

	All facilities	1/3 of facilities	2/3 of facilities
Number of Existing Facilities	26	9	17
Number of New Facilities	5	1	4
Total	31	10	21

Flare Management Plan - One-time cost	
Parameter	Value
Cost Per Flare	\$7,400
Total Flares (all 31)	102
Total Flares (existing 26)	82
Avg. Cost Per Facility (all 31)	<b>\$24,348</b>
Avg. Cost Per Facility (existing 26)	\$23,338

Flare Monitor Costs (costs pulled from Flare Impacts memo)			
Monitoring Equipment	Capital Equipment Cost (\$/flare)	Annualized Cost (\$/yr/flare)	Number of Flares Impacted
H2 Analyzer	35,400	22,450	20
Calorimeter	103,300	27,870	24
Flare Gas Flow Monitor	432,700	72,600	12
Steam Controls/Flow Monitor	672,700	111,500	53
Air Controls/Flow Monitor	161,300	48,600	5
Avg. Cost Per Facility (all 31)			

PRD Monitor		
<i>Costs not applicable to new facilities (don't have atmospheric PRDs)</i>		
Parameter	Capital Cost	Annual Cost
Total	\$965,400	\$130,000
# facilities with atmospheric PRDs	21	
Avg. Cost Per Facility (existing 26)	<b>\$46,000</b>	<b>\$6,200</b>

HEX El Paso Method Monitor		
Parameter	Capital Cost	Annual Cost
Total (existing 26)	\$69,000	\$30,000
Total (all 31)	\$137,000	\$27,000
Avg. Cost Per Facility (existing 26)	<b>\$2,700</b>	<b>\$1,200</b>
Avg. Cost Per Facility (all 31)	<b>\$4,400</b>	<b>\$900</b>

Industry Wages			
May 2016 National Industry-Specific Occupational Employment and Wage Estimates			
Sectors 31, 32, and 33 - Manufacturing			
Category	Occupation Code	Title	2016 Wage
Technical	17-2081	Environmental Engineer	42.46
Clerical	43-6014	Office and Administrative	17.91
Managerial	11-9041	Architectural and Engin	69.17

<b>EPA Wages</b>		
	<b>Hourly Mean Wage</b>	<b>With Fringe &amp; Overhead</b>
(GS- 12, step 1) - Tech.	29.76	\$47.62
(GS- 13, step 5) - Mgmt.	40.1	\$64.16
(GS-6, step 3) - Cler.	16.1	\$25.76

[https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2016/GS\\_h.pdf](https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2016/GS_h.pdf)  
or <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/>

2016/GS\_h.pdf

Nationwide Capital Equipment Cost (\$)	Nationwide Total Annualized Cost (\$/yr)
\$708,000	\$449,000
\$2,479,200	\$668,880
\$5,192,400	\$871,200
\$35,653,100	\$5,909,500
\$806,500	\$243,000
<b>\$1,446,000</b>	<b>\$263,000</b>

Loaded Wage
89.17
37.61
145.26

—

<b>Capital/Startup and O&amp;M Costs</b>			
(A)	(B)	(C)	(D)
Source & Monitor Type	Capital/Startup Costs for One Respondent	Number of Respondents with Capital/Startup Costs	Total Capital/ Startup Cost (B X C)
Flare Monitors	\$1,446,000	31	\$44,826,000
PRD Monitor	\$46,000	21	\$966,000
Heat Exchangers - El Paso Method	\$4,400	31	\$136,400
<b>TOTAL</b>			<b>\$45,928,400</b>

(a) Within a given year, there are a maximum of 31 respondents per information collection activit

<b>Total Annual Responses</b>			
(A)	(B)	(C)	(D)
Information Collection Activity	Number of Respondents	Number of Responses	Number of Existing Respondents That Keep Records But Do Not Submit Reports
<b>Notification of Compliance Status</b>			
Flares	41	1	0
PRDs	28	1	0
<b>Periodic Reports</b>			
Flares	41	2	0
PRDs	28	2	0
Decoking Operations	35	2	0
Maintenance Vents	41	2	0
HEX El Paso Method	41	2	0
<b>TOTAL</b>			

(E) Annual Cost (O&M and Capital) for One Respondent	(F) Number of Respondents <sup>a</sup>	(G) Total Annual Cost, (E X F)
\$263,000	41	\$10,783,000
\$6,200	28	\$173,600
\$900	41	\$36,900
		\$10,993,500

y, however the values in column F reflect the sum of these respondents for years 2 and 3.

(E) Total Annual Responses E=(BxC)+D
41
28
82
56
70
82
82
441

**Table 1 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 1**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes
1. Applications	NA												
2. Surveys and Studies	NA												
3. Reporting Requirements													
A. Read Rule	70	\$0	1	70	31	2,170	217	109	2,496	\$217,412	\$0	0	a, b
B. Required Activities													c
1. Flare Monitors													d
a. Capital Cost	0	\$1,446,000	1	0	0	0	0	0	0	\$0	\$0	0	
b. Annualized Cost	0	\$263,000	1	0	0	0	0	0	0	\$0	\$0	0	
2. PRD Monitor													e
a. Capital Cost	0	\$46,000	1	0	0	0	0	0	0	\$0	\$0	0	
b. Annualized Cost	0	\$6,200	1	0	0	0	0	0	0	\$0	\$0	0	
3. HEX El Paso Method													
a. Capital Cost	0	\$4,400	1	0	0	0	0	0	0	\$0	\$0	0	
b. Annualized Cost	0	\$900	1	0	0	0	0	0	0	\$0	\$0	0	
C. Create Information	Inc. in 3B												
D. Gather Information	Inc. in 3E												
E. Report Preparation													c
1. Notification of Compliance Status													
a. Flares	5	\$0	1	5	0	0	0	0	0	\$0	\$0	0	
b. PRDs	15	\$0	1	15	0	0	0	0	0	\$0	\$0	0	
2. Periodic Report													
a. Flares	5	\$0	2	10	0	0	0	0	0	\$0	\$0	0	
b. PRDs	10	\$0	2	20	0	0	0	0	0	\$0	\$0	0	
c. Decoking Operations	3	\$0	2	6	0	0	0	0	0	\$0	\$0	0	
d. Maintenance Vents	4	\$0	2	8	0	0	0	0	0	\$0	\$0	0	
e. Bypass Lines	4	\$0	2	8	0	0	0	0	0	\$0	\$0	0	f
f. HEX El Paso Method	3	\$0	2	6	0	0	0	0	0	\$0	\$0	0	
<b>Reporting Subtotal</b>						2,170	217	109	2,496	\$217,412	\$0	0	

**Table 1 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 1**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes	
4. Recordkeeping Requirements													c	
A. Read Instructions	Inc. in 3.A													
B. Implement Activities	NA													
C. Develop Record System	NA													
D. Record information														
1. Daily Flame Impingement Inspection	0.083	\$0	365	30	0	0	0	0	0	\$0	\$0	0		
2. Decoking Control Measures	2	\$0	10	20	0	0	0	0	0	\$0	\$0	0		
3. Flares	0.4	\$0	365	146	0	0	0	0	0	\$0	\$0	0		
4. PRDs	10	\$0	1	10	0	0	0	0	0	\$0	\$0	0		
5. HEX El Paso Method	0	\$0	1	0	0	0	0	0	0	\$0	\$0	0	g	
6. Maintenance Vents	25	\$0	1	25	0	0	0	0	0	\$0	\$0	0		
7. Bypass Lines	0	\$0	1	0	0	0	0	0	0	\$0	\$0	0		
8. Flare Management Plan	75	\$0	3	225	31	6,975	698	349	8,021	\$698,825	\$0	0	b	
9. Degassing	3	\$0	1	3	0	0	0	0	0	\$0	\$0	0		
E. Personnel Training	20	\$0	1	20	0	0	0	0	0	\$0	\$0	0		
F. Time for Audits	NA													
<b>Recordkeeping Subtotal</b>						6,975	698	349	8,021	\$698,825	\$0	0		
<b>TOTAL</b>						9,145	915	457	10,517	\$916,237	\$0	0		
								Total Hours	Labor	Non-Labor	Total			
								Summary of Respondent Burden	10,517	\$916,237	\$0	\$916,237		
										Initial Capital and Startup	\$217,412			
										Annualized Capital/Start-up and O & M	\$0			

Footnotes:

- (a) There are 26 currently operating facilities, and 5 facilities under construction. We assumed each of the 5 new facilities would commence operations within three years after promulgation of the rule. As such, costs are estimated for 31 facilities.
- (b) This is a one-time cost (e.g., to read rule or develop plan).
- (c) Assumed facilities will read the rule and perform certain one-time activities (e.g., develop flare management plan) in year 1. Assumed that one-third of the facilities would begin complying in year 2 and the remaining two-thirds of the facilities in year 3.
- (d) Includes costs for the following monitoring equipment: H2 analyzer, calorimeter, flare gas flow monitor, steam controls/flow monitor, and air controls/flow monitor.
- (e) 21 of the 31 facilities have atmospheric PRDs.
- (f) Assumed that bypass lines were not used during the 3-year period, so no bypass line periodic reports would be submitted.
- (g) Assumed recordkeeping hours are comparable to previously required water methods, and assigned 0 additional hours to implement the El Paso Method.

**Table 2 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 2**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes
1. Applications	NA												
2. Surveys and Studies	NA												
3. Reporting Requirements													
A. Read Rule	70	\$0	1	70	0	0	0	0	0	\$0	\$0	0	a, b
B. Required Activities													c
1. Flare Monitors													d
a. Capital Cost	0	\$1,446,000	1	0	10	0	0	0	0	\$0	\$14,460,000	0	
b. Annualized Cost	0	\$263,000	1	0	10	0	0	0	0	\$0	\$2,630,000	0	
2. PRD Monitor													e
a. Capital Cost	0	\$46,000	1	0	7	0	0	0	0	\$0	\$322,000	0	
b. Annualized Cost	0	\$6,200	1	0	7	0	0	0	0	\$0	\$43,400	0	
3. HEX El Paso Method													
a. Capital Cost	0	\$4,400	1	0	10	0	0	0	0	\$0	\$44,000	0	
b. Annualized Cost	0	\$900	1	0	10	0	0	0	0	\$0	\$9,000	0	
C. Create Information	Inc. in 3B												
D. Gather Information	Inc. in 3E												
E. Report Preparation													c
1. Notification of Compliance Status													
a. Flares	5	\$0	1	5	10	50	5	3	58	\$5,009	\$0	10	
b. PRDs	15	\$0	1	15	7	105	11	5	121	\$10,520	\$0	7	
2. Periodic Report													
a. Flares	5	\$0	2	10	10	100	10	5	115	\$10,019	\$0	20	
b. PRDs	10	\$0	2	20	7	140	14	7	161	\$14,027	\$0	14	
c. Decoking Operations	3	\$0	2	6	9	54	5	3	62	\$5,410	\$0	18	
d. Maintenance Vents	4	\$0	2	8	10	80	8	4	92	\$8,015	\$0	20	
e. Bypass Lines	4	\$0	2	8	0	0	0	0	0	\$0	\$0	0	f
f. HEX El Paso Method	3	\$0	2	6	10	60	6	3	69	\$6,011	\$0	20	
<b>Reporting Subtotal</b>						589	59	29	677	\$59,011	\$2,682,400	109	

**Table 2 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 2**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes	
4. Recordkeeping Requirements													c	
A. Read Instructions	Inc. in 3.A													
B. Implement Activities	NA													
C. Develop Record System	NA													
D. Record information														
1. Daily Flame Impingement Inspection	0.083	\$0	365	30	10	304	30	15	350	\$30,474	\$0	0		
2. Decoking Control Measures	2	\$0	10	20	10	200	20	10	230	\$20,038	\$0	0		
3. Flares	0.4	\$0	365	146	10	1,460	146	73	1,679	\$146,277	\$0	0		
4. PRDs	10	\$0	1	10	7	70	7	4	81	\$7,013	\$0	0		
5. HEX El Paso Method	0	\$0	1	0	10	0	0	0	0	\$0	\$0	0	g	
6. Maintenance Vents	25	\$0	1	25	10	250	25	13	288	\$25,047	\$0	0		
7. Bypass Lines	0	\$0	1	0	0	0	0	0	0	\$0	\$0	0		
8. Flare Management Plan	75	\$0	3	225	0	0	0	0	0	\$0	\$0	0	b	
9. Degassing	3	\$0	1	3	0	0	0	0	0	\$0	\$0	0		
E. Personnel Training	20	\$0	1	20	31	620	62	31	713	\$62,118	\$0	0		
F. Time for Audits	NA													
<b>Recordkeeping Subtotal</b>						2,904	290	145	3,340	\$290,967	\$0	0		
<b>TOTAL</b>						3,493	349	175	4,017	\$349,978	\$2,682,400	109		
									Total Hours	Labor	Non-Labor	Total		
									Summary of Respondent Burden	4,017	\$349,978	\$2,682,400	\$3,032,378	
											Initial Capital and Startup	\$14,826,000		
											Annualized Capital/Start-up and O & M	\$2,682,400		

Footnotes:

- (a) There are 26 currently operating facilities, and 5 facilities under construction. We assumed each of the 5 new facilities would commence operations within three years after promulgation of the rule. As such, costs are estimated for 31 facilities.
- (b) This is a one-time cost (e.g., to read rule or develop plan).
- (c) Assumed facilities will read the rule and perform certain one-time activities (e.g., develop flare management plan) in year 1. Assumed that one-third of the facilities would begin complying in year 2 and the remaining two-thirds of the facilities in year 3.
- (d) Includes costs for the following monitoring equipment: H2 analyzer, calorimeter, flare gas flow monitor, steam controls/flow monitor, and air controls/flow monitor.
- (e) 21 of the 31 facilities have atmospheric PRDs.
- (f) Assumed that bypass lines were not used during the 3-year period, so no bypass line periodic reports would be submitted.
- (g) Assumed recordkeeping hours are comparable to previously required water methods, and assigned 0 additional hours to implement the El Paso Method.

**Table 3 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 3**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes
1. Applications	NA												
2. Surveys and Studies	NA												
3. Reporting Requirements													
A. Read Rule	70	\$0	1	70	0	0	0	0	0	\$0	\$0	0	a, b
B. Required Activities													c
1. Flare Monitors													d
a. Capital Cost	0	\$1,446,000	1	0	21	0	0	0	0	\$0	\$30,366,000	0	
b. Annualized Cost	0	\$263,000	1	0	31	0	0	0	0	\$0	\$8,153,000	0	
2. PRD Monitor													e
a. Capital Cost	0	\$46,000	1	0	14	0	0	0	0	\$0	\$644,000	0	
b. Annualized Cost	0	\$6,200	1	0	21	0	0	0	0	\$0	\$130,200	0	
3. HEX El Paso Method													
a. Capital Cost	0	\$4,400	1	0	21	0	0	0	0	\$0	\$92,400	0	
b. Annualized Cost	0	\$900	1	0	31	0	0	0	0	\$0	\$27,900	0	
C. Create Information	Inc. in 3B												
D. Gather Information	Inc. in 3E												
E. Report Preparation													c
1. Notification of Compliance Status													
a. Flares	5	\$0	1	5	31	155	16	8	178	\$15,529	\$0	31	
b. PRDs	15	\$0	1	15	21	315	32	16	362	\$31,560	\$0	21	
2. Periodic Report													
a. Flares	5	\$0	2	10	31	310	31	16	357	\$31,059	\$0	62	
b. PRDs	10	\$0	2	20	21	420	42	21	483	\$42,080	\$0	42	
c. Decoking Operations	4	\$0	2	8	26	208	21	10	239	\$20,840	\$0	52	
d. Maintenance Vents	4	\$0	2	8	31	248	25	12	285	\$24,847	\$0	62	
e. Bypass Lines	4	\$0	2	8	0	0	0	0	0	\$0	\$0	0	f
f. HEX El Paso Method	3	\$0	2	6	31	186	19	9	214	\$18,635	\$0	62	
<b>Reporting Subtotal</b>						1,842	184	92	2,118	\$184,550	\$8,311,100	332	

**Table 3 - Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 3**

Burden Item	(A) Respondent Hours per Occurrence (Technical hours)	(B) Non-Labor Costs Per Occurrence	(C) Number of Occurrences Per Respondent Per Year	(D) Technical Hours per Respondent Per Year (A X C)	(E) Number of Respondents Per Year	(F) Technical Hours per Year (D X E)	(G) Clerical Hours per Year (F X 0.1)	(H) Management Hours per Year (F X .05)	(I) Total Hours per Year (F + G + H)	(J) Total Labor Costs Per Year	(K) Total Non- Labor Costs Per Year (B x C x E)	(L) Total Number of Responses per Year (C X E)	Footnotes	
4. Recordkeeping Requirements													c	
A. Read Instructions	Inc. in 3.A													
B. Implement Activities	NA													
C. Develop Record System	NA													
D. Record information														
1. Daily Flame Impingement Inspection	0.083	\$0	365	30	31	943	94	47	1,084	\$94,471	\$0	0		
2. Decoking Control Measures	2	\$0	10	20	31	620	62	31	713	\$62,118	\$0	0		
3. Flares	0.4	\$0	365	146	31	4,526	453	226	5,205	\$453,460	\$0	0		
4. PRDs	10	\$0	1	10	21	210	21	11	242	\$21,040	\$0	0		
5. HEX El Paso Method	0	\$0	1	0	31	0	0	0	0	\$0	\$0	0	g	
6. Maintenance Vents	25	\$0	1	25	31	775	78	39	891	\$77,647	\$0	0		
7. Bypass Lines	0	\$0	1	0	0	0	0	0	0	\$0	\$0	0		
8. Flare Management Plan	75	\$0	3	225	0	0	0	0	0	\$0	\$0	0	b	
9. Degassing	3	\$0	1	3	2	6	1	0	7	\$601	\$0	0		
E. Personnel Training	20	\$0	1	20	31	620	62	31	713	\$62,118	\$0	0		
F. Time for Audits	NA													
<b>Recordkeeping Subtotal</b>						7,700	770	385	8,855	\$771,455	\$0	0		
<b>TOTAL</b>						9,542	954	477	10,973	\$956,005	\$8,311,100	332		
								Total Hours	Labor	Non-Labor	Total			
								Summary of Respondent Burden	10,973	\$956,005	\$8,311,100	\$9,267,105		
										Initial Capital and Startup	\$31,102,400			
										Annualized Capital/Start-up and O & M	\$8,311,100			

Footnotes:

- (a) There are 26 currently operating facilities, and 5 facilities under construction. We assumed each of the 5 new facilities would commence operations within three years after promulgation of the rule. As such, costs are estimated for 31 facilities.
- (b) This is a one-time cost (e.g., to read rule or develop plan).
- (c) Assumed facilities will read the rule and perform certain one-time activities (e.g., develop flare management plan) in year 1. Assumed that one-third of the facilities would begin complying in year 2 and the remaining two-thirds of the facilities in year 3.
- (d) Includes costs for the following monitoring equipment: H2 analyzer, calorimeter, flare gas flow monitor, steam controls/flow monitor, and air controls/flow monitor.
- (e) 21 of the 31 facilities have atmospheric PRDs.
- (f) Assumed that bypass lines were not used during the 3-year period, so no bypass line periodic reports would be submitted.
- (g) Assumed recordkeeping hours are comparable to previously required water methods, and assigned 0 additional hours to implement the El Paso Method.

**Table 4 - Summary of Annual Respondent Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR**

Year	Technical Hours	Clerical Hours	Management Hours	Total Labor Hours	Labor Costs	Non-Labor (Annualized Capital/Startup and O&M) Costs	Total Costs
1	9,145	915	457	10,517	\$916,237	\$0	\$916,237
2	3,493	349	175	4,017	\$349,978	\$2,682,400	\$3,032,378
3	9,542	954	477	10,973	\$956,005	\$8,311,100	\$9,267,105
Total	22,180	2,218	1,109	25,507	\$2,222,220	\$10,993,500	\$13,215,720
Average	7,393	739	370	8,502	\$740,740	\$3,664,500	\$4,405,240
Year	Number of Respondents	Number of Responses	Reporting Hours	Recordkeeping Hours	Total Hours	Hours per Response	Hours Per Respondent
1	31	0	2,496	8,021	10,517	--	2,629
2	31	109	677	3,340	4,017	37	1,004
3	31	332	2,118	8,855	10,973	33	2,743
Total	31	441	5,291	20,216	25,507	58	6,377
Average	31	147	1,764	6,739	8,502	58	2,126

**Table 5 - Annual Agency Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 1**

Burden Item	(A) Number of Occurrences Per Year	(B) Technical Hours Per Occurrence	(C) Tech Hours Per Year (C=A x B)	(D) Management Hours Per Year (D = C x 0.05)	(E) Clerical Hours Per Year (E = C x 0.1)	(F) Total Hours Per Year (C+D+E)	(G) Total Cost Per Year	Footnotes
1. Applications	not applicable							
2. Read and Understand Rule Requirements	11	70	770	39	77	886	\$41,118	a
3. Required Activities								
A. Observe stack tests	0	16	0	0	0	0	\$0	
B. Excess emissions -- Enforcement Activities	0	24	0	0	0	0	\$0	
C. Create Information	not applicable							
D. Gather Information	not applicable							
E. Report Reviews								
1. Review notification of compliance status								
a. Flares	0	5	0	0	0	0	\$0	
b. PRDs	0	5	0	0	0	0	\$0	
2. Review compliance reports								
a. Flares	0	2	0	0	0	0	\$0	
b. PRDs	0	2	0	0	0	0	\$0	
c. Decoking Operations	0	2	0	0	0	0	\$0	
d. Maintenance Vents	0	2	0	0	0	0	\$0	
e. HEX El Paso Method	0	2	0	0	0	0	\$0	
3. Review flare management plan	31	5	155	8	16	178	\$8,277	
F. Prepare annual summary report	1	10	10	1	1	12	\$534	
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =				\$0	per trip		\$0	
<b>TOTAL</b>			935	47	94	1075	\$49,929	

Footnotes:

a Number of occurrences is the number of states and EPA Regions with affected sources (6 states + 5 EPA regions = 11 respondents).

**Table 6 - Annual Agency Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 2**

Burden Item	(A) Number of Occurrences Per Year	(B) Technical Hours Per Occurrence	(C) Tech Hours Per Year (C=A x B)	(D) Management Hours Per Year (D = C x 0.05)	(E) Clerical Hours Per Year (E = C x 0.1)	(F) Total Hours Per Year (C+D+E)	(G) Total Cost Per Year	Footnotes
1. Applications	not applicable							
2. Read and Understand Rule Requirements	0	70	0	0	0	0	\$0	a
3. Required Activities								
A. Observe stack tests	0	16	0	0	0	0	\$0	
B. Excess emissions -- Enforcement Activities	0	24	0	0	0	0	\$0	
C. Create Information	not applicable							
D. Gather Information	not applicable							
E. Report Reviews								
1. Review notification of compliance status								
a. Flares	10	5	50	3	5	58	\$2,670	
b. PRDs	7	5	35	2	4	40	\$1,869	
2. Review compliance reports								
a. Flares	20	2	40	2	4	46	\$2,136	
b. PRDs	14	2	28	1	3	32	\$1,495	
c. Decoking Operations	18	2	36	2	4	41	\$1,922	
d. Maintenance Vents	20	2	40	2	4	46	\$2,136	
e. HEX El Paso Method	20	2	40	2	4	46	\$2,136	
3. Review flare management plan	0	5	0	0	0	0	\$0	
F. Prepare annual summary report	1	10	10	1	1	12	\$534	
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =				\$0	per trip		\$0	
<b>TOTAL</b>			279	14	28	321	\$14,899	

Footnotes:

a Number of occurrences is the number of states and EPA Regions with affected sources (6 states + 5 EPA regions = 11 respondents).

**Table 7 - Annual Agency Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR - Year 3**

Burden Item	(A) Number of Occurrences Per Year	(B) Technical Hours Per Occurrence	(C) Tech Hours Per Year (C=A x B)	(D) Management Hours Per Year (D = C x 0.05)	(E) Clerical Hours Per Year (E = C x 0.1)	(F) Total Hours Per Year (C+D+E)	(G) Total Cost Per Year	Footnotes
1. Applications	not applicable							
2. Read and Understand Rule Requirements	0	70	0	0	0	0	\$0	a
3. Required Activities								
A. Observe stack tests	0	16	0	0	0	0	\$0	
B. Excess emissions -- Enforcement Activities	0	24	0	0	0	0	\$0	
C. Create Information	not applicable							
D. Gather Information	not applicable							
E. Report Reviews								
1. Review notification of compliance status								
a. Flares	31	5	155	8	16	178	\$8,277	
b. PRDs	21	5	105	5	11	121	\$5,607	
2. Review compliance reports								
a. Flares	62	2	124	6	12	143	\$6,622	
b. PRDs	42	2	84	4	8	97	\$4,486	
c. Decoking Operations	52	2	104	5	10	120	\$5,554	
d. Maintenance Vents	62	2	124	6	12	143	\$6,622	
e. HEX El Paso Method	62	2	124	6	12	143	\$6,622	
3. Review flare management plan	0	5	0	0	0	0	\$0	
F. Prepare annual summary report	1	10	10	1	1	12	\$534	
4. Travel expenses: (1 person * 30 hours per year / 8 hours per day * \$75 per diem) + (\$600 per round trip) =				\$0	per trip		\$0	
<b>TOTAL</b>			830	42	83	955	\$44,322	

Footnotes:

a Number of occurrences is the number of states and EPA Regions with affected sources (6 states + 5 EPA regions = 11 respondents).

**Table 8 - Summary of Annual Agency Burden and Cost of Recordkeeping and Reporting Requirements for the Ethylene Production RTR**

Year	Technical Hours	Management Hours	Clerical Hours	Total Hours	Labor Costs	Non-Labor Costs	Total Costs
1	935	47	94	1,075	\$49,929	\$0	\$49,929
2	279	14	28	321	\$14,899	\$0	\$14,899
3	830	42	83	955	\$44,322	\$0	\$44,322
Total	2,044	102	204	2,351	\$109,150	\$0	\$109,150
Average	681	34	68	784	\$36,383	\$0	\$36,383