SITE-SPECIFIC STATE IMPLEMENTATION PLAN

TEXAS AIR CONTROL BOARD

JUNE 18, 1993

SITE-SPECIFIC STATE IMPLEMENTATION PLAN

IV. Historical Summaries

H. Site-Specific

1. Ozone

b. Harris County - Shell Oil Company

General

The Texas Air Control Board (TACB) General Rules §101.23, concerning Alternate Emission Reduction ("Bubble") Policy, allows an owner or operator of any facility that is affected by any control requirements of the TACB Regulations, prior to compliance with such requirements, to request the Executive Director to approve the control of emissions from an alternate facility or from alternate facilities located on the affected property. This procedure is in lieu of compliance with the requirements as prescribed in the regulations. The option is available if the alternate proposed controls are not required by any TACB rule, regulation, permit condition, board order, or court order. In addition, the owner or operator must demonstrate that the alternate controls will yield emission reductions that are substantially equivalent to the emission reductions that would otherwise be required in terms of their quantity, character, air quality impacts, and area affected.

The Shell Oil Company at the Deer Park Manufacturing Complex in Harris County, has applied to the TACB under §101.23 to allow an alternate method of control for three affected vents. Due to the economic unreasonableness of providing additional controls and the minimal amount of emissions emitted (36 pounds per year), Shell is requesting to control an alternate facility on the affected property which would offset those emissions. Implementing the alternate controls on another facility will have the net effect of exceeding the reduction which would be achieved by controlling emissions from the three vents.

The revision of TACB Regulation V §115.317 (regarding Exemptions in Petroleum Refining and Petrochemical Processes), adopted on May 8, 1992, eliminated the exemption of sources with emissions of less than 100 pounds per day. As a result of this action, Shell has requested to alternately control the following vents pursuant to the provisions of §101.23:

1. LTH-1 Vacuum Flash Evaporator Vent (FIN/EPN VLV1138)
2. LTH-2 Vacuum Flash Evaporator Vent (FIN/EPN VLV9160)
3. MEK Dewaxer Stratco Flash Evaporator Vent (FIN/EPN ELBVS121)

The total emissions of the three vents is 36 pounds per year (lbs/yr) of volatile organic compounds (VOC). The Shell proposal (Attachment 1) will reduce emissions from the Alkylation Plant

Analyzer Vent (AZAR-718, EPN SHAR7VNT) by 1.05 tons per year (TPY) of VOC emissions. This will be accomplished through the reduction of the flow through the vent from 6.6 standard cubic feet per hour (SCFH) at 122 degrees Fahrenheit (°F) to 4.95 SCFH at 122°F.

Documentation

In accordance with §101.23, Shell has submitted a request to the Executive Director (Attachment 1) that delineates the justification of the alternate control of LTH-1, LTH-2, and MEK Vents and demonstrates the economic unreasonableness of adding controls to those vents. Attachment 2, a memorandum by the TACB Engineering Services Section, recommends approval of Shell's request and further prescribes the addition of specific conditions which will develop enforceability and integrity of the alternate method of control by bubbling. Attachment 3 is a letter from the Executive Director that approves the "bubble" and the conditions attached to the approval. Attachment 4 contains the provisions for the "bubble" and sets forth the conditions which would invalidate the approval. As requested by the U.S. Environmental Protection Agency (EPA), Attachment 5 provides additional production data, from which the emission rates are based, to substantiate that emission estimates are representative of normal source operations.

The TACB recommends approval for the request of alternately controlling emissions from the Shell facility as indicated in Attachments 2 and 3, provided that the stipulations in Attachment 4 are included in the approval. The approval for alternate control would effectively achieve an emissions reduction of 1.05 TPY instead of only 36 lbs/yr as specified in the revised §115.317. The substantial reduction clearly justifies the approval and intent of the TACB rules.

Attachments

(1) Shell Letter of July 23, 1992 regarding Request for Alternate Method of Control

(2) Texas Air Control Board, Engineering Services Recommendation for Approval

(3) Texas Air Control Board Executive Director Letter of Approval

(4) Provisions for Enforceable Alternate Method of Control

(5) Shell Oil Company letter dated March 24, 1993 regarding EPA Region 6 Request for Two Year Average Production Data on Units Affected by the Proposed "Bubble"

Attachment 1

Shell Oil Company • Shell Chemical Company
A Division of Shell Oil Company

Deer Park Manufacturing Com
P.O. Box 100
Deer Park, TX 77536

July 23, 1992

VIA FACSIMILE AND CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bill Campbell, Executive Director
Texas Air Control Board
12124 Park 35 Circle
Austin, TX 78753

Dear Mr. Campbell:

SUBJECT: LOSS OF EXEMPTION 115.317 OF SUBCHAPTER D (RELATING TO VACUUM-PRODUCING SYSTEMS IN PEIROLEUM REFINERIES) - PROPOSAL FOR ALTERNATE EMISSION REDUCTION UNDER SECTION 101.23

The purpose of this letter is to present a proposal for an alternate emission reduction plan pursuant to Section 101.23 in lieu of controlling three vacuum vents which will shortly require control as a result of the loss of exemption 115.317 (reference our letter of July 14, 1992). The plan meets the requirements set forth in Section 101.23. The proposed emission reductions are not required by any TACB rule, regulation, permit condition, board order or court order. The amount of the emissions in the proposal will significantly offset the amount of emissions from the three vacuum vents, and the character and impact of the emissions are comparable. Finally, the mechanical changes required to implement the emissions can be accomplished by the compliance date of July 31, 1992.

Background

As noted in our letter of July 14, 1992, we initiated a project in 1991 to control the de minimus emissions from four vacuum vents as the result of the elimination of an exemption which allowed vacuum-producing vents in petroleum refineries to emit up to 100 pounds per consecutive 24 hour period. One of these vacuum-producing vents has been controlled by routing it to furnace for destruction. The three remaining vacuum-producing vents emit a combined total of volatile organic compounds (VOCs) estimated at approximately 36 pounds per year, the vast majority of the vent streams being steam and air. Extensive engineering work has been conducted up to this time which indicates that the cost of controlling these remaining vents is 1.0 million dollars at a minimum and could be as high as 1.6 million if continuous emission monitors are required.

Proposal

Shell Deer Park Manufacturing Complex is proposing a much more cost effective emission reduction project which will significantly offset the de minimus emissions from the vacuum-producing vents. The proposal calls for

reducing the flow rate at an analyzer vent in the Alkylation Unit with a resulting decrease in emissions of 1.1 tons per year (2,200 pounds per year) of VOCs. This represents a 61 fold greater reduction in emissions over the control of the vacuum-producing vents. The reduction in flow rate will be implemented through mechanical means which will physically limit the maximum flow rate to a lower level than present conditions.

The amount of decrease in the flow rate was determined as a balance between maximizing the reduction in emissions and minimizing the impact of reducing the flow rate on the operations of the Alkylation Unit. The reduction in flow rate will impact the operation of the Alkylation Unit, in that, the analyzer response time will be somewhat increased thus slowing the unit operator's ability to detect changes in process conditions. It has been determined, however, that for the reduced flow rate selected that the slower analyzer response time will still be within acceptable operational limits. Any greater reduction in flow rate could significantly impact the operations of the unit.

The analyzer vent is 100% VOCs, composed predominantly of hydrocarbons in the C3 and C4 range. The compounds include propane, propylene, isobutane, N-butane, the various isomers of butene, and a small amount of 1,3-butadiene. The composition of the hydorcarbons in the vacuum-producing vents that we propose to offset are toluene in the case the MEK vent, and in the case of the LHT-1 and LHT-2 vents are linear/cyclic saturated hydrocarbons in the 350 to 500 degree F boiling range (kerosene or light lube oil) material. In both cases the hydrocarbons are considered photochemically active in the atmosphere. The reduction of emissions of SARA 313 chemicals (propylene and 1,3-butadiene) from the reducing the analyzer vent amounts to approximately 42 pounds per year while the vacuum-producing vent control project would only eliminate approximately 20 pounds per year of a SARA 313 listed chemical (toluene). Further, when comparing Health Screening Effects levels for toluene and 1,3-butadiene, the level for butadiene is significantly lower (11 ug/m3 vs. 375 ug/m3 annual).

Additional details of our proposal, including process description and calculations are provided in Attachments 1 and 2 and Figure 1.

As the compliance date of July 31, 1992 is rapidly approaching we would appreciate an expedited review and approval.

Very truly yours,

S. A. Reeves
Complex Manager

Attachment 2

Texas Air Control Board

Austin **MEMORANDUM** Texas

To: William R. Campbell, Executive Director

From: Troy W. Dalton, P.E., Engineering Services Section

Date: October 22, 1992

Subject: Shell Oil Company, Deer Park (HG-0659-W) alternate emission reduction request through the use of a "bubble", TACB Regulation 101.23

The Engineering Services Section recommends Shell Oil Company's (Shell) alternate emission reduction request through use of a "bubble" be approved, pending a hearing and State Implementation Plan (SIP) revision. A draft letter and provisions have been prepared for your review.

Summary

Due to the revision of TACB Regulation 115.317, which eliminated the exemption for sources with emissions of less than 100 pounds per day, Shell Oil Company is required to control three sources:

1. LHT-1 Vacuum Flash Evaporator Vent (FIN/EPN VLV1138),
2. LHT-2 Vacuum Flash Evaporator Vent (FIN/EPN VLV9160), and
3. MEK Dewaxer Stratco Flash Evaporator Vent (FIN/EPN ELBVS121),

by August 1, 1992. Shell, in their July 23, 1992 letter to the TACB, requested permission to control the emissions from the Alkylation Plant Analyzer Vent (FIN AZAR-718, EPN SHAR7VNT) in lieu of controlling the emissions from the LHT-1, the LHT-2, and the MEK vents.

Shell's proposal (Shell letter of July 23, 1992 and subsequent fax transmissions) will reduce the emissions from the Alkylation Analyzer Vent by 1.05 tons per year. This will be accomplished through a reduction of the flow through the Alkylation Analyzer Vent from 6.6 SCF/hr @ 122°F to 4.95 SCF/hr @ 122°F.

The emissions from the three vents, LHT-1, LHT-2, and MEK, will be left uncontrolled with a total combined emission of 36 lbs/yr. This alternate emission ("bubble") is authorized under TACB Regulation 101.23 and EPA regulations. Shell has been authorized to use other "bubbles" in the past.

This "bubble" will require a SIP revision. The SIP revision will require a public hearing (EPA may comment) and a letter from the Governor to the EPA, requesting the SIP revision. The comments received in the public hearing could result in different control requirements than those accepted by the TACB. The TACB "bubble" policy allows revision or cancellation of the "bubble," by the Executive Director, after the public hearing.

The TACB "bubble" policy allows for the Executive Director to approve an alternate control point(s) if the emission reductions "... are substantially equivalent to the emission reductions which would otherwise be required in terms of their quantity, character, air quality impacts including health and welfare effects, and area affected." Engineering Services and Region 7, in their review of the Shell proposal, feel that these conditions have been satisfied and the reduction (1.05 tons/yr vs. 36 lbs/yr) is a more than adequate offset. Specific provisions have been developed to ensure the enforceability and integrity of the "bubble."

An approval letter with provisions has been drafted for your review.

cc: Mr. Manuel Aguirre, P.E., Deputy Director, Regulatory Operations
Mr. Lane Hartsock, Deputy Director, Air Quality Planning
Mr. Bill Gill, Director, Emissions Inventory Division
Mr. Barry Irwin, Chief, Regulation Development Division
Mr. Amba Mann, P.E., Chief, SIP Development,
Regulation Development Division
Mr. Gene Dobesh, Region 7

ATTACHMENT 2

7/22/92

LUBE VACUUM VENTS DISPOSAL

ALTERNATE VOC REDUCTION PROPOSAL

Reduce VOC emissions from Alkylation plant analyzer AR-718 by 25% or 1.1 tons/yr. This emissions reduction is accomplished by a combination of equipment modification and operational changes and can be completed by July 31, 1992. The VOC emitted consists of isobutane, trans-2-butene, isobutene, 1-butene, cis-2-butene, N-butane, propane, propylene, isopentane, and 1,3-butadiene.

Emissions Reduction Calculation: AR-718
1991 AEI VOC emissions = 4.4 tons/yr

0.25(4.4) = 1.1 tons/yr

1991 AIR EMISSIONS INVENTORY REPORTABLE QUANTITIES

Analyzer Number	Rate (SCF/Hr)	Stream Factor	Molecular Weight	1991 AEI Total VOC Emissions (tons/yr)
AR-718	6.9	98.5	56	4.4

Notes:

1. Volumetric Flow Rate: Measured via rotameter. One time spot measurement with rotameter essentially at full scale flow rates.
2. Stream Factor: Based on analyzer reliability data.
3. Molecular Weight: Calculated based on stream composition data obtained from a continuous gas chromatograph (GC) analyzer. Calculation method is the summation of the quotients of the mole fractions and their respective pure component molecular weights.
4. AR-718 contains 100 % VOC as reported by the 1991 AEI.

Sample AEI Emissions Calculation using AR-718 data:

0.985(6.9)(24)(365)(1/379.49)(56)(1/2000)(1) = 4.3929 tons/yr
Say 4.4 tons/yr

Factors used in calculation:
- 24 hours/day
- 365 days/year
- 379.49 SCF/mole
- 2000 lbs/ton

ATTACHMENT 1
REDUCTION OF ATMOSPHERIC VENTS FROM A-718

Analyzer A-718 is a gas chromatograph used for on-line analysis at the Alkylation Unit. Process material leaving this analyzer is vented to the atmosphere. A simplified diagram of the analyzer is shown in Figure 1.

The flows through flow indicators FI-1 and FI-2 are controlled by metering valves V1 and V2. These valves have historically been adjusted to achieve a combined flow rate of 4.4 tons/year. The time required for the analyzer to detect changes in the process stream composition is affected by the combined flow rate. If the flow rate is reduced, the time required to detect composition changes increases.

The combined flow rate can be reduced from 4.4 tons/year to 3.3 tons/year by replacing metering valves V1 and V2 and/or adding flow restrictors. This will impact operations by increasing the time required to detect composition changes in the process stream. New metering valves and/or flow restrictors will be installed that will prevent the flow from exceeding 3.3 tons/year by July 31, 1992.

Attachment 3

TEXAS AIR CONTROL BOARD
12124 PARK 35 CIRCLE, AUSTIN, TEXAS 78753, 512/908-1000

KIRK P. WATSON
CHAIRMAN

BOB G. BAILEY
VICE CHAIRMAN

WILLIAM R. CAMPBELL
EXECUTIVE DIRECTOR

SUZANNE I. AHN, M.D.
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WILLIAM H. QUORTRUP
C. H. RIVERS
WARREN H. ROBERTS
MARY ANNE WYATT

December 7, 1992

Mr. S. A. Reeves
Complex Manager
SHELL OIL COMPANY
Deer Park Manufacturing Complex
P.O. Box 100
Deer Park, Texas 77536

Reference: Approval of an Alternate Emission Reduction "Bubble" Plan, by Texas Air Control Board Regulation §101.23

Dear Mr. Reeves:

The Texas Air Control Board (TACB) has received Shell Oil Company's (Shell) request for an alternate emission reduction ("bubble") letter of July 23, 1992 and subsequent "fax" transmissions. This request was necessitated by a change in the TACB regulations which now require Shell to control the volatile organic compound emissions from three vents:

1. LHT-1 Vacuum Flash Evaporator Vent (FIN/EPN VLV1138),
2. LHT-2 Vacuum Flash Evaporator Vent (FIN/EPN VLV9160), and
3. MEK Dewaxer Stratco Flash Evaporator Vent (FIN/EPN ELBVS121).

Shell indicated that the cost of controlling these vents would be economically unfeasible and has requested to alternately control the Alkylation Plant Analyzer Vent (FIN AZAR-718, EPN SHAR7VNT). This alternate control is allowed if all provisions of TACB Regulation §101.23 are met.

The TACB staff has reviewed the Shell "bubble" proposal and found the request to meet the conditions of TACB Regulation §101.23. The approval of the request is hereby granted, provided Shell adheres to all the Alternate Emission Reduction ("Bubble") Plan Provisions dated July 30, 1992 (enclosed).

In granting the Shell proposal, the TACB must apply for a State Implementation Plan revision. The revision will require a public hearing in which the U.S. Environmental Protection Agency and others may comment. These comments may necessitate changes in the provisions, or could cause cancellation of the provision.

If you have any questions about this letter or the provisions, please contact Mr. Troy Dalton of our Engineering Services Section at (512) 908-1541.

Sincerely,

William R Campbell

William R. Campbell
Executive Director

Enclosure

cc: Mr. Thomas H. Diggs, Chief, Planning Section,
U.S. Environmental Protection Agency, Region 6, Dallas
Ms. Jodena Henneke, Regional Director, Houston

Attachment 4

Alternate Emission Reduction ("Bubble") Plan
Provisions for

Uncontrolled Vacuum-Producing Vents

Shell Oil Company
Deer Park Manufacturing Complex
HG-0659-W

July 30, 1992

1. Combined volatile organic compound (VOC) emissions from the Vacuum Flash Evaporator Vent [LTH-1] (FIN/EPN VLV1138), Vacuum Flash Evaporator Vent [LTH-2] (FIN/EPN VLV9160), and the MEK Dewaxer Stratco Flash Evaporator Vent (1988 FIN/EPN ELBVS121, 1990 FIN/EPN VLV1047) shall not be more than thirty-six (36) pounds per year.

2. VOC emissions from the Alkylation Plant Analyzer Vent [Analyzer vent] (FIN AZAR-718, EPN SHAR7VNT) shall not exceed more than 3.15 tons per year as determined by a combined flow rate of 4.95 standard cubic feet per hour.

3. The nature of the VOC emissions from the MEK vent shall consist of only toluene. The VOC emissions from the LTH-1 (FIN/EPN VLV1138) and LTH-2 (FIN/EPN VLV9160) shall consist predominantly of linear/cyclic saturated hydrocarbons in the 350 to 500 degree F boiling range (kerosene or light lube oil) material. The VOC emissions from the Analyzer vent (FIN AZAR-718, EPN SHAR7VNT) shall consist predominantly of hydrocarbons in the C3 and C4 range with an average molecular weight not to exceed fifty-seven (57).

4. Analyzer vent flow must be controlled through a flow measurement device so that under full flow conditions (all metering valves full open) the maximum combined flow will not exceed 5.2 cubic feet per hour at 14.7 psia and 122 degrees Fahrenheit or a combined adjusted flow of 4.95 standard (14.7 psia and 70 degrees Fahrenheit) cubic feet per hour.

5. Shell will include all the above referenced emission points in their 1990 Air Emission Inventory or any revision of the 1990 Air Emission Inventory submission to the Texas Air Control Board (TACB) and all subsequent emission inventories as long as these points have emissions or this "bubble" is in effect. The inventory will show the quantity of emissions and will speciate emissions from each source as noted in Item 3 above.

6. Shell will maintain the following records and/or documents in the equipment files for the analyzer vent in such a manner that they are readily accessible for inspection by the TACB or its representative.

   A. All flow measurement device specifications.

   B. Chart(s) showing the flow rate as a function of flow meter indication (as supplied by the flow device manufacturer) calibrated for butane. The maximum flow allowed through each device must be clearly noted on the chart(s) and the total combined flow must not exceed the conditions shown in Item 4. The maximum level allowable flow for each measurement device must also be indicated on the face of the measurement device.

7. If, in the future, any of the emission points which are referenced in these provisions become subject to additional VOC emission limitation or control through any state, federal or local law, regulation, TACB board order, court order, or ordinance this "bubble" authorization will become void on the date such additional control must be fully implemented. In the event such additional limitation or control is imposed, Shell shall immediately undertake one of the following:

   A. Petition the TACB or its successors for a new "bubble;" or

   B. apply controls as required by TACB Regulation V on the date such additional control must be fully implemented.

Attachment 5

Shell Oil Company • Shell Chemical Company
A Division of Shell Oil Company

Deer Park Manufacturing Complex
P.O. Box 100
Deer Park, TX 77536

March 24, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Troy Dalton
Engineering Services Section
Texas Air Control Board
12124 Park 35 Circle
Austin, TX 78753

Dear Troy:

SUBJECT: EPA REGION 6 REQUEST FOR TWO-YEAR AVERAGE PRODUCTION DATA ON UNITS AFFECTED BY PROPOSED "BUBBLE"

Further to our telephone conversation of last week regarding EPA's request, I am enclosing production data from the Alkylation Unit, the Lube Hydrotreating Unit 1 (LHT-1), the Lube Hydrotreating Unit 2 (LHT-2) and the MEK-Dewaxing Unit for the two years prior to our original request for the alternate emissions reduction (July 1990 to July 1992).

These data indicate that, with the exception of turnarounds, production has been relatively constant over the two years. Turnarounds occurred at the Alkylation Unit during August and September of 1990 and at LHT-2 during August 1991. These units operate essentially 8760 hours a year. These data also are representative of the long-term historical production of the units.

With regards to the emissions from analyzer vent AR718, I am enclosing a data sheet from our Air Emissions Inventory (AEI) data base which presents the speciated emissions in tons per year for calendar years 1990 and 1991. The 1992 AEI is still in preparation, however, it will reflect a partial reduction in emissions as a result of the implementation of the of the flow restriction in July of 1992. The 1993 AEI will reflect the entire decrease in emissions.

I hope that the information presented here is satisfactory. If you require any additional information, please contact me. I will try to locate it as quickly as possible.

Finally, I would like to thank you for all of your hard work and guidance in the development of the "bubble".

Very truly yours,

Michael Hulse
Environmental Compliance

Enclosures

PROCESS UNIT PRODUCT FLOW RATES THROUGH STRATCOS/VACUUM SYSTEMS

	LHT-1 FI456-L1 PROD STOR FLOW Bbl/D		LHT-2 FI853BL2 PROD OIL FROM UNIT Bbl/D		MEK-DEWAXING FI283BLK PO TO STOR Bbl/D	
Jul-90	3264	GOOD	3802	GOOD	4166	GOOD
Aug-90	3046	GOOD	5798	GOOD	4192	GOOD
Aug-90	2936	GOOD	6503	GOOD	2546	GOOD
Sep-90	3129	GOOD	5940	GOOD	4256	GOOD
Oct-90	3104	GOOD	5531	GOOD	4144	GOOD
Nov-90	3467	GOOD	5353	GOOD	5212	GOOD
Dec-90	3019	GOOD	5647	GOOD	4016	GOOD
Jan-91	3034	GOOD	5709	GOOD	4732	GOOD
Feb-91	3025	GOOD	3451	GOOD	4651	GOOD
Mar-91	2375	GOOD	5726	GOOD	3996	GOOD
Apr-91	2914	GOOD	5941	GOOD	4172	GOOD
May-91	3144	GOOD	5598	GOOD	4260	GOOD
Jun-91	2809	GOOD	5310	GOOD	4242	GOOD
Jul-91	2863	GOOD	4441	GOOD	4165	GOOD
Aug-91	3035	GOOD	796	TURNAROUND	4620	GOOD
Sep-91	3189	GOOD	5652	GOOD	4297	GOOD
Oct-91	3584	GOOD	5966	GOOD	5154	GOOD
Nov-91	3275	GOOD	5736	GOOD	3887	GOOD
Dec-91	3107	GOOD	5307	GOOD	5152	GOOD
Jan-92	2992	GOOD	5215	GOOD	3791	GOOD
Feb-92	3155	GOOD	5779	GOOD	4375	GOOD
Mar-92	3318	GOOD	5226	GOOD	4739	GOOD
Apr-92	3386	GOOD	5327	GOOD	4696	GOOD
May-92	3070	GOOD	5567	GOOD	4390	GOOD
Jun-92	2822	GOOD	5490	GOOD	4049	GOOD
Jul-92	3353	GOOD	5561	GOOD	5047	GOOD

MLW 3/16/93 BASED ON PROCESS DATA FROM PROCESS COMPUTER (PROSS II)

From: DP32GWM9--VM29 Date and time 03/19/93 15:31:
To: CH45MH09--VM29 M. HULSE

From: BILL MALTSBERGER
SUBJECT: DPMC ALKYLATION UNIT PRODUCTION

HERE'S THE DATA YOU REQUESTED. PLEASE GIVE ME A CALL IF YOU HAVE ANY QUESTIONS.

DPMC ALKYLATION UNIT

		B/CD CRUDE ALKYLATE ********
1990	JUL	6098
1990	AUG	1932
1990	SEP	1214
1990	OCT	2979
1990	NOV	9555
1990	DEC	6927
1991	JAN	7131
1991	FEB	6664
1991	MAR	7115
1991	APR	6532
1991	MAY	6798
1991	JUN	7065
1991	JUL	7461
1991	AUG	7566
1991	SEP	8378
1991	OCT	8528
1991	NOV	8845
1991	DEC	6707
1992	JAN	8883
1992	FEB	8455
1992	MAR	8380
1992	APR	8427
1992	MAY	8355
1992	JUN	7390
1992	JUL	7928
	AVERAGE	7013

cc: DP32KLH9--VM29 K. L. HUDSON DP32RDM9--VM29 R. D. MOS[redacted]

THANX, BILL
DPMC PRODUCT ANALYSIS DEPT
PROFS NICKNAME GWM
246-6705

E N D O F N O T E

1991

PAEI0410 AIR EMISSIONS INVENTORY PAGE 0009
JUL 22, 1992 Facility Identification (FIN) Report 13:51

JA = FUELSWEST Dept= ALKY/THERMAL CRACKING
Unit= ALKY

FIN= AR718 ANALYZER VENT
FIN Type= ANALYZER
EPN= AR7VENT AR714-AR718 SHARED VENT

EMISSIONS

Total =	4.4312	Tons/Yr
Total Rpt=	4.4312	Tons/Yr
Total VOC=	4.4312	Tons/Yr
SARA VOC=	0.0222	Tons/Yr

Compound	1991 AEI Tons/Yr (current)	1990 AEI Tons/Yr (prior yr)	SARA	HAP
CIS-2-BUTENE	0.453314	0.4372		
ISOBUTANE	1.373677	1.3249		
ISOBUTENE	0.708109	0.6829		
ISOPENTANE	0.010192	0.0098		
N-BUTANE	0.364689	0.3517		
PROPANE	0.060708	0.0586		
PROPYLENE	0.021270	0.0205	*	
TRANS-2-BUTENE	0.874279	0.8432		
1-BUTENE	0.564094	0.5441		
1,3-BUTADIENE	0.000886	0.0009	*	*

Master Copy File 3-

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAR 12 1993

Mr. Lane Hartsock
Deputy Director
Texas Air Control Board
12124 Park 35 Circle
Austin, Texas 78753

Dear Mr. Hartsock:

Thank you for the opportunity to provide comments on the proposed site-specific revision to the State Implementation Plan (SIP) concerning an alternate emission reduction for Shell Oil Company at the Deer Park Manufacturing Complex. Under this alternate emission reduction plan, Shell Oil Company would reduce volatile organic compounds (VOC) emissions by 1.05 tons per year from an alkylation plant analyzer vent in lieu of controlling 36 pounds per year of VOC emissions from three vacuum vents pursuant to Texas Air Control Board (TACB) Regulation §115.317.

The U.S. Environmental Protection Agency (EPA) bases approval of such alternate emission reduction plans, or emission trades, on compliance with the EPA's Emission Trading Policy Statement (ETPS) (see 51 Federal Register 43814, December 4, 1986). The Technical Document Section I.A.1.b. lists special requirements for trades occurring in nonattainment areas that lack an approved attainment demonstration plan. It is unclear whether these more stringent requirements would apply to this trade in light of the 1990 Clean Air Act. Nevertheless, this trade does appear to comply with these requirements (e.g., the 20% additional reduction requirement).

To ensure that real emissions reductions have actually occurred, the ETPS specifies that actual baseline values should generally be based on the two years of operation preceding the application to trade (see Technical Document Section I.A.1.b.(1)(a)(ii)). If historical emissions data from the previous two years do not exist for these vents, the TACB would need to provide assurance to the EPA that the annual emissions estimates for the analyzer vent and three vacuum vents are representative of normal source operations.

Thank you again for the opportunity to comment on this site-specific revision to the SIP. If you have any questions, please contact me at (214) 655-7205 or Leila Yim Surratt at (214) 655-7231.

Sincerely yours,

Gerald W. Fontenot
Chief
Air Programs Branch (6T-A)