

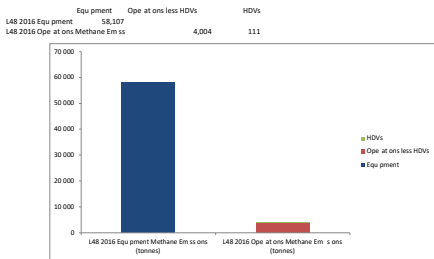
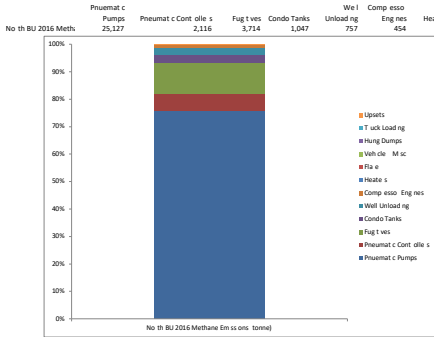
Internal 2016 Reported CH4 (MT)

Source	Anadarko	Arkoma Central	Arkoma Woodford	East Texas	SJN-Florida IBF	SJS-El Paso Conv	SJS-Williams Coal	Wamsutter	Total
Pnuematic Pumps	70	62		236	166			27,698	28,233
Equipment Leaks	1,683	1,572	857	734	2,712	1,358	114	3,714	12,743
Intermittent Pneuamtic Controllers	6	822		545	1,179	993	988	2,116	6,649
Compressor Engines	51	719	10	165	1,859	1,162	2,583	454	7,002
High Bleed Pneumatic Controllers	440	0		0	601	2,953	171		4,165
Well Unloading Venting	126	154			488	21	24	757	1,570
Water Degassing					1,224				1,224
Condensate Tanks				0.02				1,047	1,047
Other	780	583	148	206	827	140	175	11	2,870
Total	3,156	3,912	1,015	1,886	9,056	6,626	4,055	35,797	65,503
Other Breakdown									
Frac/ Refrac Venting	628	0		65	25				717
Compressor Seal Loss	24	485	148	12	12	25	4		710
Amine Vent					349				349
Compressor Blowdown	5	2		10	304				321
LB Pneum Ctrlrs				0	0	94	111		205
Dehys	0.1			115	68				183
Hung Dumps	3	68		0.29	19		21	0.29	111
Flare	97	0		1	0.2			1	99
Upsets	4	25		3	23		22	7	86
Maint Blowdowns	2	2			9	21	17		50
Compressor Starts	18	1			18				36
Heaters	0.18	0.00						2	3
Vehicle + Misc	0.1	0.1			0.3	0.1	0.1	0.3	1.0
Truck Loading	0.1							0.02	0.14
Cavitation									0
Total	3,156	3,912	1,015	1,886	9,056	6,626	4,055	35,797	65,503

EPA 2016 Reported CH4 (MT)

Source	Anadarko Basin - Prodn	Arkoma - Prodn	Arkoma - Gathering	ETX - Prodn	ETX - Gathering	Florida - Prodn	San Juan - Prodn	GGRB - Prodn	Total
Pneumatic Pumps	187	33	9	3	0	0	130	5,318	5,679
Equipment Leaks	2,431	2,846	343	615	240	7	8,424	3,227	18,134
Intermittent Pneumatic Controllers	9,447	6,106	48	325	151	0	35,347	24,218	75,642
Combustion	23	15	112	9	50	0	667	40	914
High Bleed Pneumatic Controllers	581		0		0	0	147		728
Well Unloading Venting	44	418	0	19	0	0	143	521	1,145
Dehydrators	1	0	1	0	3	362	194	1,606	2,168
Other	458	25	27	21	26	34	713	483	1,787
Total	13,173	9,443	539	992	469	403	45,765	35,413	106,196
Other Breakdown									
Tanks	199	1	0	0	13	0	319	191	724
C&W w HF	226	0	0	2	0	0	44	103	375
Recip Compressors	17	11	5	8	4	1	212	8	265
LB Pneums	1.6	0.45	0		0	0	78	145	226
C&W w/out HF	14	12	0	11	0	0	60	37	134
Blowdowns	0	0	22	0	9	2	0	0	33
Centrif Compressors	0	0	0	0	0	19	0	0	19
Flares	0	0	0	0	0	12	0	0	12
Total	13,173	9,443	539	992	469	403	45,765	35,413	106,196

highlighted cells denote where one would expect emissions higher than those reported in the national report.



Source	2016 Internal Methane Emissions (MT)	Number	Type	Size	Emission Factor	Methane Gas Lost (Mscf/yr)	Notes
Anadarko	40	118	piston chemical inj.	?	48.9 scf CH4/day - GRI/EPA "Methane Emissions from the Natural Gas Industry" - Volume 13, page 24	2,106.12	may want to update this with a more accurate emissions factor for the pump.
Anadarko	30	1	dehy pump - Kimray 21015	66-210 gal/hr	360 sch/hr	2,365.20	Appears to be incorrect calculation and does not show operation in 4th quarter
Arkoma Central	14	41	piston chemical inj.	?	48.9 scf CH4/day - GRI/EPA "Methane Emissions from the Natural Gas Industry" - Volume 13, page 24	731.79	may want to update this with a more accurate emissions factor for the pump.
Arkoma Central	48	1	Dehy pump Kimray 10015sc	22-100 gal/hr	300 sch/hr - just an estimate from Kimray 21015	2,628.00	May want to update the calculation with more accurate information on how the dehy operates now. Would add to the dehy calc, not separate for pumps. Dehy does not exist anymore.
East Texas	53	17	diaphragm chemical inj.	?	446 scf CH4/day	2,767.43	may want to confirm the emission factor is accurate for the pumps in use. EPA reported data does not include.
East Texas	96	279	piston chemical inj.	?	48.9 scf CH4/day - GRI/EPA "Methane Emissions from the Natural Gas Industry" - Volume 13, page 24	4,979.73	May want to update this with a more accurate emissions factor for the pump. EPA reported data shows only 3 pumps.
East Texas	1	43.82	Dehy pump Kimray 10015sc	?	300 sch/hr - just an estimate from Kimray 21015	2,628.00	May want to update the calculation with more accurate information on how the dehy operates now. Would add to the dehy calc, not separate for pumps. Dehy does not exist anymore. EPA reported data shows no dehydration units.
SJN-Florida IBF	166	149	?	?	13.3 scf/hr	9,232.74	production and gathering The EPA shows a total of 136 for all of San Juan, North and South
Wamsutter	534	?	methanol pumps	?	47 scf/gal, track gallons used	29,755.75	Used gallons of methanol injected to determine emissions - 633104 gallons. Not sure if this accounts for the solar injection pumps too.
Wamsutter				?		10,276.24	may be overestimating pump emissions here or underestimating with EPA's calculations.
Wamsutter	184.43	20	Sandpiper	?	1.29 scf/pump/min	46,008.35	claimed 100% DRE, should probably be just 98%
Wamsutter		79	Sandpiper (controlled)	?	1.48 scf/pump/min	1,179,818.50	may be overestimating pump emissions here or underestimating with EPA's calculations.
Wamsutter	21217.43	1772	Graco 1040 - Group 1	?	1.70 scf/pump/min	-	may be overestimating pump emissions here or underestimating with EPA's calculations.
Wamsutter	0.00	0	Graco 1040 - Group 2	?	1.29 scf/pump/min	321,455.69	may be overestimating pump emissions here or underestimating with EPA's calculations.
Wamsutter	5762.73	99	Graco 1590	?	8.29 scf/pump/min	1,078,013.03	claimed 100% DRE, should probably be just 98%
Wamsutter		332	Graco 1590 (controlled)	?	8.29 scf/pump/min	26,452.22	claimed 100% DRE, should probably be just 98%
Wamsutter		52	Graco 1040 (controlled)	?	1.29 scf/pump/min		
Total	28,146					2,719,218.79	* total heat trace pumps does not match EPA data of 1951 pumps - shows 2,355, 1891 are not controllerd.

Wamsutter data

Type & Group	Number of Pumps	Days Used in Quarter	SCF/Pump/Minute	scf/hr/pump
Sandpiper	20	272	1.291	77.44
Sandpiper (controlled)	79	272	1.484	89.06
Graco 1040 - Group	1772	272	1.704	102.26
Graco 1040 - Group 2	0	272	1.291	77.44
Graco 1590	99	272	8.285	497.12
Graco 1590 (controlled)	332	272	8.285	497.12
Graco 1040 (controlled)	52	272	1.291	77.44
Totals	1951			

Source	2016 EPA Methane Emissions (MT)	Number	Type	Size	Emission Factor	Methane Gas Lost (Mscf/yr)	Notes
Anadarko Basin - Prodn	187	118	not specified	not specified	13.3 scf/hr	11,709.29	
Anadarko Basin - Prodn			dehy pumps considered with dehy				
Arkoma - Prodn	33	41	not specified	not specified	13.3 scf/hr	1,810.94	
Arkoma - Prodn			No dehy in Akroma on production				
Arkoma - Gathering	9	4	not specified	not specified	13.3 scf/hr	466.03	
ETX - Prodn	3	3	not specified	not specified	13.3 scf/hr	165.23	
ETX - Gathering	0						
San Juan - Prodn	130	136	Notspecifi	not specifi	13.3 scf/hr	7,826.68	San Juan North and South
GGRB - Prodn	3,552	1930	chemical inj	not specifi	13.3	225,476.50	
GGRB - Prodn	1,766	1951	heat trace	not specifi	13.3	112,096.66	
Total	5,679					359,551.32	

Anadarko

Options	Number	Vent Rate (scf/day)	Days of Operation	Methane Mole%	Cost/unit	Total Cost (\$)	Natural Gas Venting (MSCF/yr)	Natural Gas Reduction (MSCF/yr)	Methane Emissions (MT/yr)	Methane Reduction (Mt/yr)	CO2 Emissions (MT/yr)	Increase in CO2 emissions from combustion (Mt/yr)	CO2e (MT/yr)	Net CO2e (MT/yr)	Cost benefit (\$/Mscf)	Value of the Recovered Gas (\$)	Issues and Limiations	Assumptions
Chemical Injection pumps - Base Case	118	48.9	365	85%	0	0	2,106.12	0	34.39	-	-	0	859.66	NA	NA	0		
Route pumps to a control device	118	48.9	365	85%	\$25,000	\$2,950,000	42.12	-	0.69	(33.70)		-	17.19	(842.46)	0	0		Assuming no control device is on-site currently
Route pumps to fuel gas system	118	48.9	365	85%	?	#VALUE!	42.12	-	0.69	(33.70)			17.19	(842.46)			- The pulsating exhaust of the pumps would need to be tampered some how. - Pumps exhaust more gas than needed for the heaters resulting in excess gas that would need to be flared.	
Use electric pumps - powered by grid power	118	0	365	85%		0							-	(859.66)				
Use electric pumps - powered by other source (engine, microturbine, etc.)	118	0	365	85%		0							-	(859.66)				
Use electric pumps - powered by solar power	118	0	365	85%	\$ 25,000.00	\$ 2,950,000.00							-	(859.66)				

OC	SITEID	ANCESTOR	EQUIP_PARENT	EQUIP_LOCATION	DESCRIPTION	CURRENTSTATUS	WMS_CHANGED	DATE	WMSAPI	PLUSGISO14224PLANT	ASSETNUM	REGUL	EQUIP_TYPE	EQUIP_MANF	EQUIP_MODEL
SJN	SJN-2998	DECOMMISSIONED	DECOMMISSIONED	PBE-2-995597	(DO NOT USE) PUMP, WATER, GAS POWERED, METER	DECOMMISSIONED	11/28/2016	00:00:00	50670710900	SOUTHERN UTE 32- 8:23- 2	N148839	PMP-PRD			
SJN	SJN-2998	WSL-701510	KAU-1-701510	PBE-2-701510	PUMP, WATER, GAS POWERED, METER SHED, (529011:99-NOCNT		03/08/2012	00:00:00	50670720500	LITTON FEDERAL GAS UNIT NO.1	N115549	PMP-PRD			
SJN	SJN-2998	WSL-705254	MBD-1-705254	PBE-3-705254	PUMP, WATER, GAS POWERED, SEPARATOR, (5290125 OPERATING		03/09/2012	00:00:00	50670749300	SOUTHERN UTE 33-10;15- 2 NO.1	N161024	PMP-PRD	WILDEN PUMP		M693080
SJN	SJN-2998	WSL-714438	SYS-PROD-714438	PBE-1-714438	PUMP, WATER, GAS POWERED, METER SHED, (529013: OPERATING		03/08/2012	00:00:00	50670731100	SOUTHERN UTE 05-35 NO.1	N104628	PMP-PRD			
SJN	SJN-2998	WSL-722928	SYS-PROD-722928	PBE-2-722928	PUMP, GAS POWERED , (57955933), SOUTHERN UTE 33 OPERATING		03/08/2012	00:00:00	50670646100	SOUTHERN UTE 33- 9; 19- 2	N117471	PMP-PRD	KIMRAY		90
SJN	SJN-2998	WSL-723673	KAU-1-723673	PBE-4-723673	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/09/2012	00:00:00	50670835400	SOUTHERN UTE 33- 9:29- 4	N151448	PMP-PRD			
SJN	SJN-2998	WSL-723675	KAU-1-723675	PBE-2-723675	PUMP, WATER, GAS POWERED, PUMP SHED, (2100103: OPERATING		03/09/2012	00:00:00	50670835300	SOUTHERN UTE 33- 9:32- 4	N150494	PMP-PRD	WILDEN PUMP		M826610
SJN	SJN-2998	WSL-723675	MBD-1-723675	PBE-1-723675	PUMP, WATER, GAS POWERED, SEPARATOR, (2100103 OPERATING		03/09/2012	00:00:00	50670835300	SOUTHERN UTE 33- 9:32- 4	N163435	PMP-PRD	WILDEN PUMP		M932080
SJN	SJN-2998	WSL-995580	KAU-1-995580	PBE-2-995580	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/09/2012	00:00:00	50670774900	SOUTHERN UTE 32- 9; 6- 2	N147285	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995580	MBD-1-995580	PBE-1-995580	PUMP, WATER, GAS POWERED, SEPARATOR, (5795563 OPERATING		03/09/2012	00:00:00	50670774900	SOUTHERN UTE 32- 9; 6- 2	N161308	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995581	KAU-1-995581	PBE-2-995581	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/09/2012	00:00:00	50670764000	SOUTHERN UTE 32- 9; 7- 1	N147308	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995581	MBD-1-995581	PBE-1-995581	PUMP, WATER, GAS POWERED, SEPARATOR, (5795563 OPERATING		03/09/2012	00:00:00	50670764000	SOUTHERN UTE 32- 9; 7- 1	N161331	PMP-PRD	WILDEN PUMP		M718110
SJN	SJN-2998	WSL-995712	MBD-1-995712	PBE-2-995712	PUMP, WATER, GAS POWERED, SEPARATOR, (5795581 OPERATING		03/09/2012	00:00:00	50670736300	SOUTHERN UTE 33-10;22- 3	N161156	PMP-PRD	WILDEN PUMP		M718110
SJN	SJN-2998	WSL-995713	MBD-1-995713	PBE-2-995713	PUMP, WATER, GAS POWERED, SEPARATOR, (5795582 OPERATING		03/09/2012	00:00:00	50670736400	SOUTHERN UTE 33-10;23- 3	N160791	PMP-PRD			
SJN	SJN-2998	WSL-995714	KAU-1-995714	PBE-1-995714	PUMP, WATER, GAS POWERED, METER SHED, (579558: OPERATING		03/08/2012	00:00:00	50670736500	SOUTHERN UTE 33-10;26- 1	N146632	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995714	MBD-1-995714	PBE-2-995714	PUMP, WATER, GAS POWERED, SEPARATOR, (5795583 OPERATING		03/09/2012	00:00:00	50670736500	SOUTHERN UTE 33-10;26- 1	N160766	PMP-PRD	WILDEN PUMP		M733070
SJN	SJN-2998	WSL-995715	KAU-1-995715	PBE-1-995715	PUMP, WATER, GAS POWERED, METER SHED, (579558 OPERATING		03/08/2012	00:00:00	50670748900	SOUTHERN UTE 33-10;16- 1	N146176	PMP-PRD			
SJN	SJN-2998	WSL-995715	SYS-PROD-995715	PBE-2-995715	PUMP, WATER, GAS POWERED, SEPARATOR, (5795581 OPERATING		03/08/2012	00:00:00	50670748900	SOUTHERN UTE 33-10;16- 1	N117167	PMP-PRD	WILDEN PUMP		M813280
SJN	SJN-2998	WSL-995715	SYS-PROD-995715	PBE-3-995715	PUMP, WATER, GAS POWERED, SEPARATOR, (5795581 OPERATING		03/08/2012	00:00:00	50670748900	SOUTHERN UTE 33-10;16- 1	N117165	PMP-PRD	WILDEN PUMP		M442980
SJN	SJN-2998	WSL-995716	KAU-1-995716	PBE-3-995716	PUMP, WATER, GAS POWERED, METER SHED, (579558: OPERATING		03/09/2012	00:00:00	50670749000	SOUTHERN UTE 33-10;22- 4	N152113	PMP-PRD	WILDEN PUMP		M8
SJN	SJN-2998	WSL-995717	KAU-1-995717	PBE-2-995717	PUMP, WATER, GAS POWERED, METER SHED, (579558 OPERATING		03/09/2012	00:00:00	50670751000	SOUTHERN UTE 33-10;20- 3	N145077	PMP-PRD			
SJN	SJN-2998	WSL-995718	KAU-1-995718	PBE-2-995718	PUMP, WATER, GAS POWERED, METER SHED, (579558: OPERATING		03/09/2012	00:00:00	50670751100	SOUTHERN UTE 33-10;33- 1	N145097	PMP-PRD			
SJN	SJN-2998	WSL-995719	KAU-1-995719	PBE-2-995719	PUMP, WATER, GAS POWERED, METER SHED, (579558: OPERATING		03/09/2012	00:00:00	50670759200	SOUTHERN UTE 33-10;28- 3	N145117	PMP-PRD			
SJN	SJN-2998	WSL-995720	SYS-PROD-995720	PBE-2-995720	PUMP, WATER, GAS POWERED, SEPARATOR, (5795582 OPERATING		03/08/2012	00:00:00	50670761200	SOUTHERN UTE 33-10;23- 4	N117171	PMP-PRD	WILDEN PUMP		M847690
SJN	SJN-2998	WSL-995721	KAU-1-995721	PBE-1-995721	PUMP, WATER, GAS POWERED, METER SHED, (579558: OPERATING		03/08/2012	00:00:00	50670773400	SOUTHERN UTE 33-10;25- 1	N117900	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995723	KAU-1-995723	PBE-1-995723	PUMP, WATER, GAS POWERED, METER SHED, (579559: OPERATING		03/08/2012	00:00:00	50670647800	SOUTHERN UTE 33-10;18- 1	N145132	PMP-PRD			
SJN	SJN-2998	WSL-995725	KAU-1-995725	PBE-1-995725	PUMP, WATER, GAS POWERED, METER SHED, (579559 OPERATING		03/08/2012	00:00:00	50670736000	SOUTHERN UTE 33-10;18- 3	N135018	PMP-PRD			
SJN	SJN-2998	WSL-995726	KAU-1-995726	PBE-2-995726	PUMP, WATER, GAS POWERED, METER SHED, (579559 OPERATING		03/09/2012	00:00:00	50670736100	SOUTHERN UTE 33-10;19- 5	N145278	PMP-PRD	WINDEL		
SJN	SJN-2998	WSL-995727	KAU-1-995727	PBE-1-995727	PUMP, WATER, GAS POWERED, METER SHED, (579559 OPERATING		03/08/2012	00:00:00	50670736200	SOUTHERN UTE 33-10;19- 6	N144828	PMP-PRD			
SJN	SJN-2998	WSL-995728	KAU-1-995728	PBE-2-995728	PUMP, WATER, GAS POWERED, METER SHED, (579559 OPERATING		03/09/2012	00:00:00	50670736600	SOUTHERN UTE 33-10;29- 1	N145344	PMP-PRD			
SJN	SJN-2998	WSL-995728	SYS-PROD-995728	PBE-1-995728	PUMP, WATER, GAS POWERED, SEPARATOR, (5795591 OPERATING		03/08/2012	00:00:00	50670736600	SOUTHERN UTE 33-10;29- 1	N105003	PMP-PRD			
SJN	SJN-2998	WSL-995729	KAU-1-995729	PBE-1-995729	PUMP, WATER, GAS POWERED, METER SHED, (579559: OPERATING		03/08/2012	00:00:00	50670736700	SOUTHERN UTE 33-10;31- 1	N145189	PMP-PRD			
SJN	SJN-2998	WSL-995729	MBD-1-995729	PBE-2-995729	PUMP, WATER, GAS POWERED, SEPARATOR, (5795592 OPERATING		03/09/2012	00:00:00	50670736700	SOUTHERN UTE 33-10;31- 1	N159643	PMP-PRD			
SJN	SJN-2998	WSL-995730	MBD-1-995730	PBE-2-995730	PUMP, WATER, GAS POWERED, METER SHED, (579559: OPERATING		03/09/2012	00:00:00	50670736800	SOUTHERN UTE 33-10;32- 1	N159683	PMP-PRD			
SJN	SJN-2998	WSL-995731	KAU-1-995731	PBE-1-995731	PUMP, WATER, GAS POWERED, METER SHED, (579559: OPERATING		03/08/2012	00:00:00	50670736900	SOUTHERN UTE 33-10;32- 2	N145229	PMP-PRD	WINDEL		M8
SJN	SJN-2998	WSL-995731	MBD-1-995731	PBE-2-995731	PUMP, WATER, GAS POWERED, SEPARATOR, (5795592 OPERATING		03/09/2012	00:00:00	50670736900	SOUTHERN UTE 33-10;32- 2	N159686	PMP-PRD	WILDEN		
SJN	SJN-2998	WSL-995732	KAU-1-995732	PBE-1-995732	PUMP, WATER, GAS POWERED, METER SHED, (579559 OPERATING		03/08/2012	00:00:00	50670752800	SOUTHERN UTE 33-10;29- 3	N146499	PMP-PRD	WILDEN PUMP		M4
SJN	SJN-2998	WSL-995733	KAU-1-995733	PBE-1-995733	PUMP, WATER, GAS POWERED, METER SHED, (579559: OPERATING		03/08/2012	00:00:00	50670769600	SOUTHERN UTE 33-10;30- 1	N146219	PMP-PRD			
SJN	SJN-2998	WSL-995733	MBD-1-995733	PBE-2-995733	PUMP, WATER, GAS POWERED, SEPARATOR, (5795592 OPERATING		03/09/2012	00:00:00	50670769600	SOUTHERN UTE 33-10;30- 1	N160505	PMP-PRD			
SJN	SJN-2998	WSL-995796	KAU-1-995796	PBE-1-995796	PUMP, WATER, GAS POWERED, METER SHED, (579558 OPERATING		03/08/2012	00:00:00	50670759100	SOUTHERN UTE 33-10;20- 4	N145250	PMP-PRD			
SJN	SJN-2998	WSL-995582	KAU-1-995582	PBE-1-995582	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/08/2012	00:00:00	50670730200	SOUTHERN UTE 32- 9; 7- 2	N147986	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995582	MBD-1-995582	PBE-2-995582	PUMP, WATER, GAS POWERED, SEPARATOR, (5795563 OPERATING		03/09/2012	00:00:00	50670730200	SOUTHERN UTE 32- 9; 7- 2	N161934	PMP-PRD	WILDEN PUMP		M428000
SJN	SJN-2998	WSL-995583	KAU-1-995583	PBE-1-995583	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/08/2012	00:00:00	50670783200	SOUTHERN UTE 32- 9; 8- 4X	N146678	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995584	KAU-1-995584	PBE-2-995584	PUMP, WATER, GAS POWERED, METER SHED, (579556: OPERATING		03/09/2012	00:00:00	50670776800	SOUTHERN UTE 33- 9:32- 2	N151469	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995619	KAU-1-995619	PBE-1-995619	PUMP, WATER, GAS POWERED, METER SHED, (579562 OPERATING		03/08/2012	00:00:00	50670728400	SOUTHERN UTE 32- 8:16- 3	N138342	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995620	WSL-995620	PBE-1-995620	PUMP, WATER, GAS POWERED, METER SHED, (579562: OPERATING		03/08/2012	00:00:00	50670728500	SOUTHERN UTE 32- 8:20- 1	N98973	PMP-PRD			
SJN	SJN-2998	WSL-995625	KAU-1-995625	PBE-1-995625	PUMP, WATER, GAS POWERED, METER SHED, (579562: OPERATING		03/08/2012	00:00:00	50670734900	SOUTHERN UTE 32- 8:18- 2	N148981	PMP-PRD			
SJN	SJN-2998	WSL-995627	KAU-1-995627	PBE-1-995627	PUMP, WATER, GAS POWERED, METER SHED, (579562: OPERATING		03/08/2012	00:00:00	50670735100	SOUTHERN UTE 32- 8:19- 2	N149418	PMP-PRD			
SJN	SJN-2998	WSL-995655	KAU-1-995655	PBE-2-995655	PUMP, WATER, GAS POWERED, METER SHED, (579564: OPERATING		03/09/2012	00:00:00	50670716900	SOUTHERN UTE 32- 9:22- 5	N147411	PMP-PRD	WILDEN PUMP		M8
SJN	SJN-2998	WSL-995660	KAU-1-995660	PBE-2-995660	PUMP, WATER, GAS POWERED, METER SHED, (579564: OPERATING		03/09/2012	00:00:00	50670729400	SOUTHERN UTE 32- 9:23- 5	N147496	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995660	MBD-1-995660	PBE-1-995660	PUMP, WATER, GAS POWERED, SEPARATOR, (5795543 OPERATING		03/09/2012	00:00:00	50670729400	SOUTHERN UTE 32- 9:23- 5	N161481	PMP-PRD	WILDEN PUMP		M548790
SJN	SJN-2998	WSL-995671	KAU-1-995671	PBE-1-995671	PUMP, WATER, GAS POWERED, METER SHED, (579555 OPERATING		03/08/2012	00:00:00	50670681100	SOUTHERN UTE 32- 9:15- 8	N149379	PMP-PRD			
SJN	SJN-2998	WSL-995672	KAU-1-995672	PBE-2-995672	PUMP, WATER, GAS POWERED, METER SHED, (579555 OPERATING		03/09/2012	00:00:00	50670681200	SOUTHERN UTE 32- 9:15- 5	N147630	PMP-PRD	WILDEN PUMP		M331170
SJN	SJN-2998	WSL-995672	MBD-1-995672	PBE-1-995672	PUMP, WATER, GAS POWERED, SEPARATOR, (5795551 OPERATING		03/09/2012	00:00:00	50670681200	SOUTHERN UTE 32- 9:15- 5	N161594	PMP-PRD	WILDEN PUMP		M548790
SJN	SJN-2998	WSL-995674	KAU-1-995674	PBE-2-995674	PUMP, WATER, GAS POWERED, METER SHED, (579555 OPERATING		03/09/2012	00:00:00	50670718100	SOUTHERN UTE 32- 9:21- 5	N147656	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995675	KAU-1-995675	PBE-2-995675	PUMP, WATER, GAS POWERED, METER SHED, (579555: OPERATING		03/09/2012	00:00:00	50670729700	SOUTHERN UTE 32- 9:21- 6	N147676	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995675	MBD-1-995675	PBE-1-995675	PUMP, WATER, GAS POWERED, SEPARATOR, (5795552 OPERATING		03/09/2012	00:00:00	50670729700	SOUTHERN UTE 32- 9:21- 6	N161645	PMP-PRD	WILDEN PUMP		
SJN	SJN-2998	WSL-995676	KAU-1-995676	PBE-2-995676	PUMP, WATER, GAS POWERED, METER SHED, (579555: OPERATING		03/09/2012	00:00:00	50670731400	SOUTHERN UTE 32- 9:16- 2	N147699	PMP-PRD	WILDEN PUMP		M8
SJN	SJN-2998	WSL-995677	KAU-1-995677	PBE-2-995677	PUMP, WATER, GAS POWERED, METER SHED, (021040 OPERATING		03/09/2012	00:00:00	50670731500	SOUTHERN UTE 32- 9:16- 3	N147722	PMP-PRD			
SJN	SJN-2998	WSL-995677	MBD-1-995677	PBE-1-995677	PUMP, WATER, GAS POWERED, SEPARATOR, (0210401 OPERATING		03/09/2012	00:00:00	50670731500	SOUTHERN UTE 32- 9:16- 3	N161697	PMP-PRD	WILDEN PUMP		M563240
SJN	SJN-2998	WSL-995678	KAU-1-995678	PBE-2-995678	PUMP, WATER, GAS POWERED, METER SHED, (579555: OPERATING		03/09/2012</								

Source	2016 Internal Methane Emissions (MT)	Number	Emission Factor (SCF/hr)	Methane Gas Lost (Mscf/yr)	Notes
Anadarko	440	115	35	35,259.00	
SJN-Florida IBF	601				
SJS-El Paso Conv	2,953				
SJS-Williams Coal	171				
Total	4,165	115		35,259.00	