthylene	34200	5.5878	19	47	0.11	0.26
Anthracene	34220	5.5878	19	47	0.11	0.26
Benzo(a)anthracene	34526	5.5878	19	47	0.11	0.26
Benzo(a)pyrene	34247	5.5878	20	48	0.11	0.27
3,4-Benzofluoranthene	34230	5.5878	20	48	0.11	0.27
Benzo(k)fluoranthene	34242	5.5878	19	47	0.11	0.26
Bis(2-Ethylhexyl)Phthalate	39100	5.5878	95	258	0.53	1.44
Chrysene	34320	5.5878	19	47	0.11	0.26
1,2-Dichlorobenzene	34536	5.5878	196	794	1.1	4.44
1,3-Dichlorobenzene	34566	5.5878	142	380	0.79	2.12
1,4-Dichlorobenzene	34571	5.5878	142	380	0.79	2.12
Diethyl Phthalate	34336	5.5878	46	113	0.26	0.63
Dimethyl Phthalate	34341	5.5878	19	47	0.11	0.26
Di-n-Butyl Phthalate	39110	5.5878	20	43	0.11	0.24
Fluoranthene	34376	5.5878	22	54	0.12	0.3
Fluorene	34381	5.5878	19	47	0.11	0.26
Hexachlorobenzene	39700	5.5878	196	794	1.1	4.44
Hexachlorobutadiene	34391	5.5878	142	380	0.79	2.12
Hexachloroethane	34396	5.5878	196	794	1.1	4.44
Naphthalene	34696	5.5878	19	47	0.11	0.26
Nitrobenzene	34447	5.5878	2237	6402	12.5	35.77
Phenanthrene	34461	5.5878	19	47	0.11	0.26
Pyrene	34469	5.5878	20	48	0.11	0.27
1,2,4-Trichlorobenzene	34551	5.5878	196	794	1.1	4.44

APPENDIX N OUTFALL 1531 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Spent Acid Treatment	0.08	0.6672
OCPSF FLOW	0.08	0.6672

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart G - Bulk Organic Chemicals	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart G - Bulk Organic Chemicals	1	34	34
BOD5 MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart G - Bulk Organic Chemicals	1	92	92
TSS AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart G - Bulk Organic Chemicals	1	49	49
TSS MAXIMUM	PRODUCT	(mg/L)	(mg/L)
Subpart G - Bulk Organic Chemicals	1	159	159

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	0.6672	34	92	22.685	61.382
		TOTAL		22.685	61.382
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	0.6672	49	159	32.693	106.08
		TOTAL		32.693	106.08
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	23	61		
TSS	00530	33	106		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	UG/L	UG/L	LB/DAY	LB/DAY
Acrylonitrile	34215	0.6672	94	232	0.06	0.15
Benzene	34030	0.6672	57	134	0.04	0.09
Carbon Tetrachloride	32102	0.6672	142	380	0.09	0.25

Chlorobenzene	34301	0.6672	142	380	0.09	0.25
Chloroethane	34311	0.6672	110	295	0.07	0.2
Chloroform	32106	0.6672	111	325	0.07	0.22
1,1-Dichloroethane	34496	0.6672	22	59	0.01	0.04
1,2-Dichloroethane	34531	0.6672	180	574	0.12	0.38
1,1-Dichloroethylene	34501	0.6672	22	60	0.01	0.04
1,2-Dichloropropane	34541	0.6672	196	794	0.13	0.53
1,3-Dichloropropylene	34561	0.6672	196	794	0.13	0.53
Ethylbenzene	34371	0.6672	142	380	0.09	0.25
Methyl Chloride	34418	0.6672	1660	4040	1.11	2.7
Methylene Chloride	34423	0.6672	36	170	0.02	0.11
Tetrachloroethylene	34475	0.6672	52	164	0.03	0.11
Toluene	34010	0.6672	28	74	0.02	0.05
1,2-trans-Dichloroethylene	34546	0.6672	25	66	0.02	0.04
1,1,1-Trichloroethane	34506	0.6672	22	59	0.01	0.04
1,1,2-Trichloroethane	34511	0.6672	32	127	0.02	0.08
Trichloroethylene	39180	0.6672	26	69	0.02	0.05
Vinyl Chloride	39175	0.6672	97	172	0.06	0.11
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	0 6672	19	47	0.01	0.03
4,6-Dinitro-o-Cresol	34657	0.6672	78	277	0.05	0.18
2,4-Dinitrophenol	34616	0.6672	1207	4291	0.81	2.86
2-Nitrophenol	34591	0.6672	65	231	0.04	0.15
4-Nitrophenol	34646	0.6672	162	576	0.11	0.38
Phenol	34694	0.6672	19	47	0.01	0.03
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	0.6672	19	47	0.01	0.03
Acenaphthylene	34200	0.6672	19	47	0.01	0.03
Anthracene	34220	0.6672	19	47	0.01	0.03
Benzo(a)anthracene	34526	0.6672	19	47	0.01	0.03
Benzo(a)pyrene	34247	0.6672	20	48	0.01	0.03
3,4-Benzofluoranthene	34230	0.6672	20	48	0.01	0.03
Benzo(k)fluoranthene	34242	0.6672	19	47	0.01	0.03
Bis(2-Ethylhexyl)Phthalate	39100	0.6672	95	258	0.06	0.17
Chrysene	34320	0.6672	19	47	0.01	0.03
1,2-Dichlorobenzene	34536	0.6672	196	794	0.13	0.53
1,3-Dichlorobenzene	34566	0.6672	142	380	0.09	0.25
1,4-Dichlorobenzene	34571	0.6672	142	380	0.09	0.25
Diethyl Phthalate	34336	0.6672	46	113	0.03	0.08
Dimethyl Phthalate	34341	0.6672	19	47	0.01	0.03

Di-n-Butyl Phthalate	39110	0.6672	20	43	0.01	0.03
Fluoranthene	34376	0.6672	22	54	0.01	0.04
Fluorene	34381	0.6672	19	47	0.01	0.03
Hexachlorobenzene	39700	0.6672	196	794	0.13	0.53
Hexachlorobutadiene	34391	0.6672	142	380	0.09	0.25
Hexachloroethane	34396	0.6672	196	794	0.13	0.53
Naphthalene	34696	0.6672	19	47	0.01	0.03
Nitrobenzene	34447	0.6672	2237	6402	1.49	4.27
Phenanthrene	34461	0.6672	19	47	0.01	0.03
Pyrene	34469	0.6672	20	48	0.01	0.03
1,2,4-Trichlorobenzene	34551	0.6672	196	794	0.13	0.53

APPENDIX N-1 OUTFALL 1531 (FDF VARIANCE)

The following data was submitted by the permittee to set daily average limitations for Methyl Chloride at Outfall 1531. A non-parametric approach was used to derive the daily average and daily maximum from the data. The daily average limitation for methyl chloride is the 95th percentile of the data and the daily maximum is the 99th percentile of the data. The 95th percentile of the data set is 1.66 mg/L and the daily maximum is 4.04 mg/L. The data set contains effluent data from April 1998 through February 1999.

Date	Conc. (mg/L)	Date	Conc. (mg/L)	Date	Conc. (mg/L)
04/04/98	1.452	07/23/98	0.081	11/12/98	0.637
04/05/98	1.924	07/24/98	0.044	11/13/98	0.589
04/06/98	4.413	07/25/98	0.356	11/14/98	0.451
04/07/98	1.252	07/26/98	0.595	11/15/98	0.195
04/08/98	2.656	07/27/98	0.797	11/16/98	0.058
04/09/98	1.816	07/28/98	0.351	11/17/98	0.073
04/10/98	1.694	07/29/98	0.089	11/18/98	0.092
04/11/98	0.561	07/30/98	0.372	11/19/98	0.079
04/12/98	0.961	07/31/98	0.310	11/20/98	0.030
04/13/98	1.488	08/01/98	0.454	11/21/98	0.004
04/14/98	1.394	08/02/98	0.939	11/22/98	0.138
04/15/98	2.362	08/03/98	0.621	11/23/98	0.011
04/16/98	2.606	08/04/98	0.881	11/24/98	0.020
04/17/98	1.894	08/05/98	0.602	11/25/98	0.010
04/18/98	1.334	08/06/98	0.373	11/26/98	0.008
04/19/98	0.669	08/07/98	0.575	11/27/98	0.008
04/20/98	0.577	08/08/98	0.448	11/28/98	0.056
04/21/98	0.922	08/09/98	0.604	11/29/98	0.042
04/22/98	0.978	08/10/98	0.314	11/30/98	0.050
04/23/98	0.966	08/11/98	0.504	12/01/98	0.005
04/24/98	1.524	08/13/98	1.166	12/02/98	0.009
04/25/98	1.249	08/14/98	1.114	12/03/98	0.090
04/26/98	1.370	08/15/98	0.623	12/04/98	0.062
04/27/98	1.078	08/16/98	0.679	12/05/98	0.577
04/28/98	1.184	08/17/98	1.044	12/06/98	0.130
04/29/98	0.957	08/18/98	0.272	12/07/98	0.114
04/30/98	1.246	08/19/98	0.715	12/08/98	0.021
05/01/98	0.811	08/20/98	0.650	12/09/98	0.022
05/02/98	1.452	08/21/98	0.928	12/10/98	0.023
05/03/98	0.812	08/22/98	0.412	12/11/98	0.007
05/04/98	1.074	08/23/98	0.646	12/12/98	0.026
05/05/98	0.773	08/24/98	0.684	12/13/98	0.414
05/06/98	1.118	08/25/98	1.414	12/14/98	0.404
05/07/98	1.317	08/26/98	0.756	12/15/98	0.725
05/08/98	1.220	08/27/98	0.263	12/16/98	1.604
05/09/98	0.748	08/28/98	0.330	12/17/98	1.614
05/10/98	0.662	08/29/98	0.466	12/18/98	0.552
05/11/98	1.179	08/30/98	0.496	12/19/98	0.470

05/12/98	0.913	08/31/98	0.491	12/20/98	0.734
05/13/98	0.772	09/01/98	0.464	12/21/98	0.142
05/14/98	1.061	09/02/98	0.264	12/22/98	0.900
05/15/98	0.564	09/03/98	0.315	12/23/98	0.114
05/16/98	0.324	09/04/98	0.460	12/24/98	0.024
05/17/98	0 871	09/05/98	0.334	12/25/98	0.023
05/18/98	0.945	09/06/98	0.418	12/26/98	0.026
05/19/98	0.946	09/07/98	0.407	12/27/98	0.021
05/20/98	0.582	09/09/98	0.734	12/28/98	0.027
05/21/98	0.298	09/10/98	0.362	12/29/98	0.027
05/22/98	1.435	09/11/98	0.087	12/30/98	0.273
05/23/98	0.656	09/12/98	0.082	12/31/98	0.581
05/24/98	0.563	09/13/98	0.076	01/01/99	0.465
05/25/98	0.752	09/14/98	0.007	01/02/99	0.438
05/26/98	1.088	09/15/98	0.004	01/03/99	0.600
05/27/98	0.339	09/16/98	0.002	01/04/99	0.871
05/28/98	0.148	09/17/98	0.002	01/05/99	0.527
05/29/98	0.213	09/18/98	0.002	01/06/99	0.995
05/30/98	0.146	09/19/98	0.002	01/07/99	1.811
05/31/98	0.306	09/20/98	0.002	01/08/99	1.399
06/01/98	0.174	09/21/98	0.002	01/09/99	0.605
06/02/98	0.159	09/22/98	0.002	01/10/99	0.626
06/03/98	0.190	09/23/98	0.002	01/11/99	0.813
06/04/98	0.322	09/24/98	0.002	01/12/99	0.596
06/05/98	0.085	09/25/98	0.002	01/13/99	0.033
06/06/98	0.858	09/26/98	0.002	01/14/99	0.094
06/07/98	1.364	09/27/98	0.002	01/15/99	0.318
06/08/98	1.230	09/28/98	0.002	01/16/99	0.424
06/09/98	1.048	09/29/98	0.002	01/17/99	0.080
06/10/98	0.553	09/30/98	0.002	01/18/99	0.123
06/11/98	0.393	10/01/98	0.002	01/19/99	0.064
06/12/98	0.463	10/02/98	0.002	01/20/99	0.971
06/13/98	0.282	10/03/98	0.002	01/21/99	1.277
06/14/98	0.289	10/04/98	0.002	01/22/99	1.258
06/15/98	0.320	10/05/98	0.002	01/23/99	1.333
06/16/98	0 354	10/06/98	0.002	01/24/99	1.130
06/17/98	0.869	10/07/98	0.002	01/25/99	1.223
06/18/98	0.307	10/08/98	0.002	01/26/99	1.085
06/19/98	0.737	10/09/98	0.002	01/27/99	1.134
06/20/98	2.170	10/10/98	0.154	01/28/99	1.155
06/21/98	1.149	10/11/98	0.736	01/29/99	0.708
06/22/98	0.049	10/12/98	0.377	01/30/99	0.630
06/23/98	0.485	10/13/98	0.067	01/31/99	0.816
06/24/98	0.232	10/14/98	0.103	02/01/99	1.029
06/25/98	0.531	10/15/98	0.029	02/02/99	0.882
06/26/98	0.546	10/16/98	0.054	02/03/99	0.066
06/27/98	0.119	10/17/98	0.014	02/04/99	0.264
06/28/98	3 416	10/18/98	0.037	02/05/99	0.397
06/29/98	1.103	10/19/98	0.031	02/06/99	0.171
06/30/98	2.068	10/20/98	0.025	02/07/99	0.070
07/01/98	1.083	10/21/98	0.013	02/08/99	0.606

07/02/98	1.783	10/22/98	0.032	02/09/99	0.584
07/03/98	2.389	10/23/98	0.009	02/10/99	0.735
07/04/98	1.623	10/24/98	0.008	02/11/99	0.824
07/05/98	1.522	10/25/98	0.008	02/12/99	0.801
07/06/98	1.445	10/26/98	0.025	02/13/99	1.628
07/07/98	0.624	10/27/98	0.034	02/14/99	0.722
07/08/98	0.774	10/28/98	0.018	02/15/99	1.074
07/09/98	0.617	10/29/98	0.075	02/16/99	1.107
07/10/98	0.899	10/30/98	0.049	02/17/99	0.855
07/11/98	0.152	10/31/98	0.053	02/18/99	0.752
07/12/98	1.310	11/01/98	0.005	02/19/99	0.567
07/13/98	0.888	11/02/98	0.013	02/20/99	0.722
07/14/98	1.470	11/03/98	0.026	02/21/99	0.712
07/15/98	1.827	11/04/98	0.051	02/22/99	0.796
07/16/98	1.273	11/05/98	0.012	02/23/99	0.647
07/17/98	1.154	11/06/98	0.015	02/24/99	0.514
07/18/98	0.136	11/07/98	0.042	02/25/99	4.959
07/19/98	0.150	11/08/98	0.087	02/26/99	4.297
07/20/98	0.149	11/09/98	0.127	02/27/99	0.093
07/21/98	0.074	11/10/98	0.120	02/28/99	0.332

APPENDIX O OUTFALL 1711 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Recovered Groundwater	0.08	0.6672
Process Area Contact Stormwater	0.38	3.1692
Incinerator Scrubber Water	1.2	10.008
Chlorine Scrubber Water	1.85	15.429
OCPSF FLOW	3.51	29.2734
UTILITY WASTEWATER		
Cooling Tower Blowdown	0.1	0.834
UTILITY FLOW	0.1	0.834
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	3.51	29.2734
Utility Wastewater	0.1	0.834
TOTAL FLOW	3.61	30.1074

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart F - Commodity Organic Chemicals	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart F - Commodity Organic Chemicals	1	30	30
BOD5 MAXIMUM			
Subpart F - Commodity Organic Chemicals	1	80	80
TSS AVERAGE			
Subpart F - Commodity Organic Chemicals	1	46	46
TSS MAXIMUM			
Subpart F - Commodity Organic Chemicals	1	149	149

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Utility Wastewater	0.25	0.25	0.25	0.25	
CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	29.273	30	80	878.2	2341.9
Utility Wastewater	0.834	7.5	20	6.255	16.68
		TOTAL	=====>	884.46	2358.6

CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	29.273	46	149	1346.6	4361.7
Utility Wastewater	0.834	11.5	37.25	9.591	31.066
		TOTAL		1356.2	4392.8
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	884	2359		
TSS	00530	1356	4393		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	UG/L	UG/L	LB/DAY	LB/DAY
Acrylonitrile	34215	29.273	94	232	2.75	6.79
Benzene	34030	29.273	57	134	1.67	3.92
Carbon Tetrachloride	32102	29.273	142	380	4.16	11.12
Chlorobenzene	34301	29.273	142	380	4.16	11.12
Chloroethane	34311	29.273	110	295	3.22	8.64
Chloroform	32106	29.273	111	325	3.25	9.51
1,1-Dichloroethane	34496	29.273	22	59	0.64	1.73
1,2-Dichloroethane	34531	29.273	180	574	5.27	16.8
1,1-Dichloroethylene	34501	29.273	22	60	0.64	1.76
1,2-Dichloropropane	34541	29.273	196	794	5.74	23.24
1,3-Dichloropropylene	34561	29.273	196	794	5.74	23.24
Ethylbenzene	34371	29.273	142	380	4.16	11.12
Methyl Chloride	34418	29.273	110	295	3.22	8.64
Methylene Chloride	34423	29.273	36	170	1.05	4.98
Tetrachloroethylene	34475	29.273	52	164	1.52	4.8
Toluene	34010	29.273	28	74	0.82	2.17

1,2-trans-Dichloroethylene	34546	29.273	25	66	0.73	1.93
1,1,1-Trichloroethane	34506	29.273	22	59	0.64	1.73
1,1,2-Trichloroethane	34511	29.273	32	127	0.94	3.72
Trichloroethylene	39180	29.273	26	69	0.76	2.02
Vinyl Chloride	39175	29.273	97	172	2.84	5.04
ACID COMPOUNDS						
2,4-Dimethylphenol	34606	29.273	19	47	0.56	1.38
4,6-Dinitro-o-Cresol	34657	29.273	78	277	2.28	8.11
2,4-Dinitrophenol	34616	29.273	1207	4291	35.33	125.61
2-Nitrophenol	34591	29.273	65	231	1.9	6.76
4-Nitrophenol	34646	29.273	162	576	4.74	16.86
Phenol	34694	29.273	19	47	0.56	1.38
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	29.273	19	47	0.56	1.38
Acenaphthylene	34200	29.273	19	47	0.56	1.38
Anthracene	34220	29.273	19	47	0.56	1.38
Benzo(a)anthracene	34526	29.273	19	47	0.56	1.38
Benzo(a)pyrene	34247	29.273	20	48	0.59	1.41
3,4-Benzofluoranthene	34230	29.273	20	48	0.59	1.41
Benzo(k)fluoranthene	34242	29.273	19	47	0.56	1.38
Bis(2-Ethylhexyl)Phthalate	39100	29.273	95	258	2.78	7.55
Chrysene	34320	29.273	19	47	0.56	1.38
1,2-Dichlorobenzene	34536	29.273	196	794	5.74	23.24
1,3-Dichlorobenzene	34566	29.273	142	380	4.16	11.12
1,4-Dichlorobenzene	34571	29.273	142	380	4.16	11.12
Diethyl Phthalate	34336	29.273	46	113	1.35	3.31
Dimethyl Phthalate	34341	29.273	19	47	0.56	1.38
Di-n-Butyl Phthalate	39110	29.273	20	43	0.59	1.26
Fluoranthene	34376	29.273	22	54	0.64	1.58
Fluorene	34381	29.273	19	47	0.56	1.38
Hexachlorobenzene	39700	29.273	196	794	5.74	23.24
Hexachlorobutadiene	34391	29.273	142	380	4.16	11.12
Hexachloroethane	34396	29.273	196	794	5.74	23.24
Naphthalene	34696	29.273	19	47	0.56	1.38
Nitrobenzene	34447	29.273	2237	6402	65.48	187.41
Phenanthrene	34461	29.273	19	47	0.56	1.38
Pyrene	34469	29.273	20	48	0.59	1.41
1,2,4-Trichlorobenzene	34551	29.273	196	794	5.74	23.24

APPENDIX P OUTFALL 2001 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTEWATER	MGD	LB/DAY
Glycol I	14.98	124.96
Glycol II	0.63	5.25
Cellulose	1.21	10.09
Dowanols	0.20	1.65
Dowanols	0.12	0.96
Cell Service	0.02	0.19
Tank Car Cleaning	0.44	3.67
Vinyl II	0.23	1.94
LHC II	0.42	3.48
LHC III	1.20	9.99
Vector SBC	0.13	1.08
R & D	0.01	0.07
Hazardous Waste Landfill Leachate	0.06	0.47
TOTAL	19.64	163.81
UTILITY WASTEWATER		
Cooling Tower Blowdown	0.07	0.60
TOTAL	0.07	0.60
SANITARY WASTEWATER		
Domestic Wastewater Effluent	0.23	1.91
TOTAL	0.23	1.91

MISCELLANEOUS WASTEWATER		
Non Routine Wastewater	0.01	0.08
BHR-1 Dilution Water	1.60	13.34
Environmental Operations Stormwater	0.05	0.42
Incinerator Scrubber Water	1.10	9.17
Solid Waste Landfill Stormwater	0.06	0.53
Transport Services	0.01	0.05
CMP	0.04	0.29
Fire Training Area	0.00	0.03
TOTAL	2.87	23.90
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	19.64	163.81
Utility Wastewater	0.07	0.60
Sanitary Wastewater	0.23	1.91
Miscellaneous Wastewater	2.87	23.90
TOTAL	22.81	190.22

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
40 CFR PART 414	OCPSF
SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	0.005
Subpart F - Commodity Organic Chemicals	0.841
Subpart G - Bulk Organic Chemicals	0.12
Subpart H - Specialty Organic Chemicals	0.034
TOTAL	1

BOD5 AND TSS REQUIREMENTS

	SUBPART FRACTION OF TOTAL OCPSF PRODUCTION	414 DAILY AVERAGE (mg/L)	WEIGHTED DAILY AVERAGE (mg/L)
BOD5 AVERAGE			
Subpart D - Thermoplastic Resins	0.005	24	0.12
Subpart F - Commodity Organic Chemicals	0.841	30	25.23
Subpart G - Bulk Organic Chemicals	0.12	34	4.08
Subpart H - Specialty Organic Chemicals	0.034	45	1.53
	TOTAL		30.96
BOD5 MAXIMUM			
Subpart D - Thermoplastic Resins	0.005	64	0.32
Subpart F - Commodity Organic Chemicals	0.841	80	67.28
Subpart G - Bulk Organic Chemicals	0.12	92	11.04
Subpart H - Specialty Organic Chemicals	0.034	120	4.08
	TOTAL		82.72
TSS AVERAGE			
Subpart D - Thermoplastic Resins	0.005	40	0.2
Subpart F - Commodity Organic Chemicals	0.841	46	38.686
Subpart G - Bulk Organic Chemicals	0.12	49	5.88
Subpart H - Specialty Organic Chemicals	0.034	57	1.938
	TOTAL		46.704
TSS MAXIMUM			
Subpart D - Thermoplastic Resins	0.005	130	0.65
Subpart F - Commodity Organic Chemicals	0.841	149	125.309
Subpart G - Bulk Organic Chemicals	0.12	159	19.08
Subpart H - Specialty Organic Chemicals	0.034	183	6.222
	TOTAL		151.261

CALCULATION OF BOD5 AND TSS LIMITATIONS

	DAILY	DAILY			
SANITARY WASTEWATER BPJ CONC.	AVG	MAX			
BOD5 (mg/L)	30	45			
TSS (mg/L)	30	45			
	BOD5	BOD5	TSS	TSS	
FRACTION OF OCPSF CONCENTRATIONS	DAILY	DAILY	DAILY	DAILY	
UTIL/MISC BPJ CONC.	AVG	MAX	AVG	MAX	
Utility Wastewater	0.25	0.25	0.25	0.25	
Miscellaneous Wastewater	0.25	0.25	0.25	0.25	
CALCULATE BOD5 LIMITS					
	FLOW	DAILY	DAILY	DAILY	DAILY
	E+6	AVG	MAX	AVG	MAX
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	162 85	30.96	82.72	5041.7	13471
Utility Wastewater	0.6005	7.74	20.68	4.6477	12.418
Sanitary Wastewater	1.9099	30	45	57.296	85.944
Miscellaneous Wastewater	10.558	7.74	20.68	81.722	218.35
		TOTAL		5185.4	13787
CALCULATE TSS LIMITS					
	FLOW	DAILY	DAILY	DAILY	DAILY
	E+6	AVG	MAX	AVG	MAX
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	162.85	46.704	151.26	7605.6	24632
Utility Wastewater	0 6005	11.676	37.815	7.0112	22.707
Sanitary Wastewater	1.9099	30	45	57.296	85.944
Miscellaneous Wastewater	10.558	11.676	37.815	123.28	399.27
		TOTAL		7793.2	25140
SUMMARIZE CONVENTIONAL POLLUTANT PERMIT LIMITS (BOD5, TSS)					
		PERMIT	LIMITS		
		DAILY	DAILY		
	STORET	AVG	MAX		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	5185	13787		
TSS	00530	7793	25140		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	DAILY	DAILY	DAILY	DAILY
	STORET	E+6	AVG	MAX	AVG	MAX
VOLATILE COMPOUNDS	NUMBER	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
Acrylonitrile	34215	162.85	96	242	15.63	39.41
Benzene	34030	162.85	37	136	6 03	22.15
Carbon Tetrachloride	32102	162.85	18	38	2.93	6.19
Chlorobenzene	34301	162.85	15	28	2.44	4.56
Chloroethane	34311	162.85	104	268	16.94	43.64
Chloroform	32106	162.85	21	46	3.42	7.49
1,1-Dichloroethane	34496	162.85	22	59	3.58	9.61
1,2-Dichloroethane	34531	162 85	68	211	11.07	34.36
1,1-Dichloroethylene	34501	162.85	16	25	2.61	4.07
1,2-Dichloropropane	34541	162.85	153	230	24.92	37.45
1,3-Dichloropropylene	34561	162.85	29	44	4.72	7.17
Ethylbenzene	34371	162.85	32	108	5.21	17.59
Methyl Chloride	34418	162.85	86	190	14	30.94
Methylene Chloride	34423	162.85	40	89	6.51	14.49
Tetrachloroethylene	34475	162.85	22	56	3.58	9.12
Toluene	34010	162.85	26	80	4.23	13.03
1,2-trans-Dichloroethylene	34546	162.85	21	54	3.42	8.79
1,1,1-Trichloroethane	34506	162.85	21	54	3.42	8.79
1,1,2-Trichloroethane	34511	162.85	21	54	3.42	8.79
Trichloroethylene	39180	162.85	21	54	3.42	8 79
Vinyl Chloride	39175	162.85	104	268	16.94	43.64
ACID COMPOUNDS						
2-Chlorophenol	34586	162.85	31	98	5.05	15.96
2,4-Dichlorophenol	34601	162.85	39	112	6.35	18.24
2,4-Dimethylphenol	34606	162 85	18	36	2.93	5 86
4,6-Dinitro-o-Cresol	34657	162.85	78	277	12.7	45.11
2,4-Dinitrophenol	34616	162.85	71	123	11 56	20.03
2-Nitrophenol	34591	162.85	41	69	6.68	11.24
4-Nitrophenol	34646	162.85	72	124	11.72	20.19
Phenol	34694	162.85	15	26	2.44	4.23
BASE/NEUTRAL COMPOUNDS						
Acenaphthene	34205	162.85	22	59	3.58	9.61
Acenaphthylene	34200	162.85	22	59	3.58	9.61
Anthracene	34220	162.85	22	59	3.58	9.61
Benzo(a)anthracene	34526	162.85	22	59	3.58	9.61
Benzo(a)pyrene	34247	162.85	23	61	3.75	9.93

3,4-Benzofluoranthene	34230	162.85	23	61	3.75	9.93
Benzo(k)fluoranthene	34242	162.85	22	59	3.58	9.61
Bis(2-Ethylhexyl) Phthalate	39100	162.85	103	279	16.77	45.43
Chrysene	34320	162.85	22	59	3.58	9.61
1,2-Dichlorobenzene	34536	162.85	77	163	12.54	26.54
1,3-Dichlorobenzene	34566	162.85	31	44	5.05	7.17
1,4-Dichlorobenzene	34571	162.85	15	28	2.44	4.56
Diethyl Phthalate	34336	162.85	81	203	13.19	33.06
Dimethyl Phthalate	34341	162.85	19	47	3.09	7.65
Di-n-Butyl Phthalate	39110	162.85	27	57	4.4	9.28
2,4-Dinitrotoluene	34611	162.85	113	285	18.4	46.41
2,6-Dinitrotoluene	34626	162 85	255	641	41.53	104.38
Fluoranthene	34376	162.85	25	68	4.07	11.07
Fluorene	34381	162.85	22	59	3.58	9.61
Hexachlorobenzene	39700	162.85	15	28	2.44	4.56
Hexachlorobutadiene	34391	162.85	20	49	3.26	7.98
Hexachloroethane	34396	162.85	21	54	3.42	8.79
Naphthalene	34696	162.85	22	59	3.58	9.61
Nitrobenzene	34447	162.85	27	68	4.4	11.07
Phenanthrene	34461	162.85	22	59	3.58	9.61
Pyrene	34469	162.85	25	67	4.07	10.91
1,2,4-Trichlorobenzene	34551	162.85	68	140	11.07	22.8

APPENDIX Q OUTFALL 3121 (INTERNAL)

CALCULATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS

FLOW INFORMATION : FORM 2C APPLICATION

		E+6
OCPSF PROCESS WASTE WATERS	MGD	LB/DAY
Pellet Water Overflow	0.09	0.7506
Process Area Contact Stormwater	0.073	0.60882
Plant Washdown Maintenance	0.0113	0.094242
OCPSF FLOW	0.1743	1.453662
UTILITY WASTEWATER		
Cooling Tower Blowdown	0.336	2.80224
UTILITY FLOW	0.336	2.80224
MISCELLANEOUS WASTEWATER		
Condensate	0.035	0.2919
MISCELLANEOUS FLOW	0.035	0.2919
		E+6
STREAM CATEGORY SUMMARY	MGD	LB/DAY
OCPSF Process Wastewater	0.1743	1.453662
Utility Wastewater	0.336	2.80224
Miscellaneous Wastewater	0.035	0.2919
TOTAL FLOW	0.5453	4.547802

OCPSF SUBPART INFORMATION: FORM 2C APPLICATION

	SUBPART
	FRACTION
	OF TOTAL
	OCPSF
40 CFR PART 414 SUBPART CATEGORY	PRODUCT
Subpart D - Thermoplastic Resins	1

BOD5 AND TSS REQUIREMENTS

	SUBPART		
	FRACTION	414	WEIGHTED
	OF TOTAL	DAILY	DAILY
	OCPSF	AVERAGE	AVERAGE
BOD5 AVERAGE	PRODUCT	(mg/L)	(mg/L)
Subpart D - Thermoplastic Resins	1	24	24
BOD5 MAXIMUM			
Subpart D - Thermoplastic Resins	1	64	64
TSS AVERAGE			
Subpart D - Thermoplastic Resins	1	40	40
TSS MAXIMUM			
Subpart D - Thermoplastic Resins	1	130	130

CALCULATION OF BOD5 AND TSS LIMITATIONS

Permit Limitation = Concentration Limitation(mg/L) * Flow E+6(lb/day)

FRACTION OF OCPSF CONCENTRATIONS					
	BOD5	BOD5	TSS	TSS	
	MONTHLY	DAILY	MONTHLY	DAILY	
UTIL/MISC BPJ CONC.	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	
Utility Wastewater	0.25	0.25	0.25	0.25	
Miscellaneous Wastewater	0	0	0	0	

CALCULATE BOD5 LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.4537	24	64	34.888	93.034
Utility Wastewater	2.8022	6	16	16.813	44.836
Miscellaneous Wastewater	0.2919	0	0	0	0
		TOTAL		51.701	137.87
CALCULATE TSS LIMITS					
	FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
STREAM CATEGORY	LB/DAY	mg/L	mg/L	LB/DAY	LB/DAY
OCPSF Process Wastewater	1.4537	40	130	58.146	188.98
Utility Wastewater	2.8022	10	32 5	28.022	91.073
Miscellaneous Wastewater	0.2919	0	0	0	0
		TOTAL		86.169	280.05
PERMIT LIMITS					
		MONTHLY	DAILY		
	STORET	AVERAGE	MAXIMUM		
CONVENTIONAL POLLUTANTS	NUMBER	LB/DAY	LB/DAY		
BOD5	00310	52	138		
TSS	00530	86	280		

CALCULATION OF TOXIC ORGANIC PERMIT LIMITATIONS

Permit Limitation = Concentration Limitation(ug/L) * 0.001 * Flow E+6(lb/day)

		FLOW	MONTHLY	DAILY	MONTHLY	DAILY
	STORET	E+6	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
VOLATILE COMPOUNDS	NUMBER	LB/DAY	ug/L	ug/L	LB/DAY	LB/DAY
Acrylonitrile	34215	1 4537	94	232	0 14	0 34
Benzene	34030	1 4537	57	134	0 08	0 19
Carbon Tetrachloride	32102	1.4537	142	380	0.21	0.55
Chlorobenzene	34301	1 4537	142	380	0 21	0.55
Chloroethane	34311	1.4537	110	295	0 16	0.43