



April 20, 2012

Illinois EPA
Bureau of Air
Air Quality Planning Section (#39)
P.O. Box 19276
Springfield, IL 62794-9276

Attn: Annual Emission Report

Re: 2011 Annual Emissions Report for 119090AAO – Shell Oil Products US

To Whom It May Concern:

URS Corporation (URS), on behalf of Shell Oil Products US, is submitting the enclosed 2011 Annual Emissions Report (Report) for Federally Enforceable State Operating Permits (FESOP) 11060036, 10120040, and 11050032.

Please contact me with any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert E. Mooshegian".

Robert E. Mooshegian, CHMM
Senior Project Manager
URS Corporation

Encl.: APCA0530 – Annual Emissions Report - 2011

cc: Mr. Kevin E. Dyer, Shell Oil Products, US

1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
Phone: 314.429.0100
Fax: 314.429.0462

Illinois Environmental Protection Agency
Division of Air Pollution Control
DAPC - ANNUAL AIR EMISSIONS REPORT - 2011
- SOURCE DATA -

119090AAO - Shell Oil Products US

SOURCE IDS AND LOCATION	AIRS: 17-119-0440	IEPA USE ONLY	SIC 1: 4613	NAICS 1: 486910
	FINDS:	IEPA USE ONLY	SIC 2:	NAICS 2:
	FEIN: 522074528		SIC 3:	NAICS 3:
	D&B:		SIC 4:	NAICS 4:
	LATITUDE: 38:50:42.3168		SIC 5:	NAICS 5:
	LONGITUDE: 90:04:34.0752		SIC 6:	NAICS 6:

Shell Oil Products US
Chaffer St. and 8th St.
Roxana, IL 62084

SOURCE ADDRESS CONTACT: Kevin E. Dyer
PHONE: (618) 288-7237

Shell Oil Products US
17 Junction Dr. PMB 399
Glen Carbon, IL 62034-43000

ANNUAL EMISSION REPORT MAILING ADDRESS CONTACT: Kevin E. Dyer
PHONE: (618) 288-7237
FAX:
E-Mail:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.



AUTHORIZED SIGNATURE
Kevin E. Dyer, Principal Project Manager

TYPED OR PRINTED NAME AND TITLE

4/18/12

DATE
(618) 288-7237

TELEPHONE NUMBER

119090AAO - Shell Oil Products US

- ANNUAL SOURCE EMISSIONS -

POLLUTANT CODE	SOURCE REPORTED EMISSIONS FOR 2011 (TONS/YEAR)	ALLOWABLE* EMISSIONS (TONS/YEAR)	EMISSIONS** REPORTED FOR 2010 (TONS/YEAR)	IEPA 2011 ESTIMATED EMISSIONS (TONS/YEAR)
CO	0.11	0.511056		0.476986
CO ₂	150.24	681.408000		681.408000
Methane	1.71	0.013060		0.013060
N ₂ O	0.00	0.012492		0.012492
NH ₃	0.00	0.018171		0.018171
NO _x	0.44	0.620256		0.567840
Part	0.01	0.048048		0.043156
PM ₁₀	0.01	0.043156		0.043156
PM _{2.5}	0.01	0.043156		0.043156
SO ₂	0.00	3.699696		0.003407
VOM	2.93	24.928831		24.928831

* The Allowable Emissions (shown above) in the IEPA 2011 Annual Emissions Report are inconsistent with the permitted annual emission rates in permits 10120040, 11050032, and 11060036. Please be aware of this inconsistency during the review of the submitted report.

**Emission units began operation in 2011. No emissions were generated or reported in 2010.

119090AAO - Shell Oil Products US

- PERMIT LISTING -

PERMIT NUMBER	TYPE OF PERMIT	OPERATION NAME	STATUS	STATUS DATE	EXPIRES
10120040	CONSTRUCTION	Soil Vapor Extraction Treatment System	GRANTED	03-01-2011	
11050032	CONSTRUCTION	Soil Vapor Extraction Treatment System w/Dual ICE	GRANTED	05-31-2011	
11060036	LIFETIME	SVE Treatment System	GRANTED	07-14-2011	
11060037	TITLE V	CLOSED			

119090AAO - Shell Oil Products US

- FUEL COMBUSTION DATA -

POINT 0003 - Regenerative Thermal Oxidizer

BEGAN OPERATION: 06/2011

01/2012

PERMIT: 11060036

CEASED OPERATION:

SCC: 40290013

MODE: 01 - Natural gas combustion

SIC: 4613

DESCRIPTION CORRECTION:

BEGAN OPERATION:	<u>01/2012</u>	PERCENT THROUGHPUTS:	DEC - FEB: <u>0.0%</u>	MAR - MAY: <u>0.0%</u>
CEASED OPERATION:	_____		JUN - AUG: <u>0.0%</u>	SEP - NOV: <u>0.0%</u>
FUEL TYPE:	1 NATURAL GAS		HEAT CONTENT:	<u>1,000 Btu/ft³</u>
INPUT (MMBTU/HR):	<u>1.40</u>		SULFUR CONTENT (%):	_____
			ASH CONTENT (%):	_____
			NITROGEN CONTENT (%):	_____

UNITS:	MMBtu
ANNUAL OPERATION	
HOURS/DAY:	0
DAYS/WEEK:	0
WEEKS/YEAR:	0
HOURS/YEAR:	0
RATE/HR:	0.00
CONFIDENTIAL:	No

UNITS:	MMBtu
PEAK OZONE SEASON OPERATION	
HOURS/DAY	0
DAYS/WEEK	0
WEEKS/SEASON	0
HOURS/SEASON	0
START TIME:	00:00
END TIME:	23:59
RATE/HR:	0.00
CONFIDENTIAL:	No

119090AAO - Shell Oil Products US

- FUEL COMBUSTION DATA -

POINT 0003 - Regenerative Thermal Oxidizer

BEGAN OPERATION: ~~06/2011~~

01/2012

PERMIT: 11060036

CEASED OPERATION:

SCC: 40290013

MODE: 01 - Natural Gas Combustion

POLLUTANT CODE	METHOD		EMISSION FACTOR		EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
CO	3	3	84	84 lbs/10 ⁶ scf	0.1092	0.000
CO ₂	3	3	120,000	120,000 lbs/10 ⁶ scf	156	0.000
Methane	3	3	2.3	2.3 lbs/10 ⁶ scf	0.00299	0.000
N ₂ O	3	3	2.2	2.2 lbs/10 ⁶ scf	0.00286	0.000
NH ₃	3	3	3.2	3.2 lbs/10 ⁶ scf	0.00416	0.000
NO _x	3	3	100	100 lbs/10 ⁶ scf	0.13	0.000
PM	3	3	7.6	7.6 lbs/10 ⁶ scf	0.00988	0.000
PM ₁₀	3	3	7.6	7.6 lbs/10 ⁶ scf	0.00988	0.000
PM _{2.5}	3	3	7.6	7.6 lbs/10 ⁶ scf	0.00988	0.000
SO ₂	3	3	0.6	0.6 lb/10 ⁶ scf	0.00078	0.000
VOM	3	3	5.5	5.5 lbs/10 ⁶ scf	0.00715	0.000

POLLUTANT CODE	METHOD		EMISSION FACTOR		OZONE SEASON EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
NO _x	3	3		100 lbs/10 ⁶ scf		0.000
VOM	3	3		5.5 lbs/10 ⁶ scf		0.000

CAPTURING CONTROLS:

CAPTURING STACKS:

STACK 0003 CAPTURE EFFICIENCY: 100%

119090AAO - Shell Oil Products US

- PROCESS DATA -

POINT 001 - Soil vapor extraction system

BEGAN OPERATION: ~~12/2010~~

05/2011

PERMIT: 11060036

CEASED OPERATION: _____

SCC: 50410310

MODE: 01 -

SIC: 4613

DESCRIPTION CORRECTION: MODE 01 - Soil Vapor Extraction System with Internal Combustion Engine (3 units) controls

BEGAN OPERATION: 05/2011

CEASED OPERATION: _____

PERCENT THROUGHPUTS: DEC - FEB: 12.1% MAR - MAY: 9.1%
 JUN - AUG: 39.4% SEP - NOV: 39.4%

UNITS: ~~TONS PROCESSED~~ Pounds Treated

ANNUAL OPERATION	
HOURS/DAY:	24
DAYS/WEEK:	7
WEEKS/YEAR:	33
HOURS/YEAR:	5,544
RATE/HR:	21.14
CONFIDENTIAL:	No

UNITS: ~~TONS PROCESSED~~ Pounds Treated

PEAK OZONE SEASON OPERATION	
HOURS/DAY	24
DAYS/WEEK	7
WEEKS/SEASON	13
HOURS/SEASON	2,184
START TIME:	00:00
END TIME:	23:59
RATE/HR:	12.13
CONFIDENTIAL:	No

119090AAO - Shell Oil Products US

- PROCESS DATA -

POINT 001 - Soil vapor extraction system

BEGAN OPERATION: 6/2005 PERMIT: 11060036

CEASED OPERATION: _____ SCC: 50410310

MODE: 01 - Soil Vapor Extraction System with Internal Combustion Engine (3 units) controls

POLLUTANT CODE	METHOD		EMISSION FACTOR		EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
VOM	2	2		0.05	5.7	1.057

POLLUTANT CODE	METHOD		EMISSION FACTOR		OZONE SEASON EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
VOM		2		0.05		0.606

CAPTURING CONTROLS: 0002

CAPTURING STACKS:

STACK 0002 CAPTURE EFFICIENCY: 100%

119090AAO - Shell Oil Products US

- FUEL COMBUSTION DATA -

POINT 0002 - Internal Combustion Engines (3)
 BEGAN OPERATION: 06/2011 05/2011 PERMIT: 10120040, 11050032
 CEASED OPERATION: 01/2012 SCC: 50410530
 MODE: 01 - Dual Fuel Combustion - Propane/Soil Vapor SIC: 4613

DESCRIPTION CORRECTION:

PERCENT THROUGHPUTS: DEC - FEB: 12.1% MAR - MAY: 9.1%
 JUN - AUG: 39.4% SEP - NOV: 39.4%
 BEGAN OPERATION: 05/2011
 CEASED OPERATION: _____
 FUEL TYPE: 69 Other Dual Fuel HEAT CONTENT: Propane 1,000 Btu/ft³
 INPUT (MMBTU/HR): 18.3 (permitted total of 3 units) HEAT CONTENT: Soil Vapors 21,070 Btu/lb
 ASH CONTENT (%): _____
 NITROGEN CONTENT (%): _____

UNITS: MMBtu/hr	
ANNUAL OPERATION	
HOURS/DAY:	24
DAYS/WEEK:	7
WEEKS/YEAR:	33
HOURS/YEAR:	5,544
RATE/HR:	0.49
CONFIDENTIAL:	No

UNITS: MMBtu	
PEAK OZONE SEASON OPERATION	
HOURS/DAY	24
DAYS/WEEK	7
WEEKS/SEASON	13
HOURS/SEASON	2,184
START TIME:	00:00
END TIME:	23:59
RATE/HR:	0.41
CONFIDENTIAL:	No

119090AAO - Shell Oil Products US

- FUEL COMBUSTION DATA -

POINT 0002 - Internal Combustion Engines (3)
 BEGAN OPERATION: ~~06/2011~~ 05/2011 PERMIT: 11060036
 CEASED OPERATION: 01/2012 SCC: 40290013

MODE: 01 - Dual Fuel Combustion - Propane/Soil Vapor

POLLUTANT CODE	METHOD		EMISSION FACTOR		EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
CO		3		0.082 lbs/MMBtu		0.040
CO ₂		3		110 lbs/MMBtu		54
Methane		3		1.25 lbs/MMBtu		0.616
NO _x		3		0.32 lbs/MMBtu		0.158
PM		3		0.0066 lbs/MMBtu		0.003
PM ₁₀		3		0.0066 lbs/MMBtu		0.003
PM _{2.5}		3		0.0066 lbs/MMBtu		0.003
SO ₂		3		0.0034 lbs/MMBtu		0.002
VOM		3		0.0021 lbs/MMBtu		0.001

POLLUTANT CODE	METHOD		EMISSION FACTOR		OZONE SEASON EMISSION RATE (LB/HR)	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
NO _x		3		0.32 lbs/MMBtu		0.131
VOM		3		0.0021 lbs/MMBtu		0.001

CAPTURING CONTROLS:
 CAPTURING STACKS:

STACK 0002 CAPTURE EFFICIENCY: 100%

119090AAO - Shell Oil Products US

- CONTROL DEVICE DATA -

CONTROL 0001 - Regenerative Thermal Oxidizers
 BEGAN OPERATION: ~~06/2011~~ 01/2012 PERMIT: 11060036
 CEASED OPERATION: _____ CONTROL CODE: 131
 MODE: 01 - NATURAL GAS COMBUSTION

REMOVAL EFFICIENCY

POLLUTANT CODE	ANNUAL OPERATION				PEAK OZONE SEASON OPERATION			
	EFFICIENCY		METHOD	EFFICIENCY		METHOD		
	IEPA	REPORTED		IEPA	REPORTED			
VOM	97%	97%			97%	97%		

CAPTURING CONTROLS:

CAPTURING STACKS:

STACK 0003 CAPTURE EFFICIENCY: 100%

119090AAO - Shell Oil Products US

- CONTROL DEVICE DATA -

CONTROL 0002 - Internal Combustion Engines (3)
 BEGAN OPERATION: ~~06/2011~~ 05/2011 PERMIT: 10120040, 11050032
 CEASED OPERATION: 01/2012 CONTROL CODE: 099

MODE: 01 - Dual Fuel Combustion - Propane/Soil Vapors

REMOVAL EFFICIENCY

POLLUTANT CODE	ANNUAL OPERATION		METHOD		PEAK OZONE SEASON OPERATION		METHOD	
	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED	IEPA	REPORTED
VOM		95%				95%		

CAPTURING CONTROLS:

CAPTURING STACKS:

STACK 0002 CAPTURE EFFICIENCY: 100%

119090AAO - Shell Oil Products US

- STACK DATA -

STACK	DESCRIPTION	DIAMETER (FT)	HEIGHT (FT)	FLOW RATE (ACFM)		TEMPERATURE	
				IEPA	REPORTED	IEPA	REPORTED
0001	Soil vapor extraction system*	0.74 NA	48 NA	1,020	NA	104	NA
0002	Internal Combustion Engine**	0.17	14		336		770
0003	Regenerative Thermal Oxidizer	1.83 1.5	30 18.5	10,000	NA***	200	NA***

*The soil vapor extraction system (POINT 001) exhausted through STACK 0002 in 2011.

**Parameters are for a single engine.

***The regenerative thermal oxidizer did not operate in 2011.