

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:	* Settlement Tracking No.
	* SA-MME-12-0061
UNION CARBIDE CORPORATION	*
	* Enforcement Tracking Nos.
AI # 2083	* AE-NP-99-0205
	* AE-CN-01-0064
PROCEEDINGS UNDER THE LOUISIANA	* MM-CN-02-0071 & MM-CN-02-0071A
ENVIRONMENTAL QUALITY ACT	* AE-CN-03-0009
LA. R.S. 30:2001, <u>ET SEQ.</u>	* AE-CN-04-0147 & AE-CN-04-0147A
	* AE-CN-05-0028
	* AE-C-06-0177
	* AE-CN-08-0104

SETTLEMENT

The following Settlement is hereby agreed to between Union Carbide Corporation (“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

Respondent is a corporation that owns and/or operates a chemical manufacturing facility located at or near 355 Louisiana Highway 3142 in Taft, St. Charles Parish, Louisiana (“the Facility”).

II

On September 7, 1999, the Department issued to Respondent a Notice of Violation and Potential Penalty, Enforcement No. AE-NP-99-0205, which was based upon the following findings of fact:

The Department is in receipt of Union Carbide Corporation, Taft/Star Manufacturing Complex’s (Respondent) letter dated January 27, 1999, regarding the compliance testing of the

Acrylics Flare, Emission Point No. 228 of the State Air Permit No. 228 of State Air Permit No. 513 (M-3). The facility is located approximately .75 miles west of Hahnville on LA Highway 3127 in Hahnville, St. Charles Parish, Louisiana. The facility operates under Permit No. 513 (M-3).

The following violations were noted during the course of the file review in regard to the compliance testing of the Acrylics Flare, Emission Point No. 228 of State Air Permit No. 513 (M-3).

1. Specific Condition No. 13 of State Air Permit No. 513 (M-3) stipulates that the permittee shall ensure destruction of emissions to the flare, Emission Point No. 228, by maintaining the heat content of the flare gas above 300 BTU/scf. According to the Respondent's January 27, 1999 letter, the heat content of the flare was found to be less than 300 BTU/scf. This is a violation of 40 CFR 63.11(b)(6)(ii) which language has been adopted as a Louisiana regulation in LAC 33:III.5122, Specific Condition No. 13 of State Air Permit No. 513 (M-3) and Sections 2057(A)(1) and (A)(2) of the Act.
2. According to the Respondent's letter dated January 27, 1999, the flare, Emission Point No. 228, is used as a control device for several pieces of equipment subject to Hazardous Organic NESHAP (HON), 40 CFR 63, including a pressure relief valve for a Group IV process unit. In accordance with Subpart F, National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry, compliance testing was required to be conducted by July 24, 1995. However, the Respondent did not perform the actual testing until December 15, 1998. This is a violation of 40 CFR 63.100(k)(3) which language has been adopted as a Louisiana regulation in LAC 33:III.5122, General Condition No. VIII of State Air Permit No. 513 (M-3), and Sections 2057(A)(1) and (A)(2) of the Act.
3. According to the Respondent's letter dated January 27, 1999, the test results on the flare, Emission Point No. 228, showed that the permitted emission rates for Nitrous Oxide (0.18 lbs/hr) and Carbon Monoxide (0.97 lbs/hr) had been exceeded. This is a violation of Louisiana Air Quality Regulations, in particular LAC 33:III.501.C.4 which language has been adopted as a Louisiana regulation in LAC 33:III.5122, General Condition III of State Air Permit No. 513 (M-3), Sections 2057(A)(1) and (2) of the Act.

On March 26, 2001, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-01-0064, which was based upon the following findings of fact:

Respondent owns and/or operates a facility for the manufacturing of petrochemicals located at the corner of Louisiana Highway 3142 and Louisiana Highway 18 in Taft, St. Charles Parish, Louisiana.

On or about March 23, 2001, the Department received a letter from Respondent dated March 22, 2001, indicating two tanks had been installed without obtaining a permit from the Department. A file review was conducted by a representative of the Department to determine the degree of compliance with the Louisiana Environmental Quality Act (the Act) and Air Quality Regulations.

The following violation was noted during the course of the review:

Respondent constructed two (2) tanks (Nos. 237A1 and 260A1) prior to the issuance of a permit by the Department. This is a violation of the Louisiana Air Quality Regulations, in particular LAC 33:III.501.C.2 and Section 2057(A)(2) of the Act.

On January 23, 2003, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-03-0009, which was based upon the following findings of fact:

The Respondent owns and/or operates the Taft Plant, a chemical manufacturing facility located on the west bank of the Mississippi River near Taft, St. Charles Parish, Louisiana. The facility operates under Louisiana Air Permit No. 476-C (M-3) issued on January 8, 2001, and amended on June 21, 2001.

On or about January 21, 2003, the Respondent submitted a letter to the Department which disclosed information regarding an ethylene emission release from the facility's Ethylene Oxide (Oxide II) Unit. According to the January 21, 2003 letter, the Respondent suspects that an earlier upset occurred on or about September 20, 2002, relative to the Integrated Gas Turbine (IGT) (Emission Point No. 50), prematurely aged the catalyst in that source. The IGT, which is an integral part of the Oxide II Unit, operates to oxidize trace quantities of ethylene from the process and has

associated energy recovery functions. Based on the Respondent's findings, it is also speculated that the efficiency of the catalyst in the IGT system was diminished which contributed to the excess ethylene emissions. The incident was reportedly first noted by the Respondent on or about January 21, 2003.

The following violation was noted during the course of its review:

The Respondent failed to maintain ethylene emissions from the IGT (Emission Point No. 50) within the permitted limits of Louisiana Air Permit No. 476-C (M-3). This is a violation of General Condition No. I of Louisiana Air Permit No. 476-C (M-3), LAC 33:III.501.C.4 and Sections 2057(A)(1) and 2057(A)(2) of the Act.

The Respondent's January 21, 2003, letter indicated that the Ethylene Oxide I (Oxide I) Unit was down and not expected to be restarted until mid-February. Therefore, the Oxide II Unit operation which is associated with the IGT emission source was required to supply ethylene oxide to support other units at the St. Charles Plant until such time that the Oxide I Unit could be brought back online. Specifically, ethylene oxide is needed as feedstock for the EXP, Ethanol Amines, Polyglycol and Methyl Glycol Ethers Units. These plants shut down if ethylene oxide is not available.

On October 6, 2003, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. MM-CN-02-0071, which was based upon the following findings of fact:

The Respondent owns and/or operates the facility known as the Union Carbide - Taft Plant, a wholly owned subsidiary of Dow Chemical Company. The facility consists of a chemical manufacturing plant located at 355 Louisiana Highway 3142 in Taft, St. Charles Parish, Louisiana. The facility operates under several Louisiana permits for different operational units. The facility is

notified with the Department as a large quantity generator of hazardous waste and has interim status for the boilers that burn hazardous waste.

The Respondent was issued National Pollutant Discharge Elimination System (NPDES) permit LA0000191 from the United States Environmental Protection Agency (EPA) with an effective date of October 5, 1987, and an expiration date of October 4, 1992. Under the terms and conditions of the NPDES permit, the Respondent was authorized to discharge treated process wastewater and non-process area storm water from Outfall 001 to the Mississippi River, waters of the state. The Respondent submitted a timely permit renewal application in 1992; therefore NPDES permit LA0000191 has been administratively continued. The Respondent is also authorized to discharge storm water from seven (7) internal outfalls (102, 103, 104, 202, 203, 501, and 601) into the Mississippi River, waters of the state, via Outfall 001 under the authority of Amended Compliance Order Enforcement No. WE-C-00-0111A issued by the Department on or about February 23, 2001. An updated permit application was submitted in June 1998. This application was updated and modified in March 1999 and September 2002. Upon delegation of the NPDES program to the state in August 1996, EPA retained permitting authority on NPDES permit LA0000191 due to an outstanding Fundamentally Different Factors (FDF) variance submitted by the Respondent on May 2, 1988. EPA granted final approval of the FDF on March 28, 2000. Permitting authority was transferred to the Department upon final approval. In accordance with the assumption of the NPDES program by the state, NPDES permit LA0000191 has become a Louisiana Pollutant Discharge Elimination System (LPDES) permit with the same expiration date.

On or about May 20, 2002, representatives of the Department performed an inspection and noted the following violations:

- A. During a perimeter survey of Tank No. 5101, a valve was observed to be leaking product. The valve was part of the roof drain system and was designed to be in storm water service. It was not raining at the time, nor was any water present on the roof in need of draining, yet a continuous stream of liquid was coming from the failed valve body. A strong hydrocarbon odor was associated with the liquid. Unknown persons had excavated around the leaking valve and placed a plastic container beneath it. The liquid was overflowing the container. This is a violation of LAC 33:III.905 which states, "When facilities have been installed on a property, use them and diligently maintain them in proper working order whenever any emissions are being made which can be controlled by the facilities, even though the ambient air quality standards in affected areas are not exceeded". Control equipment as defined by LAC 33:III.111 is "any device or contrivance, operating procedure or abatement scheme used to prevent or reduce air pollution." This is also a violation of LAC 33:III.2113.A and Sections 2057(A)(1) and (A)(2) of the Act.
- B. On or about May 22, 23, 28, and 30, 2002, a Leak Detection and Repair (LDAR) Survey took place of components governed by the Louisiana MACT Determination for NON-HON Equipment Leaks. While conducting the survey, five (5) open-ended lines were found not equipped with caps, blind flanges, plugs, or second valves. Two (2) of the open-ended lines were in the Olefins II Furnace area at valve number 3Y33765 and valve number 3Y41039. Two (2) of the open-ended lines were in the Olefins II Fin fan area at valve number 3Y60432 and valve number 3Y60421. One (1) of the open-ended lines was in the Tank 6200 pump area at valve number 3Y09771. Tank 6200 (ID No. 634) is permitted under the Olefins I Unit, which operates under Louisiana Air Permit No. 2422(M-1) issued October 12, 1999. The Olefins II Unit operates under Louisiana Air Permit No. 1150T (M-1) issued December 10, 1999. Each failure to have a cap, blind flange, plug or second valve on this open-ended line is a violation of paragraph H.1.a of the Louisiana Refinery MACT Determination dated July 26, 1994, LAC 33:III.5109.A.1, and Section 2057(A)(2) of the Act.
- C. The Respondent failed to maintain all daily inspection check sheets, in particular the number 3 Steam Plant Pipe Rack and Boiler and Industrial Furnace (BIF) number 31 for August 25, 2001, in violation of LAC 33:V.3005.F.5.
- D. The Respondent failed to maintain all daily inspection check sheets for Slop Tank (C-3125) located in the Polyethylene Unit, in violation of LAC 33:V.1911.D. Duplicate check sheets for May 2, 26, June 22, August 22, 30, and November 24 of 2001 were found on site and missing check sheets for the following dates were also noted: May 1, 13, July 9, 22, 26, August 2, October 26, November 25, December 9, 19, 22, and 23 of 2001.

- E. The Respondent failed to complete weekly inspections of the Painting and Sandblasting Less-than-90-day Container Storage Area since January of 2002, in violation of LAC 33:V.1109.E.1.a.i. A contractor has been hired by the Respondent to supervise and perform inspections until a permanent decision is made. A copy of an inspection checklist from May 24, 2002, was received by the Department.
- F. The Respondent did cause or allow the unauthorized discharge of substances into waters of the state that are not authorized in LPDES permit LA0000191 or Amended Compliance Order Enforcement No. WE-C-00-0111A. Specifically, laboratory results of samples taken at the Olefins I West-Return indicated a Propene concentration of 41 mg/L and a Hexane concentration of 40 mg/L. Each unauthorized discharge is in violation of LPDES permit LA0000191 (Part II, Section A.1), La. R.S. 30:2076 (A)(3), LAC 33:IX.501.A, LAC 33:IX.501.C, and LAC 33:IX.2355.A.
- G. The Respondent failed to maintain cathodic protection on two (2) underground storage tanks located in the North Acrolein UST mound since May 2001, in violation of LAC 33:XI.903.C. The Respondent has restored power to the rectifier and the tanks are currently cathodically protected.

A file review conducted by the Department on April 14, 2003, revealed the following effluent violations:

Date	Outfall	Parameter	Permit Limit	Sample Result
August 2002	601	Oil and Grease	15 mg/L (max)	20.9 mg/l
August 2002	402	TSS	9,290 lbs/day (max)	9,687 lbs/day
April 2002	601	TOC	50 ml/L (max)	83 mg/L
March 2002	501	Oil and Grease	15 ml/L (max)	132 mg/L
February 2002	501	Oil and Grease	15 mg/L (max)	20 mg/l
September 2001	601	Oil and Grease	15 mg/L (max)	84 mg/l
August 2001	201	TOC	1,907 lbs/day (max)	3,785 lbs/day
June 2001	402	TSS	9,290 lbs/day (max)	10,554 lbs/day

Each effluent violation at outfall 501 and 601 is a violation of Amended Compliance Order Enforcement No. WE-C-00-0111A, La. R.S. 30:2076 (A) (3), and LAC 33:IX.501.A. Each effluent violation at outfall 201 and 402 is a violation of LPDES permit LA0000191 (Part I, and Part II, Section A.1), La. R.S. 30:2076 (A) (3), LAC 33:IX.501.A, and LAC 33:IX.2355.A.

A file review conducted by the Department revealed the discharge of benzene from defective heat exchangers on at least seven (7) separate occasions over the past thirty (30) months. These leaks occurred at the cooling water returns from the Olefins I and II units. Cooling water from these units flow into the B-1 cooling water return lateral, thence into the A-2 cooling water return lateral, thence into the Mississippi River. An Administrative Order (VI-93-0500) issued by EPA on or about February 3, 1993, required the Respondent to monitor for the presence of benzene in the B-1 cooling water return lateral three (3) times per week. If a sample from the B-1 lateral indicated the presence of benzene greater than 2.0 ppb, then the Respondent was to begin sampling at the cooling water returns from the Olefins I and II units. If a sample from the Olefins return indicated the presence of benzene greater than 2.0 ppb, then the Respondent was to sample each individual heat exchanger in order to identify the leaking unit. If the concentration of benzene in the B-1 lateral was greater than 10 ppb, the Respondent was to begin sampling for benzene at outfall 001. If the concentration of benzene exceeded 20 ppb at outfall 001, the Respondent was to immediately initiate procedures to remove the leaking equipment/facility from service.

On December 22, 2003, the Department issued to Respondent an Amended Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. MM-CN-02-0071A, which was based upon the following findings of fact:

The Department hereby deletes paragraph III, subparagraph F of the Findings of Fact in its entirety.

The Department incorporated all of the remainder of the original Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. MM-CN-02-0071 and Agency Interest No. 2083 as if reiterated therein.

On June 15, 2004, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-04-0147, which was based upon the following findings of fact:

The Respondent owns and/or operates the Taft/Star Manufacturing Complex Site Logistics facility located at 355 Louisiana Highway 3142, Gate 28 in Taft, St. Charles Parish, Louisiana. The facility operates under Air Permit Number 2719-V0, issued on May 22, 2001. An Administrative Amendment was issued on July 5, 2001.

On or about April 21, 2004, a file review of the Respondent's facility was conducted to determine the degree of compliance with the Act and Air Quality Regulations.

The following violation was noted during the course of the review:

The Department received the Respondent's letters dated August 11, 2003, November 21, 2003, and March 1, 2004, regarding violations that have been discovered at Emission Source Numbers 3404, 3405, and 3409. According to the Respondent's letters, emission testing at Emission Source Number 3409 indicated that this source was not meeting the required 95 percent removal efficiency. In order to correct this deviation, the Respondent routed the emissions from Emission Source Number 3409 to Emission Source Number 3405. It was later determined however, that Emission Source Numbers 3404 and 3405 were also not meeting the required 95 percent removal efficiency and that unpermitted emissions of butanol were being emitted from Emission Source Number 3404. The deviations reportedly began when the permit was issued on May 22, 2001, and are currently ongoing. The excess emissions from these sources are detailed in the table below. By failing to achieve 95 percent efficiency at Emission Source Numbers 3404, 3405, and 3409 as indicated by emission testing, the Respondent is in violation of State Only Specific Condition Number 2 of Air Permit Number 2719-V0. Each pollutant emitted in excess of the permitted limits from each source is a violation of State Only General Condition II of Air Permit Number 2719-V0. By failing to achieve 95 percent efficiency at each of these sources and thereby exceeding the permitted limits at the sources, the Respondent is also in violation of LAC 33:III.501.C.4, and Sections 2057(A)(1) and 2057(A)(2) of the Act. Additionally, the unpermitted pollutant that was emitted from Emission Source Number 3404 is a violation of LAC 33:III.501.C.2, and Sections 2057(A)(1) and 2057(A)(2) of the Act.

Emission Source	Pollutant	2001 Emissions (TPY)	2002 Emissions (TPY)	2003 Emissions (TPY)	2004 Potential Emissions (TPY)	Current Permit Limit
3404	Acrylates	3.03	2.79	2.96	6.45	0.78
3404	Ethyl Acrylate	3.51	3.79	2.84	7.74	1.9
3404	Butanol	1.15	1.06	1.13	2.46	*
3405	Acrylates	1.21	1.25	1.3	4.73	0.3
3405	Ethyl Acrylate	3.6	3.56	2.87	8.9	0.54
3409	Acrylates	0.68	0.59	0.65	4.73	0.3
3409	Ethyl Acrylate	0.34	0.28	0.42	3.56	0.54

* Emissions not included in permit

On June 13, 2005, the Department issued to Respondent an Amended Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-04-0147A, which was based upon the following findings of fact:

The Department hereby amends paragraph IV of the Order portion to read as follows:

“IV.

Upon receiving authorization to construct, the Respondent shall begin construction of the control equipment to achieve compliance with Air Permit Number 2719-V0 and the permitted emission limitations at Emission Source Numbers 3404, 3405, and 3409. The Respondent shall complete construction of and begin implementing all modifications no later than December 15, 2005.”

The Department incorporated all of the remainder of the original Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-04-0147 and Agency Interest No. 2083 as if reiterated therein.

On March 6, 2005, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-05-0028, which was based upon the

following findings of fact:

The Respondent, a wholly owned subsidiary of the Dow Chemical Company, operates a chemical manufacturing facility located at 355 Louisiana Highway 3142, Gate 28 in Taft, St. Charles Parish, Louisiana. The Respondent operates under various permits, including Air Permit Nos. 2422 (M-1) issued on October 12, 1999; 1150T (M-1) issued on December 10, 1989; PSD-LA-598 issued on August 30, 1996; 2422-V0 issued on January 29, 2004 and 2422-V1 issued on September 30, 2004 which encompasses the Olefins I and II Units.

In accordance with Part 70 General Condition R and Louisiana General Condition No. XI of Air Permit No. 2422-V0 and 2422-V1, the Respondent provided information to the Department in notifications dated November 9, 2004 and November 30, 2004. As indicated in the November 9, 2004 and November 30, 2004 notifications, the Respondent had various periods of permitted exceedances. Carbon monoxide (CO) was above permitted emission rates relative to Emission Point Nos. 18A – 18F as listed in Air Permit Nos. 2422-V0 and 2422-V1. The Respondent noted that based on testing data submitted to the Department, excess oxygen might have been insufficient to assure proper combustion to meet emission limits for CO on Emission Point Nos. 18A-18F.

The following violation was noted during the course of review:

- A. In a letter dated December 21, 2004, and in accordance with Part 70 General Condition R and General Condition No. XI of the Air Permit 2422-V0 and 2422-V1, the Respondent provided information to the Department that noted emission limit exceedances for volatile organic compounds (VOCs) and certain toxic air pollutants (TAPs) relative to Emission Point Nos. 2425 and 2429 as follows:

Pollutant	Permitted Emissions Emission Point No. 2425 (Max lb/hr)	Excess Emissions Emission Point No. 2425 (Max lb/hr)
Benzene	0.01	0.05
Pollutant	Permitted Emissions Emission Point No. 2429	Excess Emissions Emission Point No. 2429

VOC (including TAPS)	3.63	7.07
Benzene	0.02	2.08
1,3 Butadiene	0.11	1.44

Emission testing conducted on October 6, 2004, November 5, 2004 and November 8, 2004 indicated that these emissions were higher than permitted. Each exceedance of permitted emission limits is a violation of Air Permit Nos. 2422-V0 and 2422-V1, LAC 33:III.501.C.4 and Sections 2057(A)(1) and 2057(A)(2) of the Act.

On July 23, 2008, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-CN-08-0104, which was based upon the following findings of fact:

The Respondent owns and/or operates the Oxide II Unit, an ethylene oxide production unit. The Oxide II Unit, part of the Taft/Star Manufacturing Complex, is located at 355 Louisiana Highway 3142 Gate 28 in Taft, St. Charles Parish, Louisiana. The Oxide II Unit currently operates under Title V Permit No. 373-V2 issued on June 13, 2008.

The Respondent submitted a Part 70 General Condition R Report dated May 15, 2008, to notify the Department of an emission rate exceedance from its Oxide II Unit. According to the report, the catalyst used in the BOU-1 Blowoff Oxidation Unit (EQT 618) aged prematurely, causing the volatile organic compound (VOC) emissions from the Oxide II Unit's Waste Heat Boiler (Emission Point [EP] 50 and EQT 472) to exceed the boiler's permitted maximum pounds per hour VOC emission rate. The report noted that the boiler emitted up to 175 pounds of VOCs per hour in excess of the 84.10 pounds per hour maximum VOC emission rate established in the Oxide II Unit's permit. Each failure to operate the Oxide II Unit in accordance with all terms and conditions of Title V Permit No. 373-V1 is a violation of LAC 33:III.501.C.4, La. R.S. 30:2057(A)(1), and 30:2057(A)(2).

On or about June 4, 2008, representatives of the Respondent and of the Department met to discuss the emission rate exceedance. The Respondent's representatives explained that the replacement catalyst would take several months to manufacture. In a letter dated June 12, 2008, the Respondent requested interim authorization to continue to operate the BOU-1 Blowoff Oxidation Unit until the replacement catalyst could be manufactured, shipped, and installed at the Oxide II Unit.

The Respondent owns and/or operates the Olefins II Unit, an organic chemical manufacturing unit. The Olefins II Unit, part of the Taft/Star Manufacturing Complex, is located at 355 Louisiana Highway 3142 Gate 28 in Taft, St. Charles Parish, Louisiana. The Olefins II Unit currently operates under Title V Permit No. 2422-V1 issued on September 30, 2004, and the two Administrative Amendments thereto issued on December 22, 2005, and February 14, 2006.

In an Unauthorized Discharge Notification Report dated February 15, 2008, the Respondent notified the Department of a flammable gas leak from three gaps at the base of the Olefins II Unit's Olefins II Flare (OL-II Flare and EP 22B). The leak was reportedly discovered on February 9, 2008, and ended on February 13, 2008. According to a follow-up report dated May 14, 2008, approximately 25,383 pounds of flammable, ethylene-containing gas, 365 pounds of benzene, and 96 pounds of 1,3-butadiene were emitted as a result of the leak. The follow-up report indicated that the leak was preventable. This is a violation of LAC 33:III.905 which states, "When facilities have been installed on a property, they shall be used and diligently maintained in proper working order whenever any emissions are being made which can be controlled by the facilities, even though the ambient air quality standards in affected areas are not exceeded." Control equipment as defined by LAC 33:III.111 is "any device or contrivance, operating procedure or abatement scheme used to prevent or reduce air pollution." This is also a violation La. R.S. 30:2057(A)(2). According to the

follow-up report, to prevent recurrence of the leak or similar incidents “Equipment has been modified to reduce the potential of accumulating liquid in the Olefins 2 flare system. Process control information and diagnostic alarms have been improved for the flare system. Procedures have been revised to manage liquid accumulation in the flare system.”

This settlement includes Air Quality enforcement actions that were issued to Respondent between 1999 and 2008 which had not been resolved with the Department. As a part of this settlement, Respondent and the Department have agreed to include Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-C-06-0177, issued on October 26, 2006, to ensure resolution to the satisfaction of the Department of all air quality enforcement actions issued during that time. As documented in a Memo to the File dated August 13, 2007, the Department noted that Respondent complied with the terms of the Order portion of Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-C-06-0177 and recommended its closure.

Additionally, the Department issued a Violations Clear Letter dated August 30, 2007, noting that, based on the information submitted and actions reported as being taken by Respondent, the Department determined that the issues identified in the Findings of Fact portion of Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-C-06-0177, paragraphs II, III and IV were adequately addressed.

On October 26, 2006, the Department issued to Respondent a Consolidated Compliance Order & Notice of Potential Penalty, Enforcement No. AE-C-06-0177, which was based upon the following findings of fact:

The Respondent owns and/or operates Unit 9 (the facility) of the Taft/Star Manufacturing Complex, a latex manufacturing plant located at 355 Louisiana Highway 3142 Gate 28 in Taft, St. Charles Parish, Louisiana. The facility currently operates under Title V Permit No. 2876-V1 issued

on August 10, 2006. The Taft/Star Manufacturing Complex is a major sources of toxic air pollutants (TAPs) pursuant to LAC 33:III Chapter 51. According to Title V Permit No. 2876-V1, Unit 9 will meet maximum achievable control technology (MACT) requirements by complying with applicable provisions of 40 CFR 63 Subpart FFFF (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON). Unit 9 is an existing source under the MON and the Respondent has chosen to follow the provisions associated with Storage Tanks and Equipment Leaks in the MON for some equipment prior to the mandated compliance date.

On or about October 9, 2006, representatives of the Respondent met with representatives of the Department to discuss vapor balance certification options pertaining to Subpart FFFF. According to the facility's Notification of Compliance Status dated June 2, 2006, and as discussed in the meeting, the Respondent chose to comply with the applicable provisions of Subpart FFFF for some of the facility's equipment prior to the compliance date set forth in Subpart FFFF. As explained in the meeting and reported to the Department in a Semiannual Compliance Report dated September 26, 2006, the facility uses vapor balancing during barge unloading of vinyl acetate monomer to storage tanks at the Respondent's facility. The vapor balancing alternative of Subpart FFFF (40 CFR 63.1253(f), as referenced from 40 CFR 63.2470(e), with exceptions noted in paragraphs (e)(1) through (e)(3) of that section) applies to these barge unloading operations. According to 40 CFR 63.1253(f)(7)(i), this alternative requires the owner or operator of the facility where the barge is reloaded or cleaned to "Submit to the owner or operator of the affected storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of..." 40 CFR 63.1253(f).

The Respondent reportedly requested the certifications discussed in Paragraph II of the Findings of Fact portion of this Compliance Order from offsite cleaning and loading companies transporting vinyl acetate to the storage tanks at the Respondent's facility, but the responses were not direct certifications of compliance with 40 CFR 63.1253(f), as referenced from 40 CFR 63.2470(e). As a result, the Respondent submitted a letter dated May 23, 2006, to the U. S. Environmental Protection Agency (EPA), Region VI and the Department requesting an equivalency determination to allow offsite cleaning and loading "...facilities with equivalent controls subject to state air permitting requirements to certify as suitable reloading or cleaning facilities...." The request was withdrawn on or about September 29, 2006, via an email from the Respondent to EPA, Region VI.

On or about October 23, 2006, a file review of the Respondent's facility was performed to determine the degree of compliance with the Act and the Air Quality Regulations.

The following violations were noted during the course of the review:

The Respondent failed to ensure that the owner or operator of the facility where a barge is being reloaded or cleaned submitted, to the owner or operator of the affected storage tank and to the Administrator, a written certification that the barge reloading or cleaning facility will meet the requirements of 40 CFR 63.1253(f), as referenced from 40 CFR 63.2470(e) with exceptions noted in 40 CFR 63.2470(e)(1) through (e)(3), prior to vapor balancing, to a barge, the TAP vapors displaced from loading of the storage tank at the Respondent's facility. Each processing of barge TAP vapors utilizing the required control techniques, involving a storage tank at the Respondent's facility to which the vapor balancing alternative to 40 CFR 63 Subpart FFFF applies, prior to the submittal of the required certifications is a violation of 40 CFR 63.1253(f)(7)(i) which language has been adopted as a Louisiana Regulation in LAC 33:III.5122, Table X of Title V Permit No. 2876-V1, LAC 33:III.501.C.4, and Section 2057(A)(2) of the Act.

III

Respondent does not admit it committed any violations or that it is liable for any fines, forfeitures and/or penalties. Though the enforcement actions included in this Settlement Agreement

have remained open during negotiation of settlement terms, as to each of the included actions, Respondent addressed the cited instances of violation and complied with the "order" portion of the enforcement action in the time and/or manner specified.

IV

Nonetheless, 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 SIXTY EIGHT THOUSAND SEVEN HUNDRED TWENTY-SIX AND 44/100 DOLLARS (\$68,726.44), of which SIX THOUSAND TWENTY-SIX AND 44/100 DOLLARS (\$6,026.44) represents the Department's enforcement costs, in settlement of the claims set forth in this agreement. The total amount of money expended by Respondent on cash payments to the Department as described above, shall be considered a civil penalty for tax purposes, as required by La. R.S. 30:2050.7(E)(1).

V

Respondent further agrees that the Department may consider the permit record, the Notice of Violation and Potential Penalty, the Compliance Order, the Consolidated Compliance Orders and Notices of Potential Penalties, the Amended Consolidated Compliance Orders and Notices of Potential Penalties, the Violations Clear Letter 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-referenced documents being considered as proving the violations alleged herein for the sole purpose of determining Respondent's compliance history.

VI

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.

VII

This settlement is being made 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.

VIII

The Respondent has caused a public notice advertisement to be placed in the official journal of the parish governing authority in St. Charles Parish, Louisiana. 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 an original proof-of-publication affidavit and an original public notice 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.

IX

Payment is to be made within ten (10) days from notice of the Secretary's signature. If payment is not received within that time, this Agreement is voidable at the option of the Department. Payments are to be made by check, payable to the Department of Environmental Quality, and mailed

or delivered to the attention of Accountant Administrator, Financial Services Division, Department of Environmental Quality, Post Office Box 4303, Baton Rouge, Louisiana, 70821-4303. Each payment shall be accompanied by a completed Settlement Payment Form (Exhibit A).

X

In consideration of the above, any claims for penalties are hereby compromised and settled in accordance with the terms of this Settlement.

XI

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

UNION CARBIDE CORPORATION

BY: J M Algate
(Signature)

Jeanine M Algate
(Print)

TITLE: Responsible Care Leader

THUS DONE AND SIGNED in duplicate original before me this 18th day of December, 20 12, at _____.

Michelle Marney White
NOTARY PUBLIC (ID # 26988)

Michelle Marney White
(stamped or printed)

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Peggy M. Hatch, Secretary

BY: Cfl
Cheryl Sonnier Nolan, Assistant Secretary
Office of Environmental Compliance

THUS DONE AND SIGNED in duplicate original before me this 8th day of April, 20 13, at Baton Rouge, Louisiana.

Perry Theriot
NOTARY PUBLIC (ID # 19181)

Perry Theriot
(stamped or printed)

Approved: Cfl
Cheryl Sonnier Nolan, Assistant Secretary