



TO J. E. Wyche

DATE October 5, 1982

FROM P. S. Trew

SUBJECT Plant B Process Vent Collection/
Incineration Efficiency, 9/82

Below for your review is a short summary of the performance of the process waste gas collection/incineration systems for the month of September, 1982.

I. COLLECTION SYSTEM EFFICIENCY

UNIT	% TIME OF NON-INCINERATION		
	Sept., 1982	Year-to-Date	1981
No. 1 LP-EDC	100	82.2	71
No. 2 LP-EDC	0.7	6.1	43
No. 3 LP-EDC	0.7	4.6	41
OHC-I	0.2	0.5	1
OHC-II	0.1	0.4	1
VCM-I	0.2	0.5	1
VCM-II	0.3	0.8	1
Tri-Ethane II	0.1	0.4	1
Per-Tri	0.7	2.8	10
Per-Tri DH Still	0.7	2.8	10
Bottoms Plant	0.1	0.7	1
VDCM Plant	0.8	1.0	7
Central Steam Stripper	0.4	0.5	--

Overall collection system efficiency: September, 1982 -- 95.4%
 Year-to-Date -- 93.2%
 1981 -- 84%

II. INCINERATORS' SCRUBBING EFFICIENCY

Incinerator	Permit (lb/ Limits hr)	(lb/ Avg. hr)	Number Samples	Number Above Standard	% Out
No. 1 & 2: Cl ₂ HCl	5 lb/hr	<0.01	6	0	0
	3 lb/hr	<0.01	6	0	0
No. 3: Cl ₂ HCl	5 lb/hr	<3.8	8	2	25
	3 lb/hr	<5.8	8	3	33
No. 4: Cl ₂ HCl	5 lb/hr	<0.01	7	0	0
	3 lb/hr	<0.01	7	0	0

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INCINERATOR HAZARD REVIEW

AGENDA

I. Present flow scheme with brief description of instrumentation.

II. Review of Gaseous Wastes Collection

A. Present material balance

1. Discuss sources of data
2. Consider completeness of data (unknowns in analysis, uncertainty of vent flow rates)

B. Discuss interactions of components

1. Discuss interactions under steady state conditions
2. Discuss potentials due to upset conditions in each plant.

III. Consider specific unresolved questions (Need for fire protection, vapor detectors, etc)

IV. Organize further review meetings, subcommittees, etc.

Feed Streams to Vent Header

All numbers are lbs./day

<u>Component</u>	<u>EDC #1</u>	<u>EDC #2</u>	<u>Per-Tri</u>	<u>OHC</u>
Air (O ₂)	8800 (2540)	11,000 (3170)	69,500 (5140)	17,500 (392)
CH ₄	2480	3100		
CO ₂	3980	4970	115,000	12,500
H ₂ O			3090	640
C ₂ H ₄	4060	5070		13,400
C ₂ H ₆	328	410		190
C ₂ HCl	Tr	Tr	Tr	585
C ₂ Cl ₂	Tr	Tr	12,300	80
VC	Tr	Tr	Tr	750
EC	1240	1550	3420	3420
VDC			12,150	Tr
Trans			15,600	220
Cis			12,400	50
CHCl ₃			515	64
EDC	7160	8950	6600	6600
Tri			14,300	
Per			2420	
	28,048	35,050	256,275	56,000

Note: ^{#1}O₂ quantities are based on assumed O₂ concentration as follows:

EDC #1, 2 8.8 % (wt.)

Per-Tri 2 % "

OHC 7 % "

^{#2}

Per-Tri vent flow rate was assumed to be 1.5 times flow rate prior to expansion.

SL 049449

VENT HEADER CONCENTRATIONS

Wt. %

Component	From EDC	After P/T	After DHC
Air (O ₂)	30.55 (8.8)	27.9 (28.1 ^{3.4})	28.1 (28.1 ^{3.9})
CH ₄	8.62	1.7	1.5
CO ₂	13.81	38.7	36.1
H ₂ O	1.02	1.0	1.0
C ₂ H ₄	14.08	2.9	5.9
C ₂ H ₆	1.14	.2	.3
C ₂ HCl	Tr		.2
C ₂ Cl ₂	Tr	3.8	3.3
VC	Tr		.2
EC	4.31	.9	1.7
VDC		3.8	3.2
Trans		4.9	4.2
Cis		3.9	3.3
CHCl ₃		.1	.2
EDC	24.84	5.0	6.0
Tri		4.5	3.8
Per		.8	.6

Chemical Review

N_2

N_2

O_2

O_2

CH_4

CH_4

CO_2

CO_2

H_2O

H_2O

C_2H_4

C_2H_4

C_2H_6

C_2H_6

C_2HCl

C_2HCl

C_2Cl_2

C_2Cl_2

VC

VC

EC

EC

VDC

VDC

Trans

Trans

Cis

Cis

$CHCl_3$

$CHCl_3$

EDC

EDC

TAI

TAI

PER

PER

HCl

HCl

Cl_2

Cl_2

CO

CO