

SoCalGas, June 15,2020

Rulemaking (R.) 15-01-008 to Adopt Rules and Procedures Governing Commission Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leaks Consistent with Senate Bill 1371, Leno.

In Response to Data Request, R15-01-008 2020 June Report
Appendix 5; Rev. 03/31/2020

Notes:

Use a formula-derived value with the formula used in the Annual Emissions column. Do not use a copy and paste-as-value.

At the end of Annual Emissions Column, add a summation total in a cell for a column total, and then highlight orange.

Distribution M&R Station Leaks and Emissions

Number of Stations	Station Classification	Emission Factor (Mscf/yr/ station)	Annual Emissions (Mscf)	Explanatory Notes / Comments
129	B1	0.964	124	2019 EOY Below Grade < 100# Actual Inlet Press
949	B2	1.84	1,746	2019 Below Grade 100 - 300# Actual Inlet Press
647	B3	12.176	7,878	2019 EOY Below Grade > 300# Actual Inlet Press
12	A1	40.6	487	2019 EOY Above Grade < 100# Actual Inlet Press
64	A2	896.5	57,376	2019 Above Grade 100 - 300# Actual Inlet Press
165	A3	1684.5	277,943	2019 EOY Above Grade > 300# Actual Inlet Press
			345,554	

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Distribution M&R Station Damage (3rd party dig-ins, natural disasters, etc.):

ID	Geographic Location	Damage Type	Pipe Material	Pipe Size (nominal)	Pipe Age (months)	Pressure (psi)	Leak Grade	Above Ground or Below Ground	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/Day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
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Sum total 0

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Distribution M&R Station Blowdowns:

ID	Geographic Location	Number of Blowdown Events	Annual Emissions (Mscf)	Explanatory Notes / Comments
N/A	SoCalGas Territory	16,014	64	External District Reg. Inspection at Distribution M&R Stations - Estimated avg. gas vented = 4 scf/insp
N/A	SoCalGas Territory	1,820	22	Reg. Change out & Internal Reg. Inspection at Distribution M&R Stations - Estimated avg. gas vented = 12 scf/ea. The count includes 64 straight reg removals. Relief Valve Inspection at Distribution M&R Stations - Estimated avg. gas vented = 20 scf/insp (annual test with Nitrogen, gas vented is volume of gas in valve). Need Tony to provide 2019 Relief Valve Inspection count at DRS.
N/A	SoCalGas Territory	329	7	
N/A	SoCalGas Territory	87	3	Quarterly Orifice Plate Inspection at 14 BTU District Meters - Estimated avg. gas vented = 30 scf/insp
N/A	SoCalGas Territory	83	0.17	Pneumatic Device Inspection - Estimated avg. gas vented = 2 scf/insp. Inspection count includes Pneumatic Devices with service and monitor pilot regulators and ones on standby run. Still waiting for Tony to provide 2019 Pneumatic Device Inspections.
N/A	SoCalGas Territory	46	1	Filter Change out or Filter Inspection w/parts replacement - Estimated avg. gas vented = 30 scf/ea

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Distribution M&R Station Component Vented Emissions:

ID/Number of Devices	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Number of Days Emitting	Engineering or Manufacturer's based Estimate of Emissions (Mscf/day/dev)	Annual Emissions (Mscf)	Explanatory Notes / Comments
15	SoCalGas Territory	P	I	Becker VRP		365	0.0576	N/A	Intermittent Bleed Pneumatic Device emissions are included in Distribution M&R Above Grade Station emission factors. Count includes only those Pneumatic Devices with service pilot regulators.

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Notes:

The data collected on this sheet is for informational purposes and will not be included in the emissions inventory for 2019. The worksheet is designed to track actual leaks for future reference and to determine if an actual leak based emission accounting is feasible for M&R stations.

If you record data using this table and you only leak survey part of your system, you must extrapolate emissions from leaks up to account for emissions from your entire system for the year.

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The emissions captured on this tab represent the emissions associated unintentional leaks that if repaired would not be leaking. If the component is releasing gas or "bleeding" as a result of its design or function then it is not to be captured in this tab.

Distribution M&R Station Component Fugitive Leaks:

New Column

ID	Geographic Location	Station Classification	Device Type	Bleed Rate	Manufacturer	Pressure (psi)	Discovery Date (MM/DD/YY)	Repair Date (MM/DD/YY)	Number of Days Leaking	Emission Factor (Mscf/day)	Annual Emissions (Mscf)	Explanatory Notes / Comments
520002291821	92277	B3	BV		RKWL/NORDSTROM (STD)		12/12/2019	12/12/2019	346 N/A	N/A	N/A	
520002251386	90041	B3	BV		KEROTEST		12/6/2019	12/6/2019	340 N/A	N/A	N/A	
520002251386	90041	B3	BV		KEROTEST		12/6/2019	12/6/2019	340 N/A	N/A	N/A	
520002288416	93648	B2	BV		RKWL/NORDSTROM (STD)		12/5/2019	12/5/2019	339 N/A	N/A	N/A	
520002251401	91390	B3	BV		ROCKWELL (STD.)		11/13/2019	11/13/2019	317 N/A	N/A	N/A	
520002251377	93263	A2	BV		RKWL/NORDSTROM (STD)		11/7/2019	11/7/2019	311 N/A	N/A	N/A	
520002153818	90265	B2	BV		SOCAL GENERAL USE		10/23/2019	10/23/2019	296 N/A	N/A	N/A	
520002262423	92337	B2	BV		KEROTEST		10/23/2019	10/23/2019	296 N/A	N/A	N/A	
520002262422	90028	B3	BV		KEROTEST		10/23/2019	10/23/2019	296 N/A	N/A	N/A	
520002262740	92582	B3	BV		ROCKWELL (STD.)		10/23/2019	10/23/2019	296 N/A	N/A	N/A	
520002153865	90265	B2	BV		MUELLER		10/18/2019	10/18/2019	291 N/A	N/A	N/A	
520002153819	90265	B2	BV		RKWL/NORDSTROM (STD)		10/17/2019	10/17/2019	290 N/A	N/A	N/A	
54000345518	90265	B2	BV		ROCKWELL (STD.)		10/9/2019	10/9/2019	282 N/A	N/A	N/A	
54000345518	90265	B2	BV		ROCKWELL (STD.)		10/9/2019	10/9/2019	282 N/A	N/A	N/A	
520002154648	91367	A2	BV		KEROTEST		10/4/2019	10/4/2019	277 N/A	N/A	N/A	
520002154648	91367	A2	BV		KEROTEST		10/4/2019	10/4/2019	277 N/A	N/A	N/A	
520002154615	93265	B2	BV		RKWL/NORDSTROM (STD)		10/2/2019	10/2/2019	275 N/A	N/A	N/A	
520002154632	93249	A2	BV		ROCKWELL (STD.)		10/1/2019	10/1/2019	274 N/A	N/A	N/A	
520002098281	90022	B3	BV		KEROTEST		9/25/2019	9/25/2019	268 N/A	N/A	N/A	
520002098281	90022	B3	BV		KEROTEST		9/25/2019	9/25/2019	268 N/A	N/A	N/A	
520002098281	90022	B3	BV		KEROTEST		9/25/2019	9/25/2019	268 N/A	N/A	N/A	
520002136357	91355	B2	BV		KEROTEST		9/20/2019	9/20/2019	263 N/A	N/A	N/A	
520002135401	90272	B2	BV		RKWL/NORDSTROM (STD)		9/19/2019	9/19/2019	262 N/A	N/A	N/A	
520002160127	90501	B2	BV		KEROTEST		9/17/2019	9/17/2019	260 N/A	N/A	N/A	
520002156663	90222	A2	BV		ROCKWELL (STD.)		9/6/2019	9/6/2019	249 N/A	N/A	N/A	
520002156663	90222	A2	BV		ROCKWELL (STD.)		9/6/2019	9/6/2019	249 N/A	N/A	N/A	
520002135418	90265	B2	BV		SOCAL GENERAL USE		9/4/2019	9/4/2019	247 N/A	N/A	N/A	
520002135418	90265	B2	BV		RKWL/NORDSTROM (STD)		9/4/2019	9/4/2019	247 N/A	N/A	N/A	
520002150956	93060	A2	BV		RKWL/NORDSTROM (STD)		8/30/2019	8/30/2019	242 N/A	N/A	N/A	
520002146122	92647	B2	BV		ROCKWELL (STD.)		8/20/2019	8/20/2019	232 N/A	N/A	N/A	
520002095903	93618	B2	BV		RKWL/NORDSTROM (STD)		8/19/2019	8/19/2019	231 N/A	N/A	N/A	
520002115843	90501	B2	BV		KEROTEST		8/9/2019	8/9/2019	221 N/A	N/A	N/A	
520002142377	91360	B2	BV		ROCKWELL (STD.)		8/8/2019	8/8/2019	220 N/A	N/A	N/A	
520002142377	91360	B2	BV		ROCKWELL (STD.)		8/8/2019	8/8/2019	220 N/A	N/A	N/A	
520002095207	92801	B2	BV		GROVE		8/1/2019	8/1/2019	213 N/A	N/A	N/A	
520002115791	90505	B2	BV		KEROTEST		8/1/2019	8/1/2019	213 N/A	N/A	N/A	
520002115791	90505	B2	BV		KEROTEST		8/1/2019	8/1/2019	213 N/A	N/A	N/A	
520002141060	92240	B3	BV		ROCKWELL (HYPERSEAL)		7/28/2019	7/28/2019	209 N/A	N/A	N/A	
520002078979	93430	B2	BV		RKWL/NORDSTROM (STD)		7/25/2019	7/25/2019	206 N/A	N/A	N/A	
520002095217	91767	B2	BV		ROCKWELL (STD.)		7/19/2019	7/19/2019	200 N/A	N/A	N/A	
520002121443	90717	B2	BV		RKWL/NORDSTROM (STD)		7/9/2019	7/9/2019	190 N/A	N/A	N/A	
520002096280	92345	B2	BV		WALWORTH		7/5/2019	7/5/2019	186 N/A	N/A	N/A	
520001974235	93033	A3	BV		KEROTEST		6/25/2019	6/25/2019	176 N/A	N/A	N/A	
520002078593	91367	A3	BV		ROCKWELL (STD.)		6/17/2019	6/17/2019	168 N/A	N/A	N/A	
520002098280	92584	B3	BV		KEROTEST		6/13/2019	6/13/2019	164 N/A	N/A	N/A	
520002098280	92584	B3	BV		KEROTEST		6/13/2019	6/13/2019	164 N/A	N/A	N/A	
520002098280	92584	B3	BV		KEROTEST		6/13/2019	6/13/2019	164 N/A	N/A	N/A	
520002098280	92584	B3	BV		KEROTEST		6/13/2019	6/13/2019	164 N/A	N/A	N/A	
520002077214	90280	B2	BV		ROCKWELL (STD.)		6/12/2019	6/12/2019	163 N/A	N/A	N/A	
520002017757	91711	B2	BV		RKWL/NORDSTROM (STD)		5/30/2019	5/30/2019	150 N/A	N/A	N/A	
520002017757	91711	B2	BV		RKWL/NORDSTROM (STD)		5/30/2019	5/30/2019	150 N/A	N/A	N/A	
520002057924	92324	B2	BV		ROCKWELL (STD.)		5/20/2019	5/20/2019	140 N/A	N/A	N/A	
520002017760	93292	B2	BV		KEROTEST		5/14/2019	5/14/2019	134 N/A	N/A	N/A	
520002056770	92653	B3	BV		RKWL/NORDSTROM (STD)		5/9/2019	5/9/2019	129 N/A	N/A	N/A	
520002080408	91786	B2	BV		ROCKWELL (STD.)		5/7/2019	5/7/2019	127 N/A	N/A	N/A	
520002073843	93033	A2	BV		SOCAL GENERAL USE		4/26/2019	4/26/2019	116 N/A	N/A	N/A	
520002035982	91770	B1	BV		KEROTEST		4/17/2019	4/17/2019	107 N/A	N/A	N/A	
520001989584	93436	B3	BV		RKWL/NORDSTROM (STD)		4/15/2019	4/15/2019	105 N/A	N/A	N/A	
520002066632	91325	B3	BV		KEROTEST		4/15/2019	4/15/2019	105 N/A	N/A	N/A	
520002038025	91325	B2	BV		ROCKWELL (STD.)		4/11/2019	4/11/2019	101 N/A	N/A	N/A	
520002037797	91340	B2	BV		KEROTEST		4/9/2019	4/9/2019	99 N/A	N/A	N/A	
520002037312	90019	B2	BV		RKWL/NORDSTROM (STD)		4/8/2019	4/8/2019	98 N/A	N/A	N/A	
520002037253	92595	B3	BV		RKWL/NORDSTROM (STD)		4/1/2019	4/1/2019	91 N/A	N/A	N/A	
520002054261	92567	B3	BV		ROCKWELL (STD.)		3/29/2019	3/29/2019	88 N/A	N/A	N/A	
520002054238	92545	B3	BV		RKWL/NORDSTROM (STD)		3/29/2019	3/29/2019	88 N/A	N/A	N/A	
520002051012	92345	A2	BV		RKWL/NORDSTROM (STD)		3/28/2019	3/28/2019	87 N/A	N/A	N/A	
520002017326	93292	B2	BV		KEROTEST		3/26/2019	3/26/2019	85 N/A	N/A	N/A	
520002017761	91324	A3	BV		ROCKWELL (STD.)		3/25/2019	3/25/2019	84 N/A	N/A	N/A	
520002018032	91324	B2	BV		RKWL/NORDSTROM (STD)		3/15/2019	3/15/2019	74 N/A	N/A	N/A	
520002047318	93662	B2	BV		RKWL/NORDSTROM (STD)		3/15/2019	3/15/2019	74 N/A	N/A	N/A	
520002017762	92374	A2	BV		RKWL/NORDSTROM (STD)		3/12/2019	3/12/2019	71 N/A	N/A	N/A	
520002017335	92374	B2	BV		RKWL/NORDSTROM (STD)		3/5/2019	3/5/2019	64 N/A	N/A	N/A	
520002017748	93422	B3	BV		MUELLER		3/5/2019	3/5/2019	64 N/A	N/A	N/A	
520002016007	93422	B3	BV		RKWL/NORDSTROM (STD)		3/4/2019	3/4/2019	63 N/A	N/A	N/A	
520002017339	93422	B2	BV		RKWL/NORDSTROM (STD)		3/4/2019	3/4/2019	63 N/A	N/A	N/A	
520002017339	93422	B2	BV		RKWL/NORDSTROM (STD)		3/4/2019	3/4/2019	63 N/A	N/A	N/A	
520002033615	93725	B2	BV		RKWL/NORDSTROM (STD)		2/28/2019	2/28/2019	59 N/A	N/A	N/A	
520002033616	92404	B2	BV		RKWL/NORDSTROM (STD)		2/28/2019	2/28/2019	59 N/A	N/A	N/A	
520002033225	93267	B3	BV		KEROTEST		2/28/2019	2/28/2019	59 N/A	N/A	N/A	
520001969581	93267	B2	BV		RKWL/NORDSTROM (STD)		2/26/2019	2/26/2019	57 N/A	N/A	N/A	

520001989188	92545	B3	BV	RKWL/NORDSTROM (STD)	2/22/2019	2/22/2019	53	N/A	N/A
520001989188	92545	B3	BV	RKWL/NORDSTROM (STD)	2/22/2019	2/22/2019	53	N/A	N/A
520001989344	93442	B2	BV	RKWL/NORDSTROM (STD)	2/19/2019	2/19/2019	50	N/A	N/A
520001989344	93442	B2	BV	RKWL/NORDSTROM (STD)	2/19/2019	2/19/2019	50	N/A	N/A
520002032871		B2	BV	KEROTEST	2/19/2019	2/19/2019	50	N/A	N/A
520002032871		B2	BV	ROCKWELL (STD.)	2/19/2019	2/19/2019	50	N/A	N/A
520001989165		B2	BV	ROCKWELL (STD.)	2/15/2019	2/15/2019	46	N/A	N/A
520001989372	93268	A3	BV	RKWL/NORDSTROM (STD)	2/14/2019	2/14/2019	45	N/A	N/A
520001989197		B3	BV	MUELLER	2/13/2019	2/13/2019	44	N/A	N/A
520001989169	92404	B2	BV	RKWL/NORDSTROM (STD)	2/7/2019	2/7/2019	38	N/A	N/A
520001989170	92404	BV	BV	ROCKWELL (STD.)	2/7/2019	2/7/2019	38	N/A	N/A
520001989374	93206	B2	BV	KEROTEST	2/7/2019	2/7/2019	38	N/A	N/A
520001988962	90201	B1	BV	RKWL/NORDSTROM (STD)	2/6/2019	2/6/2019	37	N/A	N/A
520001989164		B2	BV	ROCKWELL (STD.)	2/6/2019	2/6/2019	37	N/A	N/A
520001989164		B2	BV	ROCKWELL (STD.)	2/6/2019	2/6/2019	37	N/A	N/A
520001988948	90706	B2	BV	RKWL/NORDSTROM (STD)	2/5/2019	2/5/2019	36	N/A	N/A
520001989101	90201	B3	BV	ROCKWELL (HYPERSEAL)	2/5/2019	2/5/2019	36	N/A	N/A
520001989108	90302	B2	BV	KEROTEST	2/1/2019	2/1/2019	32	N/A	N/A
520001968472		B1	BV	RKWL/NORDSTROM (STD)	1/30/2019	1/30/2019	30	N/A	N/A
520001968472		B1	BV	RKWL/NORDSTROM (STD)	1/30/2019	1/30/2019	30	N/A	N/A
520002009767	92404	B2	BV	RKWL/NORDSTROM (STD)	1/24/2019	1/24/2019	24	N/A	N/A
520001968431	92592	B3	BV	ROCKWELL (STD.)	1/23/2019	1/23/2019	23	N/A	N/A
520001969674	90012	B1	BV	RKWL/NORDSTROM (STD)	1/23/2019	1/23/2019	23	N/A	N/A
520002010053	93021	B3	BV	RKWL/NORDSTROM (STD)	1/23/2019	1/23/2019	23	N/A	N/A
520001970229	91360	A2	BV	RKWL/NORDSTROM (STD)	1/17/2019	1/17/2019	17	N/A	N/A
520001969152	93616	B3	BV	KEROTEST	1/11/2019	1/11/2019	11	N/A	N/A
520001968854	90022	B2	BV	RKWL/NORDSTROM (STD)	1/10/2019	1/10/2019	10	N/A	N/A
520001969658	93312	B2	BV	KEROTEST	1/9/2019	1/9/2019	9	N/A	N/A
520001969088	92410	B3	BV	RKWL/NORDSTROM (STD)	1/8/2019	1/8/2019	8	N/A	N/A
520001969107	90022	B3	BV	KEROTEST	1/7/2019	1/7/2019	7	N/A	N/A
520001969143	92584	B3	BV	KEROTEST	1/7/2019	1/7/2019	7	N/A	N/A
520001969125	90022	B3	BV	KEROTEST	1/2/2019	1/2/2019	2	N/A	N/A
520002319351	93256	B3	C		12/24/2019	12/24/2019	358	N/A	N/A
520002301256	93066	B2	C		12/19/2019	12/19/2019	353	N/A	N/A
520002296478		B3	C		12/18/2019	12/18/2019	352	N/A	N/A
520002251388	90042	B3	C		12/17/2019	12/17/2019	351	N/A	N/A
520002270890		B2	C		12/16/2019	12/16/2019	350	N/A	N/A
540000347054	93203	B2	C		12/16/2019	12/16/2019	350	N/A	N/A
520002154876	93436	A3	C		12/13/2019	12/13/2019	347	N/A	N/A
520002270502	93225	B2	C		12/12/2019	12/12/2019	346	N/A	N/A
520002291821	92277	B3	C		12/12/2019	12/12/2019	346	N/A	N/A
520002270505	93225	B2	C		12/11/2019	12/11/2019	345	N/A	N/A
520002291016	91384	A3	C		12/11/2019	12/11/2019	345	N/A	N/A
520002291153	90035	B2	C		12/11/2019	12/11/2019	345	N/A	N/A
520002290745	91367	B3	C		12/10/2019	12/10/2019	344	N/A	N/A
520002270855		B3	C		12/9/2019	12/9/2019	343	N/A	N/A
520002251386	90041	B3	C		12/6/2019	12/6/2019	340	N/A	N/A
520002270504	93243	B2	C		12/5/2019	12/5/2019	339	N/A	N/A
520002154644	91331	B3	C		12/5/2019	12/5/2019	339	N/A	N/A
520002136747	93460	A3	C		12/5/2019	12/5/2019	339	N/A	N/A
520002288416	93648	B2	C		12/5/2019	12/5/2019	339	N/A	N/A
520002282932	93066	B2	C		12/3/2019	12/3/2019	337	N/A	N/A
520002287740	91342	B3	C		12/3/2019	12/3/2019	337	N/A	N/A
520002270868		B3	C		12/2/2019	12/2/2019	336	N/A	N/A
520002251596	91302	B2	C		12/2/2019	12/2/2019	336	N/A	N/A
520002287120	93401	B3	C		12/2/2019	12/2/2019	336	N/A	N/A
520002328889	91606	B2	C		11/24/2019	11/24/2019	328	N/A	N/A
520002136751	93454	B2	C	FILTER	11/21/2019	11/21/2019	325	N/A	N/A
520002154642	91501	B3	C		11/19/2019	11/19/2019	323	N/A	N/A
520002251341	93405	B3	C		11/19/2019	11/19/2019	323	N/A	N/A
520002251342	93401	B3	C		11/19/2019	11/19/2019	323	N/A	N/A
520002251344	93405	B2	C		11/18/2019	11/18/2019	322	N/A	N/A
520002251346	93405	B3	C		11/18/2019	11/18/2019	322	N/A	N/A
520002273276	93277	A3	C		11/18/2019	11/18/2019	322	N/A	N/A
520002251398		B3	C		11/15/2019	11/15/2019	319	N/A	N/A
520002251124	92234	B3	C		11/14/2019	11/14/2019	318	N/A	N/A
520002251071	92592	B3	C		11/14/2019	11/14/2019	318	N/A	N/A
520002136863		B3	C		11/14/2019	11/14/2019	318	N/A	N/A
520002275259	93446	B2	C		11/14/2019	11/14/2019	318	N/A	N/A
520002251130	92236	B3	C		11/12/2019	11/12/2019	316	N/A	N/A
520002116977	#N/A	B3	C		8/6/2019	8/6/2019	218	N/A	N/A
520002251705		B3	C		11/7/2019	11/7/2019	311	N/A	N/A
520002251077	90011	B3	C		11/7/2019	11/7/2019	311	N/A	N/A
520002251377	91263	A2	C		11/7/2019	11/7/2019	311	N/A	N/A
520002154864	93033	B3	C		11/7/2019	11/7/2019	311	N/A	N/A
520002251128	92201	B3	C		11/6/2019	11/6/2019	310	N/A	N/A
520002251075	92567	A3	C		11/6/2019	11/6/2019	310	N/A	N/A
520002251076		A3	C		11/6/2019	11/6/2019	310	N/A	N/A
520002251379	93314	B3	C		11/6/2019	11/6/2019	310	N/A	N/A
520002116864	93436	B3	C		11/6/2019	11/6/2019	310	N/A	N/A
520002251126	92270	B2	C		11/5/2019	11/5/2019	309	N/A	N/A
520002251374	93263	B3	C		11/5/2019	11/5/2019	309	N/A	N/A
520002267178	90631	B3	C		11/4/2019	11/4/2019	308	N/A	N/A
520002270973	91367	B3	C		11/1/2019	11/1/2019	305	N/A	N/A
520002154852	93560	B3	C		10/29/2019	10/29/2019	303	N/A	N/A
520002154177	92501	B1	C		10/28/2019	10/28/2019	301	N/A	N/A
520002154856	93501	A3	C		10/28/2019	10/28/2019	301	N/A	N/A
520002154868	93012	A2	C		10/28/2019	10/28/2019	301	N/A	N/A
520002154651	91367	B2	C		10/25/2019	10/25/2019	298	N/A	N/A
520002263787	91387	A3	C		10/25/2019	10/25/2019	298	N/A	N/A
520002136731	91362	B3	C		10/24/2019	10/24/2019	297	N/A	N/A
520002154866	93021	B3	C		10/23/2019	10/23/2019	296	N/A	N/A
520002154650	91350	B2	C		10/23/2019	10/23/2019	296	N/A	N/A
520002259745	93551	B3	C		10/23/2019	10/23/2019	296	N/A	N/A
520002259744	93551	B3	C		10/21/2019	10/21/2019	294	N/A	N/A
520002136750	93463	B3	C		10/18/2019	10/18/2019	291	N/A	N/A
520002154860	91367	B2	C		10/18/2019	10/18/2019	291	N/A	N/A
520002153865	90265	B2	C		10/18/2019	10/18/2019	291	N/A	N/A
520002136258	93250	B3	C		10/17/2019	10/17/2019	290	N/A	N/A

520002257350	91367	B3	C	10/17/2019	10/17/2019	290	N/A	N/A
520002256574	90041	B3	C	10/17/2019	10/17/2019	290	N/A	N/A
520002154225	92570	B3	C	10/16/2019	10/16/2019	289	N/A	N/A
520002154221	92596	B3	C	10/15/2019	10/15/2019	288	N/A	N/A
520002154175	92506	B2	C	10/15/2019	10/15/2019	288	N/A	N/A
520002154652	91387	A3	C	10/15/2019	10/15/2019	288	N/A	N/A
520002154639	93312	B2	C	10/14/2019	10/14/2019	287	N/A	N/A
520002154123	91750	B2	C	10/9/2019	10/9/2019	282	N/A	N/A
520002154220	90247	B3	C	10/9/2019	10/9/2019	282	N/A	N/A
520002153868	90045	B2	C	10/8/2019	10/8/2019	281	N/A	N/A
520002154138	93122	B2	C	10/7/2019	10/7/2019	276	N/A	N/A
520002252659	93256	A3	C	10/3/2019	10/3/2019	276	N/A	N/A
520002252047	91367	B2	C	10/2/2019	10/2/2019	275	N/A	N/A
520002154632	93249	A2	C	10/1/2019	10/1/2019	274	N/A	N/A
520002154633	93249	B3	C	10/1/2019	10/1/2019	274	N/A	N/A
520002136737	93010	B2	C	9/30/2019	9/30/2019	273	N/A	N/A
520002162017	90003	B3	C	9/30/2019	9/30/2019	273	N/A	N/A
520002136338	91042	B2	C	9/27/2019	9/27/2019	270	N/A	N/A
520002245643	92223	A3	C	9/26/2019	9/26/2019	269	N/A	N/A
520002098281	90022	B3	C	9/25/2019	9/25/2019	268	N/A	N/A
520002161988	93003	B2	C	9/25/2019	9/25/2019	268	N/A	N/A
520002161990	93003	B2	C	9/25/2019	9/25/2019	268	N/A	N/A
520002136839	93	B3	C	9/24/2019	9/24/2019	267	N/A	N/A
520002245641	92584	B3	C	9/24/2019	9/24/2019	267	N/A	N/A
520002245412	92584	B3	C	9/24/2019	9/24/2019	267	N/A	N/A
520002136870		B3	C	9/23/2019	9/23/2019	266	N/A	N/A
520002135407	90265	B2	C	9/23/2019	9/23/2019	266	N/A	N/A
520002136719	93535	B3	C	9/20/2019	9/20/2019	263	N/A	N/A
520002136704	91367	A2	C	9/18/2019	9/18/2019	261	N/A	N/A
520002136354	90046	B2	C	9/17/2019	9/17/2019	260	N/A	N/A
520002136361	91350	B2	C	9/17/2019	9/17/2019	260	N/A	N/A
520002160127	90501	B2	C	9/17/2019	9/17/2019	260	N/A	N/A
520002136823		B2	C	9/16/2019	9/16/2019	259	N/A	N/A
520002116857	93060	A2	C	9/16/2019	9/16/2019	259	N/A	N/A
520002159929	91367	B3	C	9/15/2019	9/16/2019	259	N/A	N/A
520002135730	93618	B3	C	9/13/2019	9/13/2019	256	N/A	N/A
520002136321	93311	A3	C	9/13/2019	9/13/2019	256	N/A	N/A
520002135741	90278	B3	C	9/12/2019	9/12/2019	255	N/A	N/A
520002135745	92562	B3	C	9/12/2019	9/12/2019	255	N/A	N/A
520002135678	92320	B3	C	9/11/2019	9/11/2019	254	N/A	N/A
520002135755	92223	B3	C	9/11/2019	9/11/2019	254	N/A	N/A
520002135715		A3	C	9/11/2019	9/11/2019	254	N/A	N/A
520002136853		B3	C	9/11/2019	9/11/2019	254	N/A	N/A
520002136172	91710	B2	C	9/10/2019	9/10/2019	253	N/A	N/A
520002135398	90272	B2	C	9/10/2019	9/10/2019	253	N/A	N/A
520002136738	93012	B2	C	9/9/2019	9/9/2019	252	N/A	N/A
520002136707	91367	B2	C	9/9/2019	9/9/2019	252	N/A	N/A
520002136708		B2	C	9/6/2019	9/6/2019	249	N/A	N/A
520002155709	90041	B3	C	9/6/2019	9/6/2019	249	N/A	N/A
520002156663	90222	A2	C	9/6/2019	9/6/2019	249	N/A	N/A
520002136335	90042	B3	C	9/5/2019	9/5/2019	248	N/A	N/A
520002136238	93272	A3	C	9/5/2019	9/5/2019	248	N/A	N/A
520002135671	92314	B2	C	9/4/2019	9/4/2019	247	N/A	N/A
520002135674	92404	B3	C	9/4/2019	9/4/2019	247	N/A	N/A
520002116574	91606	B2	C	9/4/2019	9/4/2019	247	N/A	N/A
520002135418	90285	B2	C	9/4/2019	9/4/2019	247	N/A	N/A
520002136856		B2	C	9/3/2019	9/3/2019	246	N/A	N/A
520002150956	93060	A2	C	8/30/2019	8/30/2019	242	N/A	N/A
520002150903	93060	B2	C	8/30/2019	8/30/2019	242	N/A	N/A
520002116143	92571	B3	C	8/29/2019	8/29/2019	241	N/A	N/A
520002150213	92277	B3	C	8/29/2019	8/29/2019	241	N/A	N/A
520002116073	91784	B2	C	8/27/2019	8/27/2019	239	N/A	N/A
520002116825	91367	B2	C	8/27/2019	8/27/2019	239	N/A	N/A
520002149373	91784	B2	C	8/27/2019	8/27/2019	239	N/A	N/A
520002116934		B2	C	8/26/2019	8/26/2019	238	N/A	N/A
520002116575	91367	B2	C	8/26/2019	8/26/2019	238	N/A	N/A
520002148005	91205	B3	C	8/24/2019	8/24/2019	236	N/A	N/A
520002147512	93405	B3	C	8/23/2019	8/23/2019	235	N/A	N/A
520002146573	91360	A2	C	8/22/2019	8/22/2019	234	N/A	N/A
520002116843	91360	B2	C	8/21/2019	8/21/2019	233	N/A	N/A
520002145753	91367	B3	C	8/20/2019	8/20/2019	232	N/A	N/A
520002145256	93510	B2	C	8/19/2019	8/19/2019	231	N/A	N/A
520002096341		A3	C	8/16/2019	8/16/2019	228	N/A	N/A
520002116855	93060	B2	C	8/15/2019	8/15/2019	227	N/A	N/A
520002143651	92508	B2	C	8/15/2019	8/15/2019	227	N/A	N/A
520002116151	92270	B3	C	8/14/2019	8/14/2019	226	N/A	N/A
520002116154	92210	B3	C	8/13/2019	8/13/2019	225	N/A	N/A
520002116142	92545	B3	C	8/13/2019	8/13/2019	225	N/A	N/A
520002116962	92324	B2	C	8/12/2019	8/12/2019	224	N/A	N/A
520002135064	92354	B2	C	8/12/2019	8/12/2019	224	N/A	N/A
520002116145	92553	B3	C	8/9/2019	8/9/2019	221	N/A	N/A
520002116071	92223	B3	C	8/8/2019	8/8/2019	220	N/A	N/A
520002116149	92264	B3	C	8/8/2019	8/8/2019	220	N/A	N/A
520002116146	92320	B2	C	8/8/2019	8/8/2019	220	N/A	N/A
520002116963	92324	B2	C	8/7/2019	8/7/2019	219	N/A	N/A
520002116067	92408	B3	C	8/7/2019	8/7/2019	219	N/A	N/A
520002116845	93030	B2	C	8/7/2019	8/7/2019	219	N/A	N/A
520002116153		B3	C	8/6/2019	8/6/2019	218	N/A	N/A
520002116919		B2	C	8/6/2019	8/6/2019	218	N/A	N/A
520002116068	92407	B2	C	8/6/2019	8/6/2019	218	N/A	N/A
520002116144	92570	B3	C	8/6/2019	8/6/2019	218	N/A	N/A
520002138512	93551	B3	C	8/6/2019	8/6/2019	218	N/A	N/A
520002116065	92324	B2	C	8/5/2019	8/5/2019	217	N/A	N/A
520002116060	92301	B2	C	8/5/2019	8/5/2019	217	N/A	N/A
520002116974		B2	C	8/2/2019	8/2/2019	214	N/A	N/A
520002116548	93251	A3	C	8/1/2019	8/1/2019	213	N/A	N/A
520002095902	93446	B2	C	8/1/2019	8/1/2019	213	N/A	N/A
520002095207	93801	B2	C	8/1/2019	8/1/2019	213	N/A	N/A
520002096211	93436	B3	C	7/31/2019	7/31/2019	212	N/A	N/A

520002095220	93212	B2	C	7/30/2019	7/30/2019	211	N/A	N/A
520002131323		A3	C	7/29/2019	7/29/2019	210	N/A	N/A
520002095942	93288	A3	C	7/26/2019	7/26/2019	207	N/A	N/A
520002078981	93428	B2	C	7/26/2019	7/26/2019	207	N/A	N/A
520002078979	93430	B2	C	7/25/2019	7/25/2019	206	N/A	N/A
520002129101		B2	C	7/25/2019	7/25/2019	206	N/A	N/A
520002128981	92584	B3	C	7/25/2019	7/25/2019	206	N/A	N/A
520002037645	93422	B3	C	7/24/2019	7/24/2019	205	N/A	N/A
520002095214	92869	B2	C	7/24/2019	7/24/2019	205	N/A	N/A
520002038055	93108	B2	C	7/23/2019	7/23/2019	204	N/A	N/A
520002078976	93402	B3	C	7/23/2019	7/23/2019	204	N/A	N/A
520002096349		B3	C	7/23/2019	7/23/2019	204	N/A	N/A
520002095200	90020	B3	C	7/23/2019	7/23/2019	204	N/A	N/A
520002126849	93465	B2	C	7/20/2019	7/20/2019	201	N/A	N/A
520002095717	90028	B3	C	7/19/2019	7/19/2019	200	N/A	N/A
520002095217	91767	B2	C	7/19/2019	7/19/2019	200	N/A	N/A
520002122924	93455	B2	C	7/19/2019	7/19/2019	200	N/A	N/A
520002095956	93561	B2	C	7/16/2019	7/16/2019	197	N/A	N/A
520002095704	93274	B2	C	7/15/2019	7/15/2019	196	N/A	N/A
520002095728	90002	B3	C	7/15/2019	7/15/2019	196	N/A	N/A
520002123701	93256	A3	C	7/15/2019	7/15/2019	196	N/A	N/A
520002095627	90501	B2	C	7/11/2019	7/11/2019	192	N/A	N/A
520002095222	91768	B2	C	7/10/2019	7/10/2019	191	N/A	N/A
520002121749	91601	B2	C	7/10/2019	7/10/2019	191	N/A	N/A
520002095714		B2	C	7/8/2019	7/8/2019	189	N/A	N/A
520002095719	92590	B3	C	7/5/2019	7/5/2019	186	N/A	N/A
520002095966	91504	B3	C	7/5/2019	7/5/2019	186	N/A	N/A
520002096169	91405	B2	C	7/5/2019	7/5/2019	186	N/A	N/A
520002123404	93505	B3	C	7/4/2019	7/4/2019	185	N/A	N/A
520002095725	92230	A3	C	7/3/2019	7/3/2019	184	N/A	N/A
520002095941	93276	B3	C	7/3/2019	7/3/2019	184	N/A	N/A
520002096347		A2	C	7/2/2019	7/2/2019	183	N/A	N/A
520002095723	92584	B3	C	7/2/2019	7/2/2019	183	N/A	N/A
520002095724	92585	A3	C	7/1/2019	7/1/2019	182	N/A	N/A
520002112178		B2	C	6/28/2019	6/28/2019	179	N/A	N/A
520002079015	93276	A2	C	6/24/2019	6/24/2019	175	N/A	N/A
520002079014	93249	A3	C	6/21/2019	6/21/2019	172	N/A	N/A
520002077202	92660	B3	C	6/21/2019	6/21/2019	172	N/A	N/A
520002079279	93060	B2	C	6/19/2019	6/19/2019	170	N/A	N/A
520002078232	90245	B2	C	6/19/2019	6/19/2019	170	N/A	N/A
520002078987	93656	B3	C	6/18/2019	6/18/2019	169	N/A	N/A
520002077211	92660	B3	C	6/18/2019	6/18/2019	169	N/A	N/A
520002079387		B3	C	6/17/2019	6/17/2019	168	N/A	N/A
520002077210	92626	B2	C	6/14/2019	6/14/2019	165	N/A	N/A
520002077268	92220	B3	C	6/13/2019	6/13/2019	164	N/A	N/A
520002102400	93292	B3	C	6/13/2019	6/13/2019	164	N/A	N/A
520002102469	93405	B3	C	6/12/2019	6/12/2019	163	N/A	N/A
520002079032	93243	B2	C	6/11/2019	6/11/2019	162	N/A	N/A
520002079034	93225	B2	C	6/11/2019	6/11/2019	162	N/A	N/A
520002079392		B3	C	6/6/2019	6/6/2019	157	N/A	N/A
520002078595	92530	B3	C	6/5/2019	6/5/2019	156	N/A	N/A
520002096594	93063	A2	C	6/4/2019	6/4/2019	155	N/A	N/A
520002078583	92399	B2	C	6/3/2019	6/3/2019	154	N/A	N/A
520002058312	93618	B2	C	6/1/2019	6/1/2019	152	N/A	N/A
520002058599	93030	B2	C	5/29/2019	5/29/2019	149	N/A	N/A
520002087914	93274	B2	C	5/29/2019	5/29/2019	149	N/A	N/A
520002032784	92404	B2	C	5/29/2019	5/29/2019	149	N/A	N/A
520002058332	93280	B2	C	5/28/2019	5/28/2019	148	N/A	N/A
520002058603	93010	B2	C	5/28/2019	5/28/2019	148	N/A	N/A
520002089790	92584	B3	C	5/28/2019	5/28/2019	148	N/A	N/A
520002057920	91505	B3	C	5/24/2019	5/24/2019	144	N/A	N/A
520002038049	93066	B2	C	5/23/2019	5/23/2019	143	N/A	N/A
520002057594	90746	B2	C	5/22/2019	5/22/2019	142	N/A	N/A
520002094409	92584	B3	C	5/22/2019	5/22/2019	142	N/A	N/A
520002057986	92584	B3	C	5/21/2019	5/21/2019	141	N/A	N/A
520002038147		B3	C	5/21/2019	5/21/2019	141	N/A	N/A
520002038037	93550	B3	C	5/21/2019	5/21/2019	141	N/A	N/A
520002058307	93422	B3	C	5/21/2019	5/21/2019	141	N/A	N/A
520002056778	91731	B2	C	5/21/2019	5/21/2019	141	N/A	N/A
520002037649	93446	B3	C	5/17/2019	5/17/2019	137	N/A	N/A
520002056821		B2	C	5/17/2019	5/17/2019	137	N/A	N/A
520002056823	91731	B2	C	5/17/2019	5/17/2019	137	N/A	N/A
520002057922	93509	B2	C	5/16/2019	5/16/2019	136	N/A	N/A
520002056824	91007	B2	C	5/16/2019	5/16/2019	136	N/A	N/A
520002084494		A2	C	5/16/2019	5/16/2019	136	N/A	N/A
520002084936	91367	B3	C	5/15/2019	5/15/2019	135	N/A	N/A
520002057989		B3	C	5/14/2019	5/14/2019	134	N/A	N/A
520002017760	93292	B2	C	5/14/2019	5/14/2019	134	N/A	N/A
520002056822	91733	B2	C	5/14/2019	5/14/2019	134	N/A	N/A
520002057817	91706	B2	C	5/13/2019	5/13/2019	133	N/A	N/A
520002058344	93263	B3	C	5/13/2019	5/13/2019	133	N/A	N/A
520002083990	93012	B2	C	5/13/2019	5/13/2019	133	N/A	N/A
520002057939	92504	B3	C	5/10/2019	5/10/2019	130	N/A	N/A
520002058602	93066	B3	C	5/10/2019	5/10/2019	130	N/A	N/A
520002037644	93841	B3	C	5/10/2019	5/10/2019	130	N/A	N/A
520002083398	93066	B3	C	5/10/2019	5/10/2019	130	N/A	N/A
520002083643	90210	B2	C	5/10/2019	5/10/2019	130	N/A	N/A
520002038050	93012	B2	C	5/9/2019	5/9/2019	129	N/A	N/A
520002038052	93012	B2	C	5/9/2019	5/9/2019	129	N/A	N/A
520002037650	93446	B3	C	5/9/2019	5/9/2019	129	N/A	N/A
520002058306	93422	B3	C	5/8/2019	5/8/2019	128	N/A	N/A
520002056820	91780	B2	C	5/8/2019	5/8/2019	128	N/A	N/A
520002057642	90066	B3	C	5/8/2019	5/8/2019	128	N/A	N/A
520002058601	93036	B2	C	5/7/2019	5/7/2019	127	N/A	N/A
520002038048	93066	B3	C	5/7/2019	5/7/2019	127	N/A	N/A
520002056777	91733	B2	C	5/7/2019	5/7/2019	127	N/A	N/A
520002057991	92223	A2	C	5/6/2019	5/6/2019	126	N/A	N/A
520002057987	93551	B3	C	5/3/2019	5/3/2019	123	N/A	N/A
520002057988	92553	A3	C	5/2/2019	5/2/2019	122	N/A	N/A

520002038046	93033	B2	C		5/2/2019	5/2/2019	122	N/A	N/A
520002057931	92399	B2	C		5/1/2019	5/1/2019	121	N/A	N/A
520002057932	92399	B2	C		5/1/2019	5/1/2019	121	N/A	N/A
520002058334	93250	B3	C		5/1/2019	5/1/2019	121	N/A	N/A
520002058346		B3	C		5/1/2019	5/1/2019	121	N/A	N/A
520002038161		A3	C		4/30/2019	4/30/2019	120	N/A	N/A
520002038206	93206	A3	C		4/30/2019	4/30/2019	120	N/A	N/A
520002038160		B2	C		4/30/2019	4/30/2019	120	N/A	N/A
520002038197		B3	C		4/19/2019	4/19/2019	109	N/A	N/A
52000205924	92629	A1	C		4/19/2019	4/19/2019	109	N/A	N/A
520002067776	92551	B3	C		4/18/2019	4/18/2019	108	N/A	N/A
520002067937	92320	B2	C		4/17/2019	4/17/2019	107	N/A	N/A
520002068651	90042	B3	C		4/17/2019	4/17/2019	107	N/A	N/A
520002018053	93030	B2	C		4/16/2019	4/16/2019	106	N/A	N/A
520002067819	93543	B3	C		4/16/2019	4/16/2019	106	N/A	N/A
520002066586	91331	B3	C		4/15/2019	4/15/2019	105	N/A	N/A
520002064866	92591	A3	C		4/10/2019	4/10/2019	100	N/A	N/A
520002065960	93543	B3	C		4/10/2019	4/10/2019	100	N/A	N/A
520002037259	92585	B3	C		4/9/2019	4/9/2019	99	N/A	N/A
520002037300	92571	A3	C		4/8/2019	4/8/2019	98	N/A	N/A
520002037301	92571	B3	C		4/8/2019	4/8/2019	98	N/A	N/A
520002038193		B2	C		4/8/2019	4/8/2019	98	N/A	N/A
520002038193		B2	C		4/8/2019	4/8/2019	98	N/A	N/A
520002037254	92595	B3	C		4/2/2019	4/2/2019	92	N/A	N/A
520002037255	92592	B3	C		4/2/2019	4/2/2019	92	N/A	N/A
520002038140		B2	C		4/1/2019	4/1/2019	91	N/A	N/A
520002037252	92595	B3	C		4/1/2019	4/1/2019	91	N/A	N/A
520002037783	93249	B3	C		4/1/2019	4/1/2019	91	N/A	N/A
520002038140		B2	C		4/1/2019	4/1/2019	91	N/A	N/A
520002054262	92545	B3	C		3/29/2019	3/29/2019	88	N/A	N/A
520001989343		A3	C		3/28/2019	3/28/2019	87	N/A	N/A
520002017763		A2	C		3/28/2019	3/28/2019	87	N/A	N/A
520002017326	92345	B2	C		3/26/2019	3/26/2019	85	N/A	N/A
520002053160	91302	B2	C		3/26/2019	3/26/2019	85	N/A	N/A
520002017733	93446	B3	C		3/25/2019	3/25/2019	84	N/A	N/A
520002017761	93292	A3	C		3/25/2019	3/25/2019	84	N/A	N/A
520002018181		B2	C		3/25/2019	3/25/2019	84	N/A	N/A
520002017330	92518	B3	C		3/22/2019	3/22/2019	81	N/A	N/A
520002017399	90059	B3	C		3/21/2019	3/21/2019	80	N/A	N/A
520002050546	93274	B2	C		3/20/2019	3/20/2019	79	N/A	N/A
520002017795	91040	B2	C		3/19/2019	3/19/2019	78	N/A	N/A
520002017797	91214	B2	C		3/19/2019	3/19/2019	78	N/A	N/A
520002018152		B3	C		3/18/2019	3/18/2019	77	N/A	N/A
520002047933	91356	B3	C		3/18/2019	3/18/2019	77	N/A	N/A
520002018032	91324	B2	C		3/15/2019	3/15/2019	74	N/A	N/A
520002017793	90012	B2	C		3/14/2019	3/14/2019	73	N/A	N/A
520002018058	93012	B2	C		3/14/2019	3/14/2019	73	N/A	N/A
520002017327	92345	B3	C		3/13/2019	3/13/2019	72	N/A	N/A
520002018036	91356	B3	C		3/13/2019	3/13/2019	72	N/A	N/A
520002017801	91201	B3	C		3/13/2019	3/13/2019	72	N/A	N/A
520001870961	93311	B3	C		3/13/2019	3/13/2019	72	N/A	N/A
520002017762		A2	C		3/12/2019	3/12/2019	71	N/A	N/A
520002017149	90810	B3	C		3/12/2019	3/12/2019	71	N/A	N/A
520002017383	91761	B2	C		3/11/2019	3/11/2019	70	N/A	N/A
520002017331	92404	B2	C		3/11/2019	3/11/2019	70	N/A	N/A
520002018038		A2	C		3/11/2019	3/11/2019	70	N/A	N/A
520002016012	93463	B3	C		3/11/2019	3/11/2019	70	N/A	N/A
520002017383	91761	B2	C		3/11/2019	3/11/2019	70	N/A	N/A
520002017383	91761	B2	C		3/11/2019	3/11/2019	70	N/A	N/A
520002018169		B3	C		3/8/2019	3/8/2019	67	N/A	N/A
520002017391		B3	C		3/8/2019	3/8/2019	67	N/A	N/A
520002017776	93313	A2	C		3/8/2019	3/8/2019	67	N/A	N/A
520002017391		B3	C		3/8/2019	3/8/2019	67	N/A	N/A
520002017391		B3	C		3/8/2019	3/8/2019	67	N/A	N/A
520002017381	92320	B2	C		3/7/2019	3/7/2019	66	N/A	N/A
520002016087		B2	C		3/7/2019	3/7/2019	66	N/A	N/A
520002043901	91367	B2	C		3/7/2019	3/7/2019	66	N/A	N/A
520002017384		B2	C		3/6/2019	3/6/2019	65	N/A	N/A
520002017393	92543	B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002017394	92545	B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002018200		B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002017335	92374	B2	C		3/5/2019	3/5/2019	64	N/A	N/A
520002017748	93274	B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002016080	91803	B1	C		3/5/2019	3/5/2019	64	N/A	N/A
520002018200		B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002039751	91504	B3	C		3/5/2019	3/5/2019	64	N/A	N/A
520002039750	91302	B2	C		3/5/2019	3/5/2019	64	N/A	N/A
520002017380	92373	B2	C		3/4/2019	3/4/2019	63	N/A	N/A
520001989572		A2	C		3/4/2019	3/4/2019	63	N/A	N/A
520002017743	93656	B3	C		3/4/2019	3/4/2019	63	N/A	N/A
520002016007	93422	B3	C		3/4/2019	3/4/2019	63	N/A	N/A
520002017147	90744	B2	C		3/4/2019	3/4/2019	63	N/A	N/A
520002017336	92373	B3	C		3/1/2019	3/1/2019	60	N/A	N/A
520001989576	93060	B2	C		3/1/2019	3/1/2019	60	N/A	N/A
520002016010	90011	B2	C		3/1/2019	3/1/2019	60	N/A	N/A
520002033615	93725	B2	C		2/28/2019	2/28/2019	59	N/A	N/A
520002027584		B3	C		2/28/2019	2/28/2019	59	N/A	N/A
520002033225		B3	C		2/28/2019	2/28/2019	59	N/A	N/A
520001989683		B2	C		2/27/2019	2/27/2019	58	N/A	N/A
520001989683		B2	C		2/27/2019	2/27/2019	58	N/A	N/A
520001970262	93001	B2	C		2/26/2019	2/26/2019	57	N/A	N/A
520001989181		B3	C		2/25/2019	2/25/2019	56	N/A	N/A
520001989095	90023	B3	C		2/25/2019	2/25/2019	56	N/A	N/A
520002032053	91786	B2	C		2/25/2019	2/25/2019	56	N/A	N/A
520002031610		A3	C		2/25/2019	2/25/2019	56	N/A	N/A
520001989180		B3	C		2/22/2019	2/22/2019	53	N/A	N/A
520001989389	90031	B3	C		2/22/2019	2/22/2019	53	N/A	N/A
520001989561	90410	A3	C		2/22/2019	2/22/2019	53	N/A	N/A
520001989088	90037	B2	C		2/21/2019	2/21/2019	52	N/A	N/A

520002033859	93725	B2	C		2/21/2019	2/21/2019	52	N/A	N/A
520001989161	91367	A2	C		2/20/2019	2/20/2019	51	N/A	N/A
520001989089	91105	B2	C		2/20/2019	2/20/2019	51	N/A	N/A
520001989119	90791	B2	C		2/20/2019	2/20/2019	51	N/A	N/A
520001989586		B2	C		2/20/2019	2/20/2019	51	N/A	N/A
520001989192	92555	B3	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989195	91367	A3	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989385		A3	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989359	93277	B2	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989089	90011	B2	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989116	90710	B2	C		2/19/2019	2/19/2019	50	N/A	N/A
520001989206	92211	B3	C		2/15/2019	2/15/2019	46	N/A	N/A
520001989208	92201	B3	C		2/15/2019	2/15/2019	46	N/A	N/A
520001989394	91040	B2	C		2/15/2019	2/15/2019	46	N/A	N/A
520001988951	90706	B2	C		2/15/2019	2/15/2019	46	N/A	N/A
520001989197		B3	C		2/13/2019	2/13/2019	44	N/A	N/A
520001989203	92340	B3	C		2/12/2019	2/12/2019	43	N/A	N/A
520001989204	92276	B3	C		2/12/2019	2/12/2019	43	N/A	N/A
520001989573	93015	B2	C		2/12/2019	2/12/2019	43	N/A	N/A
520001989212	92210	B2	C		2/11/2019	2/11/2019	42	N/A	N/A
520001989189	92545	B3	C		2/11/2019	2/11/2019	42	N/A	N/A
520001989171	92404	B2	C		2/11/2019	2/11/2019	42	N/A	N/A
520001989358		B2	C		2/11/2019	2/11/2019	42	N/A	N/A
520001989171	92404	B2	C	FILTER	2/11/2019	2/11/2019	42	N/A	N/A
520001989176	92399	B2	C		2/8/2019	2/8/2019	39	N/A	N/A
520001989173	92346	B2	C		2/8/2019	2/8/2019	39	N/A	N/A
520001989210	92253	B3	C	SAFECO FILTER	2/8/2019	2/8/2019	39	N/A	N/A
520001989169	92404	B2	C		2/7/2019	2/7/2019	38	N/A	N/A
520001989170	92404	B2	C		2/7/2019	2/7/2019	38	N/A	N/A
520001989164		B2	C		2/6/2019	2/6/2019	37	N/A	N/A
520001989205	92270	B3	C		2/6/2019	2/6/2019	37	N/A	N/A
520001989166	93725	B2	C		2/6/2019	2/6/2019	37	N/A	N/A
520001989167		B2	C		2/6/2019	2/6/2019	37	N/A	N/A
520001988962	90201	B1	C		2/6/2019	2/6/2019	37	N/A	N/A
520001989380	93311	B3	C		2/5/2019	2/5/2019	36	N/A	N/A
520001988948	90706	B2	C		2/5/2019	2/5/2019	36	N/A	N/A
520001988957		B2	C		2/5/2019	2/5/2019	36	N/A	N/A
520002019559	90280	B3	C		2/5/2019	2/5/2019	36	N/A	N/A
520001988946	90706	B2	C		2/4/2019	2/4/2019	35	N/A	N/A
520001989114	90717	B2	C		2/1/2019	2/1/2019	32	N/A	N/A
520002014062		B2	C		1/31/2019	1/31/2019	31	N/A	N/A
520001968416	90249	B2	C		1/29/2019	1/29/2019	29	N/A	N/A
520001970584		B2	C		1/28/2019	1/28/2019	28	N/A	N/A
520001969633	93314	A2	C		1/28/2019	1/28/2019	28	N/A	N/A
520001969519	93277	A3	C		1/28/2019	1/28/2019	28	N/A	N/A
520002011761	93117	B2	C		1/28/2019	1/28/2019	28	N/A	N/A
520001970549		B3	C		1/25/2019	1/25/2019	25	N/A	N/A
520001970292	93458	B3	C		1/25/2019	1/25/2019	25	N/A	N/A
520001968932	90280	B1	C		1/25/2019	1/25/2019	25	N/A	N/A
520001970612		B2	C		1/24/2019	1/24/2019	24	N/A	N/A
520001969585	93267	B2	C		1/24/2019	1/24/2019	24	N/A	N/A
520002009767	92404	B2	C		1/24/2019	1/24/2019	24	N/A	N/A
520001969643	93308	A2	C		1/23/2019	1/23/2019	23	N/A	N/A
520001969674	90012	B1	C		1/23/2019	1/23/2019	23	N/A	N/A
520001970221	93021	B2	C		1/23/2019	1/23/2019	23	N/A	N/A
520001968914	90270	B3	C		1/23/2019	1/23/2019	23	N/A	N/A
520002009977	91701	B2	C		1/23/2019	1/23/2019	23	N/A	N/A
520002010053	93021	B3	C		1/23/2019	1/23/2019	23	N/A	N/A
520001969085	92410	B3	C		1/22/2019	1/22/2019	22	N/A	N/A
520001970141	91302	B2	C		1/22/2019	1/22/2019	22	N/A	N/A
520002000703		B3	C		1/19/2019	1/19/2019	19	N/A	N/A
520001969696	91342	B2	C		1/18/2019	1/18/2019	18	N/A	N/A
520001989388	#N/A	B3	C		2/22/2019	2/22/2019	53	N/A	N/A
520001970229	91360	A2	C		1/17/2019	1/17/2019	17	N/A	N/A
520001969098	92410	B3	C		1/16/2019	1/16/2019	16	N/A	N/A
520001969712	91384	A3	C		1/16/2019	1/16/2019	16	N/A	N/A
520001968921	90255	B3	C		1/16/2019	1/16/2019	16	N/A	N/A
520001969075		B2	C		1/15/2019	1/15/2019	15	N/A	N/A
520002002108		A3	C		1/15/2019	1/15/2019	15	N/A	N/A
520001969078	92376	B2	C		1/14/2019	1/14/2019	14	N/A	N/A
520001969152	93616	B3	C		1/11/2019	1/11/2019	11	N/A	N/A
520001969068	92336	B3	C		1/11/2019	1/11/2019	11	N/A	N/A
520001970400		B3	C		1/11/2019	1/11/2019	11	N/A	N/A
520001969690		B1	C		1/11/2019	1/11/2019	11	N/A	N/A
520001968409	92703	B2	C		1/11/2019	1/11/2019	11	N/A	N/A
520001968911	90270	B1	C		1/11/2019	1/11/2019	11	N/A	N/A
520001970152	91367	B3	C		1/10/2019	1/10/2019	10	N/A	N/A
520001968433	92805	B2	C		1/10/2019	1/10/2019	10	N/A	N/A
520001969064	92335	B2	C		1/9/2019	1/9/2019	9	N/A	N/A
520001968413	92701	B2	C		1/9/2019	1/9/2019	9	N/A	N/A
520001969089	92410	B3	C		1/8/2019	1/8/2019	8	N/A	N/A
520001970233	93041	B2	C		1/8/2019	1/8/2019	8	N/A	N/A
520001970237	93033	B2	C		1/8/2019	1/8/2019	8	N/A	N/A
520001969513	93242	B3	C		1/8/2019	1/8/2019	8	N/A	N/A
520001968891	90255	B1	C		1/8/2019	1/8/2019	8	N/A	N/A
520001970233	93041	B2	C	FILTER	1/8/2019	1/8/2019	8	N/A	N/A
520001969133	92530	B3	C		1/7/2019	1/7/2019	7	N/A	N/A
520001969143	92584	B3	C		1/7/2019	1/7/2019	7	N/A	N/A
520001968416	92703	B2	C		1/7/2019	1/7/2019	7	N/A	N/A
520001995565	91604	B2	C		1/7/2019	1/7/2019	7	N/A	N/A
520001969139	92545	B3	C		1/4/2019	1/4/2019	4	N/A	N/A
520001970501		B3	C		1/3/2019	1/3/2019	3	N/A	N/A
520001969125	90022	B3	C		1/2/2019	1/2/2019	2	N/A	N/A
520001969128	92584	B3	C		1/2/2019	1/2/2019	2	N/A	N/A
520001969627	93268	A3	C		1/2/2019	1/2/2019	2	N/A	N/A
520001970241	93036	B2	C		1/2/2019	1/2/2019	2	N/A	N/A
520002079022	#N/A	B2	C		6/6/2019	6/6/2019	157	N/A	N/A
520001969704	#N/A	B2	C		1/18/2019	1/18/2019	18	N/A	N/A
520002251678	#N/A	B2	C		11/12/2019	11/12/2019	316	N/A	N/A

520002275108	93063	B2	O	11/12/2019	11/12/2019	316	N/A	N/A
520002262049	92545	B3	O	10/23/2019	10/23/2019	296	N/A	N/A
520002259129	90029	B1	O	10/18/2019	10/18/2019	291	N/A	N/A
520002154593	93420	B3	O	10/17/2019	10/17/2019	290	N/A	N/A
520002258573	90301	B1	O	10/17/2019	10/17/2019	290	N/A	N/A
520002153879	90047	B1	O	10/16/2019	10/16/2019	289	N/A	N/A
520002154591	93420	A3	O	10/15/2019	10/15/2019	288	N/A	N/A
520002153878	90044	B3	O	10/15/2019	10/15/2019	288	N/A	N/A
520002154952		B3	O	10/14/2019	10/14/2019	287	N/A	N/A
520002154879	93420	B3	O	10/14/2019	10/14/2019	287	N/A	N/A
520002153871	90303	B3	O	10/11/2019	10/11/2019	284	N/A	N/A
520002153874	90047	B2	O	10/1/2019	10/1/2019	274	N/A	N/A
520002134633		A2	O	9/20/2019	9/20/2019	263	N/A	N/A
520002157923		B3	O	8/28/2019	8/28/2019	240	N/A	N/A
520002114743	93455	B3	O	8/23/2019	8/23/2019	235	N/A	N/A
520002114673	90683	B2	O	8/21/2019	8/21/2019	233	N/A	N/A
520002115735	93510	B1	O	8/21/2019	8/21/2019	233	N/A	N/A
520002114672	92647	B2	O	8/20/2019	8/20/2019	232	N/A	N/A
520002114679	90720	B2	O	8/15/2019	8/15/2019	227	N/A	N/A
520002114678	93023	B3	O	8/14/2019	8/14/2019	226	N/A	N/A
520002114670	92655	B2	O	8/9/2019	8/9/2019	221	N/A	N/A
520002116938	90740	B2	O	8/9/2019	8/9/2019	221	N/A	N/A
520002114668		B2	O	8/9/2019	8/9/2019	221	N/A	N/A
520002114668	92843	B2	O	8/8/2019	8/8/2019	220	N/A	N/A
520002142377	91360	B2	O	8/8/2019	8/8/2019	220	N/A	N/A
520002116579	92276	B3	O	8/2/2019	8/2/2019	214	N/A	N/A
520002115793	90505	B2	O	8/2/2019	8/2/2019	214	N/A	N/A
520002116933		B2	O	8/1/2019	8/1/2019	213	N/A	N/A
520002111060	92340	B3	O	7/28/2019	7/28/2019	209	N/A	N/A
520002095211	93247	B2	O	7/24/2019	7/24/2019	205	N/A	N/A
520002096198	93012	B2	O	7/23/2019	7/23/2019	204	N/A	N/A
520002079283	93023	B2	O	7/22/2019	7/22/2019	203	N/A	N/A
520002095203		B3	O	7/19/2019	7/19/2019	200	N/A	N/A
520002096170	91401	B2	O	7/16/2019	7/16/2019	197	N/A	N/A
520002096171	91423	B2	O	7/16/2019	7/16/2019	197	N/A	N/A
520002095198	93036	B3	O	7/16/2019	7/16/2019	197	N/A	N/A
520002095197		B3	O	7/10/2019	7/10/2019	191	N/A	N/A
520002077275	91790	B2	O	6/28/2019	6/28/2019	179	N/A	N/A
520002077270	91744	B2	O	6/14/2019	6/14/2019	165	N/A	N/A
520002077271	91789	A2	O	6/5/2019	6/5/2019	156	N/A	N/A
520002084401	92801	B2	O	5/15/2019	5/15/2019	135	N/A	N/A
520002056766	92630	B2	O	5/14/2019	5/14/2019	134	N/A	N/A
520002074588		B3	O	5/11/2019	5/11/2019	131	N/A	N/A
520002056760	92782	B3	O	5/2/2019	5/2/2019	122	N/A	N/A
520002037799	91350	B2	O	4/29/2019	4/29/2019	119	N/A	N/A
520002018063	93013	B2	O	4/26/2019	4/26/2019	116	N/A	N/A
520002038043	91360	B2	O	4/23/2019	4/23/2019	113	N/A	N/A
520002018062	93013	B2	O	4/19/2019	4/19/2019	109	N/A	N/A
520002035984		B3	O	4/19/2019	4/19/2019	109	N/A	N/A
520002066631	91367	B2	O	4/18/2019	4/18/2019	108	N/A	N/A
520002035982	91770	B1	O	4/17/2019	4/17/2019	107	N/A	N/A
520002035985		B3	O	4/15/2019	4/15/2019	105	N/A	N/A
520002036905	90810	B2	O	4/15/2019	4/15/2019	105	N/A	N/A
520002035938	91754	B1	O	4/12/2019	4/12/2019	102	N/A	N/A
520002036903	90221	B3	O	4/9/2019	4/9/2019	99	N/A	N/A
520002036907	90810	B3	O	4/9/2019	4/9/2019	99	N/A	N/A
520002035936	91754	B1	O	4/2/2019	4/2/2019	92	N/A	N/A
520002017039	90222	B2	O	3/13/2019	3/13/2019	72	N/A	N/A
520002045312		B2	O	3/9/2019	3/9/2019	68	N/A	N/A
520002017031		B1	O	3/7/2019	3/7/2019	66	N/A	N/A
520001988974	91105	B2	O	2/27/2019	2/27/2019	58	N/A	N/A
520001989357		B2	O	2/11/2019	2/11/2019	42	N/A	N/A
520001988977	90275	B1	O	2/11/2019	2/11/2019	42	N/A	N/A
520002018547	91607	B3	O	2/1/2019	2/1/2019	32	N/A	N/A
520001968472		B1	O	1/30/2019	1/30/2019	30	N/A	N/A
520002010235	91335	B2	O	1/28/2019	1/28/2019	28	N/A	N/A
520002010011		A3	O	1/24/2019	1/24/2019	24	N/A	N/A
520001970517		B3	O	1/11/2019	1/11/2019	11	N/A	N/A
520001999823	90062	B3	O	1/9/2019	1/9/2019	9	N/A	N/A
520001996060	91744	B2	O	1/7/2019	1/7/2019	7	N/A	N/A
520002077272	#N/A	A3	O	6/6/2019	6/6/2019	157	N/A	N/A
520002038205	#N/A	B3	O	4/25/2019	4/25/2019	115	N/A	N/A
520002253659	93256	A3	P	10/3/2019	10/3/2019	276	N/A	N/A
520002251386	90041	B3	R	12/6/2019	12/6/2019	340	N/A	N/A
520002251341	93405	B3	R	11/19/2019	11/19/2019	323	N/A	N/A
520002251124	92234	B3	R	11/14/2019	11/14/2019	318	N/A	N/A
520002251130	92236	B3	R	11/12/2019	11/12/2019	316	N/A	N/A
520002251130	92236	B3	R	11/12/2019	11/12/2019	316	N/A	N/A
520002251130	92236	B3	R	11/12/2019	11/12/2019	316	N/A	N/A
520002273736	90031	B3	R	11/8/2019	11/8/2019	312	N/A	N/A
520002251126	92270	B2	R	11/5/2019	11/5/2019	309	N/A	N/A
520002270973	91367	B3	R	11/1/2019	11/1/2019	305	N/A	N/A
520002268704		A3	R	11/1/2019	11/1/2019	305	N/A	N/A
520002154852	93560	B3	R	10/29/2019	10/29/2019	302	N/A	N/A
520002265948	93407	B2	R	10/25/2019	10/25/2019	298	N/A	N/A
520002154596	92630	B3	R	10/16/2019	10/16/2019	289	N/A	N/A
520002154596	92630	B3	R	10/16/2019	10/16/2019	289	N/A	N/A
520002154879	93420	B3	R	10/14/2019	10/14/2019	287	N/A	N/A
520002154222	92544	B3	R	10/9/2019	10/9/2019	282	N/A	N/A
520002252047	91367	B2	R	10/2/2019	10/2/2019	275	N/A	N/A
520002136338	91042	B2	R	9/27/2019	9/27/2019	270	N/A	N/A
520002246951	92591	A3	R	9/26/2019	9/26/2019	269	N/A	N/A
520002161988	93003	B2	R	9/25/2019	9/25/2019	268	N/A	N/A
520002134633		A2	R	9/20/2019	9/20/2019	263	N/A	N/A
520002160127	90501	B2	R	9/17/2019	9/17/2019	260	N/A	N/A
520002135398	90272	B2	R	9/10/2019	9/10/2019	253	N/A	N/A
520002150323	92277	B3	R	8/29/2019	8/29/2019	241	N/A	N/A
520002149373	91784	B2	R	8/27/2019	8/27/2019	239	N/A	N/A
520002058304	93422	B3	R	8/26/2019	8/26/2019	238	N/A	N/A

WELKER JET- 300
 FISHER 161-H
 RELIANCE Z
 GROVE 80-LR MED-720#
 GROVE 80-BA MED-720#
 MOONEY SERIES 20
 MOONEY SERIES 20
 MOONEY SERIES 20
 MOONEY SERIES 20
 GROVE 80-LR MED-720#
 RELIANCE Z
 FISHER 161 SST
 GROVE 80-LR MED-720#
 GROVE 80-LR MED-720#
 GROVE 80-LR MED-720#
 FISHER 621-107
 GROVE 80-LR MED-720#
 FISHER 161 ALUMINUM
 FISHER 161 ALUMINUM
 GROVE 80-LR H-1440#
 MOONEY SERIES 20
 GROVE 80-BA MED-720#
 GROVE 80-LR LOW-275#
 RELIANCE Z
 GROVE 80-BA MED-720#
 MOONEY FG-FLANGD-300
 FISHER 161 SST

520002145757	90042	B3	R	FISHER 161 SST	8/23/2019	8/23/2019	235	N/A	N/A
520002116843	91360	B2	R	RELiance Z	8/21/2019	8/21/2019	233	N/A	N/A
520002145751	91202	B3	R	FISHER 161 SST	8/20/2019	8/20/2019	232	N/A	N/A
520002116830	91607	B3	R	GROVE 80-LR-MED-720#	8/16/2019	8/16/2019	228	N/A	N/A
520002115796	90505	B2	R	GROVE 80-LR-LOW-275#	8/13/2019	8/13/2019	225	N/A	N/A
520002116062	92324	B2	R	MOONEY SERIES 20	8/12/2019	8/12/2019	224	N/A	N/A
520002116062	92324	B2	R	MOONEY SERIES 20	8/12/2019	8/12/2019	224	N/A	N/A
520002116064	92354	B2	R	RELiance Z	8/12/2019	8/12/2019	224	N/A	N/A
520002114670	92655	B2	R	FISHER 161 ALUMINUM	8/9/2019	8/9/2019	221	N/A	N/A
520002116148	92334	B3	R	MOONEY SERIES 20	8/9/2019	8/9/2019	221	N/A	N/A
520002116068	92407	B2	R	GROVE 80-LR-MED-720#	8/6/2019	8/6/2019	218	N/A	N/A
520002116578	91367	B3	R	MOONEY SERIES 20	8/6/2019	8/6/2019	218	N/A	N/A
520002096211	93436	B3	R	RELiance Z	7/31/2019	7/31/2019	212	N/A	N/A
520002058600	93033	B2	R	FISHER 1805-4	7/30/2019	7/30/2019	211	N/A	N/A
520002095738	92201	B2	R	MOONEY SERIES 20	7/25/2019	7/25/2019	206	N/A	N/A
520002078979	93430	B2	R	MOONEY SERIES 20	7/25/2019	7/25/2019	206	N/A	N/A
520002095214	92869	B2	R	FISHER 161 ALUMINUM	7/24/2019	7/24/2019	205	N/A	N/A
520002095214	92869	B2	R	RELiance Z	7/24/2019	7/24/2019	205	N/A	N/A
520002095214	92869	B2	R	FISHER 161 SST	7/24/2019	7/24/2019	205	N/A	N/A
520002095214	92869	B2	R	RELiance Z	7/24/2019	7/24/2019	205	N/A	N/A
520002079281	93001	B2	R	RELiance Z	7/23/2019	7/23/2019	204	N/A	N/A
520002096349		B3	R	MOONEY FG-FLANGD-300	7/23/2019	7/23/2019	204	N/A	N/A
520002095232	91789	B2	R	FISHER 621	7/22/2019	7/22/2019	203	N/A	N/A
520002095628	90277	B2	R	MOONEY SERIES 20	7/18/2019	7/18/2019	199	N/A	N/A
520002095705	91701	B2	R	MOONEY SERIES 20	7/16/2019	7/16/2019	197	N/A	N/A
520002095704	93274	B2	R	FISHER 161 ALUMINUM	7/15/2019	7/15/2019	196	N/A	N/A
520002095623	90505	B2	R	FISHER 161 ALUMINUM	7/5/2019	7/5/2019	186	N/A	N/A
520002096279		A3	R	MOONEY SERIES 20	7/5/2019	7/5/2019	186	N/A	N/A
520002096279		A3	R	MOONEY SERIES 20	7/5/2019	7/5/2019	186	N/A	N/A
520002096279		A3	R	MOONEY SERIES 20	7/5/2019	7/5/2019	186	N/A	N/A
520002096279		A3	R	MOONEY SERIES 20	7/5/2019	7/5/2019	186	N/A	N/A
520002123404	93505	B3	R	RELiance Z	7/4/2019	7/4/2019	185	N/A	N/A
520002096348		A2	R	MOONEY SERIES 20	7/2/2019	7/2/2019	183	N/A	N/A
520002095703	91730	B2	R	MOONEY SERIES 20	7/1/2019	7/1/2019	182	N/A	N/A
520002095703	91730	B2	R	MOONEY SERIES 20	7/1/2019	7/1/2019	182	N/A	N/A
520002095707	91701	B2	R	MOONEY SERIES 20	7/1/2019	7/1/2019	182	N/A	N/A
520002079269	91367	B2	R	RELiance Z	6/24/2019	6/24/2019	175	N/A	N/A
520002079245	91316	B3	R	MOONEY SERIES 20	6/21/2019	6/21/2019	172	N/A	N/A
520002078232	90245	B2	R	GROVE 80-LR-LOW-275#	6/19/2019	6/19/2019	170	N/A	N/A
520002079253	91343	B2	R	FISHER 161 SST	6/18/2019	6/18/2019	169	N/A	N/A
520002102403	92870	B2	R	FISHER 161 ALUMINUM	6/14/2019	6/14/2019	165	N/A	N/A
520002102283	90036	B3	R	GROVE 80-LR-MED-720#	6/9/2019	6/9/2019	160	N/A	N/A
520002078235	90245	B3	R	GROVE 80-LR-MED-720#	6/6/2019	6/6/2019	157	N/A	N/A
520002078532	92324	B2	R	MOONEY SERIES 20	6/5/2019	6/5/2019	156	N/A	N/A
520002058337	93280	B2	R	RELiance Z	5/30/2019	5/30/2019	150	N/A	N/A
520002058364	91367	B3	R	FISHER 161 SST	5/30/2019	5/30/2019	150	N/A	N/A
520002058599	93030	B2	R	FISHER 161 ALUMINUM	5/29/2019	5/29/2019	149	N/A	N/A
520002058599	93030	B2	R	FISHER 161 ALUMINUM	5/29/2019	5/29/2019	149	N/A	N/A
520002058599	93030	B2	R	FISHER 161 SST	5/29/2019	5/29/2019	149	N/A	N/A
520002056766	92630	B2	R	FISHER 161 SST	5/14/2019	5/14/2019	134	N/A	N/A
520002058344	93263	B3	R	MOONEY FG-FLANGD-300	5/13/2019	5/13/2019	133	N/A	N/A
520002083398	93066	B3	R	FISHER 621-107	5/10/2019	5/10/2019	130	N/A	N/A
520002083398	93066	B3	R	FISHER 1805-4	5/10/2019	5/10/2019	130	N/A	N/A
520002083358	90065	B3	R	RELiance Z-138	5/9/2019	5/9/2019	129	N/A	N/A
520002057642	90066	B3	R	RELiance Z	5/8/2019	5/8/2019	128	N/A	N/A
520002056760	92782	B3	R	GROVE 80-LR-MED-720#	5/2/2019	5/2/2019	122	N/A	N/A
520002057993	92284	B3	R	MOONEY SERIES 20	5/1/2019	5/1/2019	121	N/A	N/A
520002037799	91350	B2	R	FISHER 161 ALUMINUM	4/29/2019	4/29/2019	119	N/A	N/A
520002018063	93013	B2	R	RELiance Z	4/26/2019	4/26/2019	116	N/A	N/A
520002018063	93013	B2	R	RELiance Z	4/26/2019	4/26/2019	116	N/A	N/A
520002038004	91320	B2	R	RELiance Z	4/24/2019	4/24/2019	114	N/A	N/A
520002038043	91360	B2	R	RELiance Z	4/23/2019	4/23/2019	113	N/A	N/A
520002037313	92225	B3	R	FISHER 627 M	4/17/2019	4/17/2019	107	N/A	N/A
520002037313	92225	B3	R	FISHER 627 M	4/17/2019	4/17/2019	107	N/A	N/A
520002037313	92225	B3	R	FISHER 627 M	4/17/2019	4/17/2019	107	N/A	N/A
520002038031	93552	B3	R	FISHER 161 SST	4/17/2019	4/17/2019	107	N/A	N/A
520002037313	92225	B3	R	FISHER 627 M	4/17/2019	4/17/2019	107	N/A	N/A
520002066632		B3	R	MOONEY FG-FLANGD-300	4/15/2019	4/15/2019	105	N/A	N/A
520002035980	91755	B1	R	GROVE 80-LR-LOW-275#	4/11/2019	4/11/2019	101	N/A	N/A
520002037795	91331	B3	R	MOONEY FG-FLANGD-600	4/10/2019	4/10/2019	100	N/A	N/A
520002035937	91754	B1	R	FISHER 161 SST	4/10/2019	4/10/2019	100	N/A	N/A
520002035937	91754	B1	R	FISHER 161 SST	4/10/2019	4/10/2019	100	N/A	N/A
520002064866	93591	A3	R	GROVE 80-LR-HI-1440#	4/10/2019	4/10/2019	100	N/A	N/A
520002035935	90022	B1	R	GROVE 80-LR-LOW-275#	4/9/2019	4/9/2019	99	N/A	N/A
520002035935	90022	B1	R	RELiance Z	4/9/2019	4/9/2019	99	N/A	N/A
520002036903	90221	B3	R	GROVE 80-BA-MED-720#	4/9/2019	4/9/2019	99	N/A	N/A
520002038193		B2	R	MOONEY SERIES 20	4/8/2019	4/8/2019	98	N/A	N/A
520002038042	91367	B2	R	RELiance Z	4/5/2019	4/5/2019	95	N/A	N/A
520002038158		B2	R	MOONEY SERIES 20	4/4/2019	4/4/2019	94	N/A	N/A
520002038859	90220	B2	R	GROVE 80-BA-MED-720#	4/1/2019	4/1/2019	91	N/A	N/A
520002038024	91436	B2	R	GROVE 80-BA-MED-720#	4/1/2019	4/1/2019	91	N/A	N/A
520002038029	91367	B3	R	FISHER 161 SST	4/1/2019	4/1/2019	91	N/A	N/A
520002054387	90037	B2	R	FISHER 161 SST	3/29/2019	3/29/2019	88	N/A	N/A
520002017733	93446	B3	R	FISHER H202	3/25/2019	3/25/2019	84	N/A	N/A
520002017790	90032	B1	R	RELiance Z	3/21/2019	3/21/2019	80	N/A	N/A
520002017797	91214	B2	R	GROVE 80-LR-MED-720#	3/19/2019	3/19/2019	78	N/A	N/A
520002047318	93662	B2	R	FISHER 99-FLANGE BOD	3/15/2019	3/15/2019	74	N/A	N/A
520002017798	91214	B2	R	MOONEY FG-FLANGD-150	3/12/2019	3/12/2019	71	N/A	N/A
520002017332	92407	A3	R	MOONEY SERIES 20	3/4/2019	3/4/2019	63	N/A	N/A
520002017332	92407	A3	R	MOONEY SERIES 20	3/4/2019	3/4/2019	63	N/A	N/A
520002018150		B2	R	MOONEY SERIES 20	3/4/2019	3/4/2019	63	N/A	N/A
520002018150		B2	R	MOONEY SERIES 20	3/4/2019	3/4/2019	63	N/A	N/A
520001989576	93060	B2	R	GROVE 80-LR-MED-720#	3/1/2019	3/1/2019	60	N/A	N/A
520001988970	90275	B1	R	RELiance Z	2/28/2019	2/28/2019	59	N/A	N/A
520001989565	93551	B3	R	GROVE 80-BA-HI-1440#	2/28/2019	2/28/2019	59	N/A	N/A
520002033225		B3	R	MOONEY SERIES 20	2/28/2019	2/28/2019	59	N/A	N/A
520002033225		B3	R	MOONEY SERIES 20	2/28/2019	2/28/2019	59	N/A	N/A
520002033225		B3	R	MOONEY SERIES 20	2/28/2019	2/28/2019	59	N/A	N/A
520001988973		B1	R	RELiance Z	2/25/2019	2/25/2019	56	N/A	N/A
520002032053	91786	B2	R	FISHER 621-107	2/25/2019	2/25/2019	56	N/A	N/A

520001989180		B3	R	MOONEY SERIES 20	2/22/2019	2/22/2019	53	N/A	N/A
520001989392	91203	B3	R	FISHER 161 SST	2/20/2019	2/20/2019	51	N/A	N/A
520001989555	91311	B2	R	FISHER 161 ALUMINUM	2/12/2019	2/12/2019	43	N/A	N/A
520001989556	91326	B3	R	FISHER 161 SST	2/12/2019	2/12/2019	43	N/A	N/A
520001989573	93015	B2	R	MOONEY FG-FLANGD-300	2/12/2019	2/12/2019	43	N/A	N/A
520002033857	92345	B3	R	MOONEY SERIES 20	2/12/2019	2/12/2019	43	N/A	N/A
520001989558	91311	B2	R	FISHER 161 ALUMINUM	2/11/2019	2/11/2019	42	N/A	N/A
520001988968	91775	B2	R	FISHER 161 SST	2/6/2019	2/6/2019	37	N/A	N/A
520001989101	90201	B3	R	RELIANCE Z	2/5/2019	2/5/2019	36	N/A	N/A
520001988958	90241	B2	R	FISHER 161 ALUMINUM	2/1/2019	2/1/2019	32	N/A	N/A
520002018547	91607	B3	R	FISHER 161 SST	2/1/2019	2/1/2019	32	N/A	N/A
520002018547	91607	B3	R	FISHER 161 SST	2/1/2019	2/1/2019	32	N/A	N/A
520001970144	91367	B3	R	FISHER 161-H	1/31/2019	1/31/2019	31	N/A	N/A
520001969708	92243	B2	R	RELIANCE Z-138	1/30/2019	1/30/2019	30	N/A	N/A
520001970137		B2	R	GROVE 80-LR MED-720W	1/29/2019	1/29/2019	29	N/A	N/A
520001970137		B2	R	FISHER 161 ALUMINUM	1/29/2019	1/29/2019	29	N/A	N/A
520002011761	93117	B2	R	FISHER 180S-4	1/28/2019	1/28/2019	28	N/A	N/A
520002009767	92404	B2	R	MOONEY SERIES 20	1/24/2019	1/24/2019	24	N/A	N/A
520001970229	91360	A2	R	FISHER 161 SST	1/17/2019	1/17/2019	17	N/A	N/A
520001970229	91360	A2	R	FISHER 161 SST	1/17/2019	1/17/2019	17	N/A	N/A
520001970229	91360	A2	R	FISHER 161 SST	1/17/2019	1/17/2019	17	N/A	N/A
520001969712	91384	A3	R	MOONEY SERIES 20	1/16/2019	1/16/2019	16	N/A	N/A
520001969068	92336	B3	R	GROVE 80-LR MED-720W	1/11/2019	1/11/2019	11	N/A	N/A
520001968433	92805	B2	R	FISHER 161 ALUMINUM	1/10/2019	1/10/2019	10	N/A	N/A
520001969195	92251	B3	R	MOONEY SERIES 20	1/8/2019	1/8/2019	8	N/A	N/A
520001969195	92251	B3	R	MOONEY SERIES 20	1/8/2019	1/8/2019	8	N/A	N/A
520001956697	91790	B2	R	FISHER 161 ALUMINUM	1/8/2019	1/8/2019	8	N/A	N/A
520001939708		A1	C	Mercury	1/4/2019	1/4/2019	4	N/A	N/A
520001961836	90265	A1	C	Mercury	2/1/2019	2/1/2019	32	N/A	N/A
520001961866		A1	C	Mercury	2/1/2019	2/1/2019	32	N/A	N/A
520001961883		A3	C	Mercury	2/13/2019	2/13/2019	44	N/A	N/A
520001961893		A1	C	Mercury	2/5/2019	2/5/2019	36	N/A	N/A
520001961894	92692	A1	C	Mercury	2/7/2019	2/7/2019	38	N/A	N/A
520001982225	92869	A1	C	Mercury	3/7/2019	3/7/2019	66	N/A	N/A
520001982232	90715	A3	C	Mercury	3/4/2019	3/4/2019	63	N/A	N/A
520001982340		A1	C	Mercury	3/1/2019	3/1/2019	60	N/A	N/A
520001982384		A2	C	Mercury	3/11/2019	3/11/2019	70	N/A	N/A
520002000953	92630	A1	C	Mercury	3/25/2019	3/25/2019	84	N/A	N/A
520002001984	92805	A1	C	Mercury	2/16/2019	2/16/2019	47	N/A	N/A
520002005944		A3	C	Mercury	4/22/2019	4/22/2019	112	N/A	N/A
520002006011	93314	A1	C	Mercury	4/5/2019	4/5/2019	95	N/A	N/A
520002006042		A2	C	Mercury	4/4/2019	4/4/2019	94	N/A	N/A
520002006043	93313	A1	C	Mercury	4/5/2019	4/5/2019	95	N/A	N/A
520002006068		A3	C	Mercury	4/1/2019	4/1/2019	91	N/A	N/A
520002013603	92821	A1	C	Mercury	1/30/2019	1/30/2019	30	N/A	N/A
520002027981	90077	A1	C	Mercury	5/13/2019	5/13/2019	133	N/A	N/A
520002028084		A3	C	Mercury	5/2/2019	5/2/2019	122	N/A	N/A
520002028177		A3	C	Mercury	5/7/2019	5/7/2019	127	N/A	N/A
520002028212	92868	A1	C	Mercury	5/3/2019	5/3/2019	123	N/A	N/A
520002049249	92833	A1	C	Mercury	6/3/2019	6/3/2019	154	N/A	N/A
520002049338		A1	C	Mercury	6/12/2019	6/12/2019	163	N/A	N/A
520002049441	93648	A1	C	Mercury	6/10/2019	6/10/2019	161	N/A	N/A
520002049472	90027	A1	C	Mercury	6/3/2019	6/3/2019	154	N/A	N/A
520002066926		A2	C	Mercury	4/12/2019	4/12/2019	102	N/A	N/A
520002067934	92320	A1	C	Mercury	4/17/2019	4/17/2019	107	N/A	N/A
520002069781	90703	A1	C	Mercury	7/2/2019	7/2/2019	183	N/A	N/A
520002069822		A1	C	Mercury	7/12/2019	7/12/2019	193	N/A	N/A
520002069888		A1	C	Mercury	7/2/2019	7/2/2019	183	N/A	N/A
520002069924		A2	C	Mercury	7/16/2019	7/16/2019	197	N/A	N/A
520002071865		A1	C	Mercury	4/25/2019	4/25/2019	115	N/A	N/A
520002105707		A1	C	Mercury	9/9/2019	9/9/2019	252	N/A	N/A
520002105720		A1	C	Mercury	9/19/2019	9/19/2019	262	N/A	N/A
520002105777	92841	A1	C	Mercury	9/6/2019	9/6/2019	249	N/A	N/A
520002117036		A1	C	Mercury	7/1/2019	7/1/2019	182	N/A	N/A
520002126947	93270	A2	C	Mercury	10/9/2019	10/9/2019	282	N/A	N/A
520002126963	91340	A1	C	Mercury	10/2/2019	10/2/2019	275	N/A	N/A
520002126971	91356	A1	C	Mercury	10/9/2019	10/9/2019	282	N/A	N/A
520002126999		A1	C	Mercury	10/9/2019	10/9/2019	282	N/A	N/A
520002127011		A1	C	Mercury	10/4/2019	10/4/2019	277	N/A	N/A
520002127089	90303	A2	C	Mercury	10/9/2019	10/9/2019	282	N/A	N/A
520002130545	90703	A1	C	Mercury	8/2/2019	8/2/2019	214	N/A	N/A
520002130644		A2	C	Mercury	8/21/2019	8/21/2019	233	N/A	N/A
520002130716	92612	A1	C	Mercury	8/8/2019	8/8/2019	220	N/A	N/A
520002131241		A2	C	Mercury	7/29/2019	7/29/2019	210	N/A	N/A
520002146057	92677	A1	C	Mercury	11/1/2019	11/1/2019	305	N/A	N/A
520002146061	91606	A1	C	Mercury	11/15/2019	11/15/2019	319	N/A	N/A
520002146132	90720	A1	C	Mercury	11/1/2019	11/1/2019	305	N/A	N/A
520002161519	91384	A1	C	Mercury	12/9/2019	12/9/2019	343	N/A	N/A
520002161640		A1	C	Mercury	12/12/2019	12/12/2019	346	N/A	N/A
520002161640		A1	C	Mercury	12/9/2019	12/9/2019	343	N/A	N/A
520002161642		A1	C	Mercury	12/9/2019	12/9/2019	343	N/A	N/A
520002162423	92672	A1	C	Mercury	9/24/2019	9/24/2019	267	N/A	N/A
520002273404		A1	C	Mercury	11/7/2019	11/7/2019	311	N/A	N/A
520002287000		A3	C	Mercury	12/2/2019	12/2/2019	336	N/A	N/A
520002301261	90043	A2	C	Mercury	12/19/2019	12/19/2019	353	N/A	N/A
520001939757		A2	C	Mercury	1/2/2019	1/2/2019	2	N/A	N/A
520002049379		A2	C	Mercury	6/17/2019	6/17/2019	168	N/A	N/A
520002130684		A1	C	Mercury	8/2/2019	8/2/2019	214	N/A	N/A
520002145868		A1	C	Mercury	8/20/2019	8/20/2019	232	N/A	N/A

Appendix 5 - Rev. 03/31/2020

Header column "Comment" boxes displayed below for reference.	
Column Heading	Description and Definition of Required Contents (If not self-explanatory)
Station Leaks & Emissions	
Number of Stations	
Station Classification	A1 = above grade, pressure <100 psi A2 = above grade, pressure =100-300 psi A3 = above grade, pressure >300 psi B1 = below grade, pressure <100 psi B2 = below grade, pressure =100-300 psi B3 = below grade, pressure >300 psi
Emission Factor (Mscf/yr)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Tab: All Damages	
ID	
Geographic Location	GIS, zip code, or equivalent
Damage Type	E = excavation damage N = natural force damage O = other outside force damage
Pipe Material	PB = cathodically protected steel, bare PC = cathodically protected steel, coated UB = unprotected steel, bare UC = unptotected steel, coated
Pipe Size (nominal)	
Pipe Age (months)	

Pressure (psi)	MOP = maximum operating pressure over the past year
Leak Grade	2 = grade 2 2+ = grade 2+ 3 = grade 3 N = non-graded or ungraded
Above Ground or Below Ground	AH = above ground, hazardous AN = above ground, non-hazardous B = below ground
Discovery Date (MM/DD/YY)	
Repair Date (MM/DD/YY)	
Number of Days Leaking	<p>If date and time stamp are reliable and used consistently by respondent, then emissions may be calculated based on actual time leaking. E.G. Repair time - damage event time = duration of event.</p> <p>If respondent has average or historical leak duration based on the nature and circumstances of damages, then these may be applied to like damage events. The emissions factors should be adequately supported and explained in the filing.</p> <p>If actual time stamps and historical averages are not available, then whole days should be used in the engineering calculation. The leak begins with the damage event date thru repair date or December 31st of subject year, whichever is later. E.G. Days Leaking = Repair date - date of damage + 1 day.</p>
Emission Factor (Mscf/Day)	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	<p>Provide method of calculation and example of formula.</p> <p>Explain how any EF's used were derived.</p>

Blowdowns	
ID	
Geographic Location	GIS, zip code, or equivalent
Number of Blowdown Events	
Annual Emissions (Mscf)	
Explanatory Notes / Comments	

Component Vented Emissions	
ID	
Geographic Location	GIS, zip code, or equivalent
Station Classification	A1 = above grade, pressure <100 psi A2 = above grade, pressure =100-300 psi A3 = above grade, pressure >300 psi B1 = below grade, pressure <100 psi B2 = below grade, pressure =100-300 psi B3 = below grade, pressure >300 psi
DeviceType	C = connector OE = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
NumberOfDays Emitting	Because the emissions are a factor of design or function, these emissions counted for the entire year.

New Column - for type of M&R Station where emission located.

Engineering or Manufacturer's based Estimate of Emissions	
Annual Emissions(Mscf)	The emissions should be based on 365 days times the actual volume emitting if known, or the approved Emissions Factor. Note whether the emissions are based on actual volumetric measures in the next column.
Explanatory Notes / Comments	

Component Leaks	
ID	
Geographic Location	GIS, zip code, or equivalent
Station Classification	A1 = above grade, pressure <100 psi A2 = above grade, pressure =100-300 psi A3 = above grade, pressure >300 psi B1 = below grade, pressure <100 psi B2 = below grade, pressure =100-300 psi B3 = below grade, pressure >300 psi
DeviceType	C = connector OE = open-ended line M = meter P = pneumatic device PR = pressure relief valve V = valve O = other devices
Bleed Rate	L = low bleed I = intermittent bleed H = high bleed NA = not applicable
Manufacturer	
Pressure(psi)	MOP = maximum operating pressure over the past year

New Column - for type of M&R Station where found.

Discovery Date(MM/DD/YY)	List the actual discovery date. If the leak was discovered in the year of interest, then we will assume the component was leaking from the beginning of the year for emissions reporting purposes.
Repair Date(MM/DD/YY)	Date that the component repair stopped the leak. Any associated blowdowns as a result of the repair should be included in the blowdowns tab.
NumberofDays Leaking	Assume Leaking from January 1 of subject year or prior survey date, whichever is later, thru the repair date (if repaired in year of interest) or December 31 of subject year, whichever is earlier. For O&M discovered leaks, assume that the leak begins with the discovery date <u>thru</u> repair date or December 31st of subject year, whichever is earlier.
Emission Factor(Mscf/day)	
Annual Emissions(Mscf)	
Explanatory Notes / Comments	