

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:

Settlement Tracking No. SA-AWE-06-0052

Shell Chemical LP

Norco – West Site (AI 4384)

Norco – East Site (AI 26336)

St. Rose Site (AI 3462)

Geismar Site (AI 1136)

Taft Site (AI 583)

Enforcement Tracking Nos.

AE-C-99-0158, AE-AO-99-0159

AE-AO-99-0160 AE-PP-00-0365

AE-PP-00-0323 AE-PP-00-0064

AE-PP-00-0251 AE-PP-00-0180

AE-PP-00-0353 AE-PP-00-0279

WE-CN-00-0279 AE-CN-02-0064

AE-CN-02-0093 AE-CN-03-0022

WE-L-04-0221 AE-CN-00-0169

AE-PP-00-0398 AE-CN-02-0194

AE-PP-99-0231 AE-PP-03-0425

as amended by AE-PP-0231A

WE-CN-02-0740

Permit: 2520-V1 Permit: 2520-V2

PROCEEDINGS UNDER THE LOUISIANA
ENVIRONMENTAL QUALITY ACT
LA. R.S. 30:2001, ET SEQ.

Docket No. 2003-6610-EQ for WE-CN-00-0279
Docket No. 2000-2073-EQ for Permit: 2520-V1
Docket No. 2002-0737-EQ for Permit: 2520-V2

SETTLEMENT AGREEMENT

The following Settlement is hereby agreed to between Shell Chemical LP (“Respondent”) and the Department of Environmental Quality (“DEQ” or “the Department”), under authority granted by the Louisiana Environmental Quality Act, La. R.S. 30:2001, et seq. (“the Act”).

I. Facilities Covered

Respondent operates chemical manufacturing facilities at the following locations: Shell Chemical - Norco West Site, St. Charles Parish, LA; Shell Chemical – Norco East Site, St. Charles Parish, LA; Shell Chemical – St. Rose Site, St. Charles Parish, LA; Shell Chemical – Taft Site, St. Charles Parish, LA; and Shell Chemical – Geismar Site, Ascension Parish, LA (collectively known as the “Facility” or “Facilities”).

II. Pending Administrative Orders and Enforcement Actions Resolved

Except as otherwise specifically provided in this Section, this Settlement Agreement shall resolve all civil liability of Respondent to the Department for violations alleged in the following administrative orders and enforcement actions and for the additional deviations reported to the Department pursuant to the activities and/or reporting requirements of any of these enforcement actions provided such report has been made prior to September 30, 2006:

- A. Compliance Order, AE-C-99-0158, issued on August 16, 1999, to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit A.
- B. Administrative Order, AE-AO-99-0159, issued on August 16, 1999, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit B.
- C. Administrative Order, AE-AO-99-0160, issued on August 16, 1999 to Shell Chemical – Norco St. Rose Site, attached hereto and made a part of this Settlement as Exhibit C.
- D. Notice of Potential Penalty, AE-PP-00-0365, issued on December 1, 2000, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit D.
- E. Notice of Potential Penalty, AE-PP-00-0323, issued on December 1, 2000 to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit E.
- F. Notice of Potential Penalty, AE-PP-00-0064, issued on October 23, 2000, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit F.
- G. Notice of Potential Penalty, AE-PP-00-0251, issued on October 23, 2000, to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit G.
- H. Notice of Potential Penalty, AE-PP-00-0180, issued on October 23, 2000, to Shell Chemical – Norco St. Rose Site, attached hereto and made a part of this Settlement as Exhibit H.
- I. Notice of Potential Penalty, AE-PP-00-0353, issued on October 23, 2000, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit I.

J. Notice of Potential Penalty, AE-PP-00-0279, issued on October 23, 2000, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit J.

K. Consolidated Compliance Order & Notice of Potential Penalty, WE-CN-00-0279, issued on November 27, 2001 to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit K. This Settlement Agreement is specifically intended to resolve the pending administrative hearing request and proceedings filed by Respondent to challenge this CO & NOPP.

L. Consolidated Compliance Order & Notice of Potential Penalty, AE-CN-02-0064, issued on July 25, 2002, to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit L. The Findings of Fact asserted that Respondent had self-reported that certain emission sources were exceeding allowable emission rates for one or more pollutants and that certain emission points were not in compliance with certain regulatory requirements. The Findings of Fact also noted that Respondent submitted a revised Title V permit application on May 6, 2002 to correct inaccurate emission estimates that resulted in the permit exceedances.

This Settlement Agreement specifically resolves all claims for civil penalties arising out of the matters asserted in the Findings of Fact.

M. Consolidated Compliance Order & Notice of Potential Penalty, AE-CN-02-0093, issued on September 2, 2003, to Shell Chemical – Norco East Site, attached hereto and made a part of this Settlement as Exhibit M.

N. Consolidated Compliance Order & Notice of Potential Penalty, AE-CN-03-0022, issued on May 5, 2003, to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit N. The Findings of Fact asserted that Respondent operates the Shell Norco West Site T-Unit Wastewater facilities pursuant to existing state Consolidated Air Quality Permit No. 2520-00008-04. The Findings of Fact further state that a meeting was held with the

Respondent on August 6, 2002 to discuss permit reconciliation issues and the ongoing site-wide process to reconcile permits at the West Site. It further noted that Respondent had notified the Department that certain emission sources were exceeding allowable emission rates.

Title V Permit No. 2889-VO was issued for the T-Unit on August 31, 2004. This Settlement Agreement specifically resolves all claims for civil penalties arising out of the matters asserted in the Findings of Fact. Claims for civil penalties also are resolved for emissions in excess of permit limits included in Title V Permit No. 2889-VO and which are to be controlled by the Biotreater Emissions Odor Reduction Project that may have occurred from the effective date of CO/NOPP AE-CN-03-0022 until the date specified for final compliance in the compliance schedule that is incorporated into Title V Permit No. 2889-VO. However, this Settlement Agreement does not supersede the Compliance Order portion of this Combined Compliance Order and Notice of Potential Penalty and all required compliance items must be completed pursuant to the schedule approved under such order or any future modifications to such order and schedule.

O. Warning Letter, WE-L-04-0221, issued on February 25, 2004 to Shell Chemical – Norco West Site, attached hereto and made a part of this Settlement as Exhibit O.

P. Notice of Proposed Penalty AE-PP-99-0231, issued on September 29, 1999, to Shell Chemical – Geismar Site, as amended by AE-PP-0231A, issued on August 28, 2000, attached hereto and made a part of this Settlement collectively as Exhibit P.

Q. Consolidated Compliance Order & Notice of Potential Penalty, AE-CN-00-0169, issued on December 29, 2000, to Shell Chemical – Geismar Site, attached hereto and made a part of this Settlement as Exhibit Q.

R. Notice of Potential Penalty, AE-PP-00-0398, issued on April 10, 2001, to Shell Chemical – Geismar Site, attached hereto and made a part of this Settlement as Exhibit R.

S. Consolidated Compliance Order & Notice of Potential Penalty, AE-CN-02-0194, issued on February 21, 2003 to Shell Chemical – Geismar Site, attached hereto and made a part of this Settlement as Exhibit S.

T. Notice of Proposed Penalty, AE-PP-03-0425, issued on May 11, 2004 to Shell Chemical-Norco site, attached hereto and made a part of this Settlement as Exhibit T.1

T-2. Compliance Order WE-CN-02-0740, issued on July 13, 2004 to Shell Chemical-Taft site for alleged failure to timely submit a complete LPDES permit renewal application, which is attached as Exhibit T-2.

It is the intent of the parties that any claim for a penalty for the violations alleged therein is compromised by this Settlement Agreement; however, this Settlement Agreement shall not supersede the requirements of the Compliance Order.

III. Additional Matters Resolved

This Settlement Agreement shall also resolve all civil liability of Respondent to the Department for the following matters:

A. **Leak Detection and Repair.** Deviations under any of the following leak detection and repair programs under LAC 33:III.2121, LAC 33:III.2122, LAC 33:III.3003 incorporating by reference 40 CFR Part 60, Subparts VV and GGG; LAC 33:III.5109; LAC 33:III.5116 incorporating by reference 40 CFR Part 61, Subparts J and V; and LAC 33:III.5122 incorporating by reference 40 CFR Part 63, Subparts H and CC, self-reported by Respondent, including but not limited to missed monitoring events, missed deadline for first attempt to repair, missed repair deadlines, open-ended lines and valves, sampling system deviations, and recordkeeping/reporting deviations occurring through end of calendar year 2003 and reported on or before March 31, 2004. These matters are summarized in Exhibit U attached hereto and made a part hereof.

B. Air Permit Noncompliance Self-Reported By Respondent. Deviations from existing permit limits (state permits, Title V permits, PSD permits) where emissions in excess of such limits:

i) have been reported to the Department on or before March 31, 2004 (as indicated on Exhibit V);

ii) have been included in a Title V permit or permit revision issued prior to October 31, 2006; and/or

iii) have been disclosed to the Department in one of the following applications for reconciliation of emissions limits through revision to Title V permits that are pending before the Department as of October 31, 2006:

Norco facility

Permit No. 2510-V1 – Shared Sources

Permit No. 2520-V2 – Olefins Unit

Geismar facility

Permit No. 2136-V2 – Utilities

Permit No. 2151-V2- Alcohols/OFP

Permit No. 2669-V1- Olefins (SHOP)

Permit No. 2727-V0 – Logistics

Permit No. 2729-V0 – Cogeneration

Permit No. 2489 V0 - PDO-1 Unit

It is specifically intended that where such excess emissions have been reported to the Department and where Respondent has included such excess emissions in an application for a Title V permit or permit revision, any claims for penalties relating to such excess emissions are

resolved through this Settlement Agreement where such increased emission limits are included in the final Title V permit or permit revision.

C. Other Air Permit and Air Regulatory Noncompliance. Deviations from Title V or state air permit or regulatory requirements occurring through the end of calendar year 2003 and reported to DEQ on or before March 31, 2004. Such reporting includes Title V deviation reports (including reports made pursuant to General Conditions K, M, N, R and/or XI or any specific permit conditions), NSPS excess emissions and monitoring system reports, NESHAP reports, or any other type of required or voluntary report, including, without limitation reports of noncompliance involving flare requirements, regulatory applicability, emission control requirements, ambient air standard requirements, emission limit exceedances, operating parameter deviations, deviations from monitoring, recordkeeping and reporting requirements, or deviations from risk management requirements. This paragraph also specifically includes the deviation relating to failure to include the chlorinated vent from the DOW SHAC unit at the West Site to the flare [EIQ # 108] prior to November 14, 2000 when Respondent sold the flare to Resolution Performance Products L.L.C. ("RPP"). RPP subsequently changed names and is now known as Hexion Specialty Chemicals, Inc. A permit revision was issued by LDEQ on March 21, 2003 to include this vent to the flare in the Hexion permit, No 2764-V1. The deviations that have been self-reported through March 31, 2004 are identified in Exhibits V and W, attached hereto and made a part hereof.

D. Reportable Releases. Releases to air, water, or land required to be reported per LAC 33:I. Ch. 39 and/or LAC 33:III.Ch. 51, occurring through end of calendar year 2003 and reported by January 15, 2004. These releases are identified in Exhibit X attached hereto and made a part hereof.

E. Water Discharge Permit Noncompliance. Deviations from effluent limitations or other discharge permit conditions self-reported to DEQ occurring on or before December 31, 2003 and reported to DEQ on or before February 15, 2004. These deviations are identified in Exhibit Y attached hereto and made a part hereof, including, but not limited to, any deviations or noncompliance referenced in Warning Letter WE-L-04-0221 issued to Norco West Site on or about February 25, 2004.

F. Other Matters. The following additional matters are resolved through this Settlement Agreement.

1. Issues Related to Classification of EDC Stripper Effluent. Respondent operates two EDC Strippers at the Norco facility to remove EDC from contaminated recovered groundwater prior to routing the effluent to the wastewater treatment system where it is commingled for further biotreatment with other streams. These two strippers were installed as part of a DEQ approved groundwater corrective action program. Prior to August 27, 2003, the treated groundwater was routed to the T-Unit wastewater treatment system where it is commingled for further biotreatment with other streams. Sludge generated from wastewater treatment tanks in that system is processed in an on-site biosolids incinerator, permitted under the DEQ Solid Waste Rules. Testing has shown that there is no detectable level of EDC in the sludge. The ash from the incinerator is sold as a product, for use in landfill cover applications at a permitted solid waste facility. The level of EDC in the effluent exiting the stripper (prior to commingling with other streams) is always below 0.5 mg/L (the level at which the effluent is not considered to have the characteristic of a hazardous waste pursuant to LAC 33:V.4903.E. The average EDC concentration in the groundwater prior to entering the EDC stripper is approximately 400 mg/L; however, after treatment the average concentration in the EDC Stripper effluent is approximately 0.018 mg/L. This is well below the 0.210 mg/L land disposal restriction standard in LAC

33:V.Ch. 22, Table 7. Respondent believes that the stripper effluent does not contain listed hazardous waste U077 (discarded commercial chemical product EDC), because the concentrations in the effluent is so low. However, in 2003, the Department indicated that a formal determination that the stripper effluent is not considered to contain U077 may be necessary to assure that the stripper effluent is not subject to hazardous waste regulations. Therefore, Respondent protectively began routing the stripper effluent directly to a permitted LPDES outfall without further treatment in the biotreatment system in order to preclude any issue about application of the derived-from rule to residuals of the biotreatment system. This was done with the approval of the Department (August 2003). This is viewed as a temporary solution while the status of the EDC Stripper effluent is further determined. The Department is in the process of developing a formal rule for such classification decisions for contaminated media – referred to as the “Contained-In Rule.” It is anticipated that such rulemaking will be completed during 2007. Respondent will submit a formal request for a determination that the EDC stripper effluent does not contain U077 as soon as practicable after promulgation of the DEQ Contained-In Rule, but no later than six (6) months after the promulgation of the final rule or after the effective date of this Settlement Agreement, whichever is later. The Department agrees to expeditiously review and provide a determination concerning this request. This Settlement Agreement is intended to resolve any potential claims of the Department for civil penalties with respect to past issues arising out of the classification of the EDC Stripper effluent and any streams mixed with or derived from the EDC Stripper effluent.

2. **Ambient Air Standards.** In a meeting between the Department and Respondent on December 5, 2000, Respondent reported modeled exceedances of the ambient air standard for 1,3 Butadiene (“1,3 BD”) from the Shell Norco East Site Chemical Plant. Subsequent to that time, Respondent has taken several voluntary measures to assess and minimize 1,3 BD emissions.

This Settlement Agreement is intended to resolve any claims the Department may have for civil penalties with respect to any potential noncompliance with the 1,3 BD standard set forth in LAC 33:III. Ch. 51, Table 51.2 which occurred prior to the date this Settlement Agreement becomes final. According to the Respondent, community air monitoring to date indicates that all monitored Louisiana Air Toxics (including 1,3 BD) ambient levels are below their respective standards.

3. **Appeal of Title V Permit for Olefins Unit, Norco.** Respondent requested that the Department include allowances for certain startup, shutdown and controlled malfunction emissions in its 2520-V (Olefins) Title V permit. Respondent submitted information quantifying emissions and asserting that such emissions were part of normal expected operations. The Department did not include such allowances in the permit and Respondent timely requested an administrative adjudicatory hearing on such permit. The table below summarizes the history of this matter:

Date	Action
March 1998	2520-V0 issued. Startup and Shutdown emissions approved per General Condition XVII (i.e. GCXVII approved emissions from "activities in application").
January 2000	2520-V1 issued as reconciliation of cracking furnace firing rates requested by Respondent. Without request by respondent, DEQ revised the permit to update the Louisiana General Condition XVII to reflect new language. This changed the meaning of the general condition and activities authorized from "activities in application" to "activities listed in permit". Although Respondent had listed a number of insignificant activities, no activities from 2520-V0 were carried forward.
February 2000	Shell requests a hearing on 2520-V1 based on exclusion of previously approved GCXVII activities
April 12, 2000	Meeting between Shell and DEQ to resolve appeal. Agreement reached to use Shell as pilot for State in developing permit mechanism for maintenance activities > 5 tpy and/or > MER

Date	Action
October 12, 2000	Application submitted to DEQ for permitting all planned, intermittent activities/maintenance and insignificant activities
May 4, 2001	Same data as 10/12/00 re-submitted in different format
June 28, 2001	Meeting between Shell and DEQ. DEQ insisted on hearing withdrawal by Shell. No commitment to permit any activities other than those meeting < 5 tpy or < MER policy guidelines. DEQ committed to continue working on mechanism for permitting other activities via a LDEQ Title V Workgroup as well as to approve a permit for Shell authorizing all qualified GCXVII activities.
July 30, 2001	Shell submits additional data at DEQ request on various other activities, notably furnace decoking operations.
September 28, 2001	Shell submits additional insignificant activity information for permitting.
October 24, 2001	DEQ issues 2520-V2
November 21, 2001	Shell requests a hearing on 2520-V2 based on failure of the permit to specifically authorize <ul style="list-style-type: none"> <li data-bbox="493 932 894 963">□ many insignificant activities; <li data-bbox="493 968 959 999">□ many qualified GCXVII activities <li data-bbox="493 1003 1000 1035">□ previously permitted decoking events <li data-bbox="493 1039 1382 1100">□ several issues unrelated to Shell's original permit requests but which appeared in the revised permit.
January, 30, 2002	Meeting between Shell and DEQ to review status of our second contested Olefins permit.
June 16, 2002	Submitted detailed Insignificant Activity evaluations to DEQ
September 2, 2002	2520-V mandatory renewal application submitted to DEQ to administratively continue permit
October 9, 2002	Shell submits a compilation of all information related to Shell's November 21, 2001 Request For Adjudicatory Hearing

This pending administrative adjudicatory challenge to the Olefins Title V permit is resolved as follows:

The Norco facility is authorized to continue normal historical operations and maintenance practices until the Department makes a final decision on the pending application for revision to the Olefins Title V permit. Any potential penalties or other injunctive relief for such normal, routine emissions (both operational and maintenance) if ultimately authorized in the final permits, but which have occurred in the past or which will occur until a final decision on the

permit is made, are resolved by this Settlement Agreement. The Department agrees in principle to include normal startup and shutdown and maintenance emissions in the Olefins Title V permit pursuant to the Department's guidance document(s) and practice, and the Department agrees that it will not unreasonably withhold approval in the final revised Olefins Title V permit for such emissions as are consistent with such guidance and practice. Within thirty (30) days after the effective date of this Settlement Agreement, Respondent and the Department will file a joint motion to dismiss the pending adjudicatory proceedings concerning Permit 2520-V2 (and prior versions of the Permit as appealed).

IV. LDAR Program Requirements

Respondent shall continue to comply with its written plant-wide LDAR program at Norco East and West Sites (AI Nos. 26336 and 4384) and St. Rose (AI No. 3462), and shall update the program as may be necessary to ensure continuing compliance with all applicable state and federal LDAR regulations. Such program shall include at a minimum:

- a. Procedure(s) for Method 21 monitoring;
- b. Identification of all LDAR regulated equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs VHAPs and benzene within each process unit;
- c. Procedures(s) for identifying leaking equipment within each process unit;
- d. Procedure(s) for repairing and keeping track of leaking equipment;
- e. Procedure(s) for identifying and including in the LDAR program new equipment that is subject to LDAR standards;
- f. A process for measuring, tracking, and communicating LDAR Program performance through development of performance metrics (e.g. track daily

components monitored by monitoring personnel, maintenance repair success rate, leak rates by units, etc.);

- g. A designation of the personnel responsible for the day-to day implementation of the LDAR program and the designation of an LDAR Coordinator who has the responsibility for implementing the LDAR program;
- h. A procedure for regularly communicating LDAR information to appropriate personnel; and
- i. A process for evaluating new and replacement equipment to promote consideration of installation of equipment that will minimize leaks and/or eliminate chronic leaking components; however, such process is designed to raise awareness of options and is only one factor, to be considered along with safety and feasibility factors, in the review of LDAR equipment and is not intended to require use of any particular equipment as a result of the review process.

Respondent shall also implement at each process unit a program for internal audits at least once every two years for the next four (4) years from the effective date of this Settlement Agreement. The internal audit of the LDAR program shall be conducted by sending personnel familiar with the LDAR program and its requirements from one or more of the Respondent's other facilities. Respondent may elect to retain third-parties to undertake an internal audit, provided that an LDAR audit occurs at each process unit at least every two (2) years. Each LDAR audit shall include, but not be limited to: (a) performing comparative monitoring; (b) reviewing a sufficiently representative number of records to ensure monitoring and repairs were timely completed; (c) reviewing component identification procedures, tagging procedures, data management procedures, a sufficiently representative number of field tag records for leaks and turnaround components; and (d) observation of LDAR technicians' calibration and monitoring

techniques per Method 21. Audit reports for the referenced internal audits shall be made available to the Department upon request. Until calendar year 2008 (i.e., through calendar years 2006-2007), Respondent shall continue to conduct monitoring per applicable regulatory defined monitoring frequencies and shall not be allowed to utilize "skip" periods of monitoring, even if Respondent otherwise qualifies for "skip" periods under the applicable regulations.

V. No Admission of Liability

Respondent denies it committed any violations or that it is liable for any fines, forfeitures, injunctive relief and/or penalties for alleged violations of the Act, its implementing regulations or permit requirements. However, in the interest of settlement and to accomplish its objective of cooperatively reconciling the goals of Respondent and the Department under the Act, Respondent has agreed to undertake the obligations specified in this Settlement Agreement in order to resolve the claims of the Department.

VI. Settlement Payment

A. Settlement Amount

Respondent, without making any admission of liability under state or federal statute or regulation, agrees to pay, and the Department agrees to accept, a payment in the amount of One Million Dollars (\$1,000,000.00), of which Fifteen Thousand Dollars (\$15,000.00) represent DEQ's enforcement costs, in settlement of the claims and issues set forth in this Settlement Agreement.

B. Procedure for Payment

The payment described above is to be made by two (2) equal installments of \$500,000.00, with the first installment check to be post-marked to the address specified below within thirty (30) days of the effective date of this Settlement and the second installment post-marked to the address specified below within two hundred ten (210) days after the effective date

of this Settlement. Payment is to be made payable to the Department of Environmental Quality and mailed to the attention of Darryl Serio, Office of Management and Finance, Financial Services Division, Department of Environmental Quality, Post Office Box 4303, Baton Rouge, Louisiana, 70821-4303.

VII. Beneficial Environmental Projects

Respondent, in addition to the settlement amount specified in Paragraph VI above and as part of this Settlement, agrees to expend the amount of Five Million Five Hundred Thousand Dollars (\$5,500,000.00) to implement and/or perform the following beneficial environmental projects. These projects, along with the approximate amount to be spent on each, are listed and specifically incorporated into this Settlement as follows:

A. Flaring Reduction/Flare System Improvement

1. Respondent agrees to expend the amount of Four Million Seven Hundred Thousand Dollars (\$4,700,000.00) on projects to reduce the number and magnitude of flaring events at the Norco East and West sites (AI Nos. 26336 and 4384). These projects will reduce flaring events and the noise and light associated with flaring. In addition, any reduction of flaring events will also reduce emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, particulate matter and /or volatile organic compounds.

2. Unless delayed by *force majeure* as discussed in Section XII of this Settlement Agreement, Respondent will install the flare system improvement projects for the OP-1 Unit during the 2008 turnaround; for the OL-5 Unit during the 2010 turnaround and for the GO-1 Unit during the 2012 turnaround. All projects will complete shakedown and are to be made operational within 180 days after installation.

3. Within one hundred eighty (180) days of the effective date of the Settlement Agreement, Respondent will submit a schedule for execution of flare system

improvement/reduction projects to the Department consistent with the deadlines in the preceding paragraph. It is recognized that due to factors such as market conditions, future regulatory requirements, and weather conditions that the scheduling of such turnarounds has inherent uncertainty; thus, the deadlines may be adjusted pursuant to Section XVI of this Settlement Agreement, provided that all projects are to be completed within 7 years of the effective date of this agreement. It is also recognized by the Department that Respondent may have to obtain permits from the Department or various other government agencies to support one or more flare system reduction projects, and that any schedule will be contingent upon obtaining such permits. Respondent commits to use its best efforts to timely submit any required applications for permits and to promptly respond to any requests for information to expedite such permitting processes. If a project cannot be completed within the deadlines set forth above due to delays associated with permitting, Respondent may request a reasonable extension of the deadline commensurate with the permitting delays. The Department will not unreasonably withhold approval for such extension. Any dispute concerning extension of the deadline for completion is subject to the Dispute Resolution provisions of Paragraph XIII of this Settlement Agreement.

B. Donation to Hurricane/Storm Cleanup and Recovery Fund

1. Respondent agrees to donate Four Hundred Thousand Dollars (\$400,000.00) to the Louisiana Department of Environmental Quality to establish a fund to support post-hurricane or storm clean-up and recovery activities including but not limited to the following:

- a. Collection and recycling or disposal of household hazardous waste materials;
- b. Collection and disposal of hazardous waste such as orphan drums and/or hazardous waste generated by municipalities and/or schools; and
- c. Repairs to municipal wastewater treatment facilities and collection systems damaged by the hurricanes.

This fund shall have a life of five years from the date of its creation. Unspent money remaining in this fund after five years shall be placed in the Hazardous Waste Site Cleanup Fund and/or the Environmental Trust Fund as appropriate.

2. Respondent agrees to make the donation to the DEQ within sixty (60) days after the effective date of the Settlement Agreement.

C. Donation to DEQ for Highly Reactive VOC Study

1. Respondent agrees to donate Three Hundred Thousand Dollars (\$300,000.00) to the Louisiana Department of Environmental Quality to support the activities of the DEQ Highly Reactive VOC Task Force which is studying the impact of highly reactive VOCs on ozone formation within the Baton Rouge Ozone Nonattainment Area. It is anticipated that this study will assist in the achievement of ozone attainment for the Baton Rouge Ozone Nonattainment Area.

2. Respondent agrees to make the donation to the DEQ within thirty (30) days after the effective date of the Settlement Agreement.

D. Donation for St. Charles Parish School System

1. Respondent agrees to donate Sixty-Five Thousand Dollars (\$65,000.00) to be used by the St. Charles Parish School System in improving their Crisis Management and Emergency Response for Norco K-3rd grade and Norco 4th-6th grade schools. These improvements will allow the students at the schools to be housed more safely, to be sheltered more securely, to be evacuated more efficiently and to improve communications, should a crisis ever arise. The improvements will be used to fund equipment such as the following: radios for each school, an integrated intercom system for each school, emergency kits for each classroom, cell phone and safety kits with carts, special need evacuation wagons/carts, security gates, and/or upgrade to evacuation routes.

2. Respondent agrees to make such donation through an Act of Donation within thirty (30) days after the effective date of the Settlement Agreement.

3. Respondent will submit a report to the Department verifying that the funds have been donated. Respondent shall make such report within thirty (30) days after the conclusion of any semi-annual period in which donation has been made and/or notice is received by Respondent of the expenditure of the donated funds.

E. Donation to the St. Charles Parish EOC

1. Respondent agrees to donate Thirty-Five thousand and no/100 Dollars (\$35,000.00) to the St. Charles Parish EOC to obtain an AM Radio Station System or similar equipment to enhance its ability, during times of emergencies, to disseminate information such as security instructions, cleanup coordination, emergency road closures, and chemical release information to local residents.

2. Respondent agrees to make such donation through an Act of Donation within thirty (30) days after the effective date of the Settlement Agreement.

3. Respondent will submit a report to the Department verifying that the funds have been donated. Respondent shall make such report within thirty (30) days after the conclusion of any semi-annual period in which donation has been made and/or notice is received by Respondent of the expenditure of the donated funds.

F. Acts of Donation and Reports for Beneficial Environmental Projects.

1. The Acts of Donation mentioned in B, C, D and E above will be made in a form consistent with Exhibit Z, attached hereto and made a part of this Settlement Agreement.

2. Except for those reports required in D and E above, Respondent will submit semiannual progress reports to the Department, to be post-marked on or before the thirtieth (30th)

day of the month following each calendar semiannual period after the effective date of the settlement. The Norco and Geismar facilities may submit separate reports.

3. Respondent will submit a final compliance report within 30 days after the semiannual period in which all Beneficial Environmental Projects have been completed. The final report shall indicate the completion and start-up date of each project and the total expenditure for each project. It shall also contain a certification that the projects were completed as described. The Norco and Geismar facilities may submit separate reports.

G. Adjustments to BEP Financial Commitments

Respondent commits to spend a total of Five Million Five Hundred Thousand (\$5,500,000.00) Dollars on the above-referenced BEPs. In establishing compliance with the terms of this Settlement Agreement, the DEQ will consider the total amount of Respondent's expenditures on any of the above-referenced BEPs. In the event that expenditures on any of the BEPs is less than the amount set forth above, the DEQ will consider any cost overrun on any other BEP as an offset against the shortfall. In the event of a shortfall in total expenditures, Respondent will propose for the Department's consideration and will perform one or more additional BEPs, after DEQ approval, to satisfy the shortfall and to spend the full BEP commitment of Five Million Five Hundred Thousand Dollars (\$5,500,000.00). If additional proposed BEP(s) are not approved by the DEQ, then the DEQ may require the balance due as a cash payment. DEQ will notify the Respondent of its decision to approve a supplemental BEP or to require a cash payment by certified mail, to the person specified for receipt of notices in this Settlement. In the event that a cash payment is required, the DEQ shall specify the date by which such payment is due, which shall not be earlier than sixty (60) days following Respondent's receipt of the notice.

H. Tax Treatment

Respondent acknowledges that it has been provided notice of R.S. 30:2050.7(E)(1) which provides: "Notwithstanding the provisions of R.S. 30:2205, the secretary [of DEQ] may enter into settlements of civil penalty assessments which allow the respondent to perform beneficial environmental projects or provide for the payment of a cash penalty to the state, or both. Such settlements shall be considered a civil penalty for tax purposes."

VIII. Compliance History

Respondent further agrees that the Department may consider the inspection report(s), the enforcement actions listed in Paragraphs II, above, and this Settlement for the purpose of determining compliance history in connection with any future enforcement or permitting action by the Department against Respondent, and in any such action Respondent shall be estopped from objecting to the above-reference documents being considered as proving the violations alleged herein for the sole purpose of determining Respondent's compliance history.

IX. Final Order

This agreement shall be considered a final order of the secretary for all purposes, including, but not limited to, enforcement under La. R.S. 30:2025(G)(2), and Respondent hereby waives any right to administrative or judicial review of the terms of this agreement, except such review as may be required for interpretation of this agreement in any action by the Department to enforce this agreement.

X. Effect of Settlement

A. This Settlement is intended to constitute a compromise and settlement, without any admission of or acknowledgment by Respondent that it is liable for any violations, and is being executed in the interest of settling the state's claims and avoiding for both parties the expense and effort involved in litigation or an adjudicatory hearing. In agreeing to the compromise and

settlement, the Department considered the factors for issuing civil penalties set forth in LSA-R.S. 30:2025(E) of the Act and the rules relating to beneficial environmental projects set forth in LAC 33:I.Chapter 25.

B. In consideration of the above, any and all alleged violations or issues of alleged noncompliance raised by the Department in the enforcement actions listed in Section II or the matters described in Section III of this Settlement Agreement, including violations or potential noncompliance self-disclosed by Respondent, are fully compromised and settled.

XI. Publication of Settlement

The Respondent has caused a public notice advertisement to be placed in the official journal of the parish governing authority in each parish corresponding with the location of each facility made subject of this Settlement. The advertisement, in form, wording, and size approved by the Department, announced the availability of this settlement for public view and comment and the opportunity for a public hearing. Respondent has submitted a proof-of-publication affidavit to the Department and, as of the date this Settlement is executed on behalf of the Department, more than forty-five (45) days have elapsed since publication of the notice.

XII. Force Majeure

If any event including, but not limited to construction delays, [one or more union strikes], acts of terrorism and/or an act of declared or undeclared war, occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Settlement, and which otherwise meets the requirements of this Part, Respondent shall notify the DEQ in writing as soon as practicable, but in any event no later than thirty (30) business days of when Respondent first knew of the event. The notice shall specifically reference this Section of this Settlement Agreement and shall describe the anticipated time the delay may persist, the cause of

the delay, and the measures taken by Respondent to minimize the delay. Respondent shall take all reasonable measures to minimize such delays.

Unless the DEQ notifies Respondent in writing within thirty (30) days of the date of notice by Respondent, or before the end of the anticipated delay period stated in the notification, whichever is shorter, then it is stipulated that such an extension of any required deadline is approved. If DEQ timely objects to the extension of a deadline for any required activity on the basis of the asserted force majeure, then Respondent may invoke the Dispute Resolution provisions of this Settlement.

XIII. Dispute Resolution

If Respondent objects to any DEQ written notice of nonacceptance or decision made pursuant to this Settlement Agreement, Respondent shall notify the DEQ in writing of Respondent's objection within ten (10) calendar days of receipt of such notice or decision. DEQ and Respondent shall then have an additional thirty (30) calendar days from the receipt by DEQ of the notification of objection to reach agreement. If agreement cannot be reached on any issue within this thirty (30) calendar day period, DEQ shall provide a written statement of its decision by certified mail to Respondent within ten (10) calendar days of the expiration of the period to reach agreement. If Respondent objects to DEQ's decision, Respondent shall notify DEQ in writing within twenty (20) calendar days after receipt of DEQ's written statement of its decision, exclusive of date of receipt, of Respondent's objections and request for a hearing with the Secretary of DEQ. If the request for hearing is granted, the issues raised in the request shall be resolved by an adjudicatory hearing before an administrative law judge. The Secretary's final decision or order after this hearing is Final Agency Action for the purpose of judicial review. In the event Respondent fails to object to a DEQ written notice of non acceptance or decision made pursuant to this Settlement Agreement, Respondent will be bound by such written notice of non acceptance or decision.

If the dispute resolution process is invoked with respect to a particular matter, all other work not directly affected thereby shall proceed according to the agreed upon schedule.

XIV. Effective Date

The effective date of this Settlement Agreement shall be the date the Department provides Respondent with written notice of the signing of this Settlement Agreement by the Department following the concurrence of the Attorney General pursuant to La. R.S. 30:2050.7.

XV. Termination

If Respondent believes it is in compliance with the requirements of this Settlement and has completed all tasks herein, then it shall so certify to the DEQ and unless the DEQ objects in writing within thirty (30) days of receipt of the certification, then this Settlement shall be deemed terminated. If the DEQ timely objects to the certification, the parties agree to engage in Dispute Resolution proceedings.

XVI. Allowable Modifications

The DEQ may allow extensions of compliance dates and deadlines upon a written request by Respondent showing good cause that such a delay is necessary. Additionally, the DEQ may allow reduced frequency in reporting. Any other modification is subject to the requirements of La. R.S. 30:2050.7.

XVII. Notices

Notifications required by this Settlement Agreement shall be deemed submitted on the date they are postmarked and sent either by overnight express courier or by certified or registered mail, return receipt requested. When written notification is required by this Settlement, it shall be addressed as follows:

As to the DEQ: Peggy Hatch, Administrator, Enforcement Division, Office of Environmental Compliance, Louisiana Department of Environmental Quality, P.O. Box 4312, Baton Rouge, Louisiana 70821-4312

As to the Respondent: Plant Manager, Shell Chemical L.P., P.O. Box 10, Norco, LA 70079 with respect to the Norco facility and Plant Manager, Shell Chemical L.P., 7594 Highway 75, Geismar, LA 70734, with respect to the Geismar facility.

XVIII. Entire Agreement

This Settlement constitutes the entire agreement and settlement between the parties. Prior drafts shall not be used in any action involving the interpretation or enforcement of this Settlement.

XIX. Signatories

Each undersigned representative of the parties certifies that he or she is fully authorized to execute this Settlement Agreement on behalf of his/her respective party, and to legally bind such party to its terms and conditions.

SHELL CHEMICAL LP

BY: Stacy P. Methvin
(Signature)

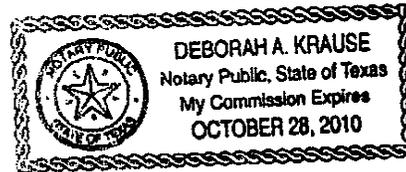
STACY P. METHVIN
(Print)

TITLE: PRESIDENT/CEO

THUS DONE AND SIGNED in duplicate original before me this 8 day of
FEBRUARY, 2007, at HOUSTON, TX - ONE SHELL PLAZA.

Deborah A. Krause
NOTARY PUBLIC (ID # _____)

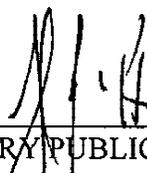
DEBORAH A. KRAUSE
(Print)

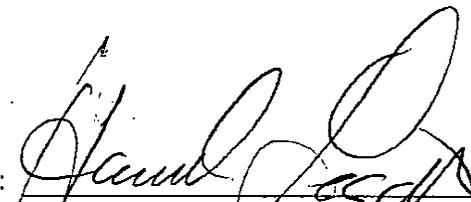


STATE OF LOUISIANA
Mike McDaniel, Secretary
Department of Environmental Quality

BY: 
Harold D. Leggett, Ph.D., Assistant Secretary
Office of Environmental Compliance

THUS DONE AND SIGNED in duplicate original before me this 3rd day of
May, 2007, at Baton Rouge, Louisiana.


NOTARY PUBLIC (ID# 20156)
Ted R. Boyle, II
(Print)

Approved: 
Harold D. Leggett, Ph.D. Assistant Secretary