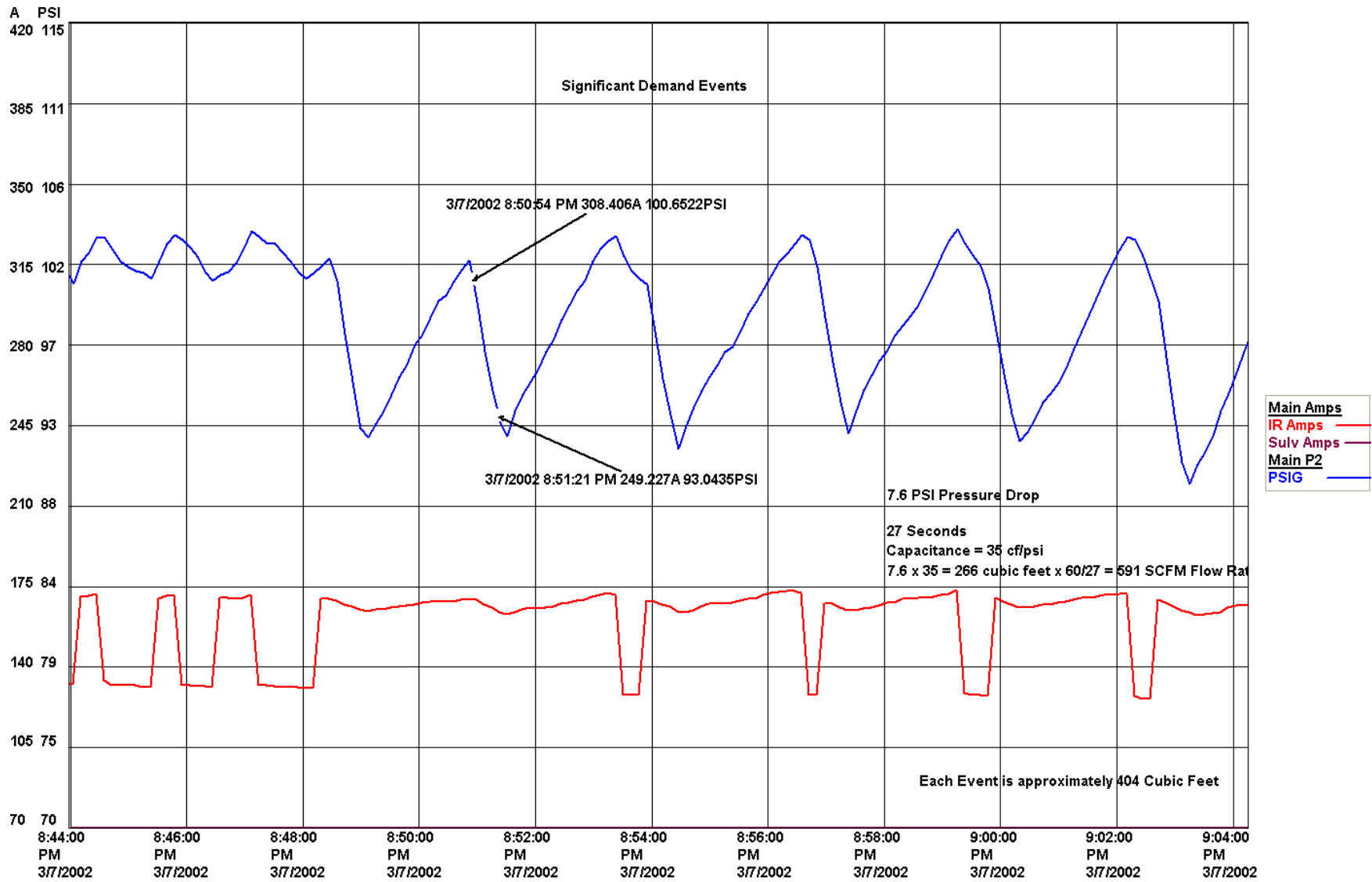


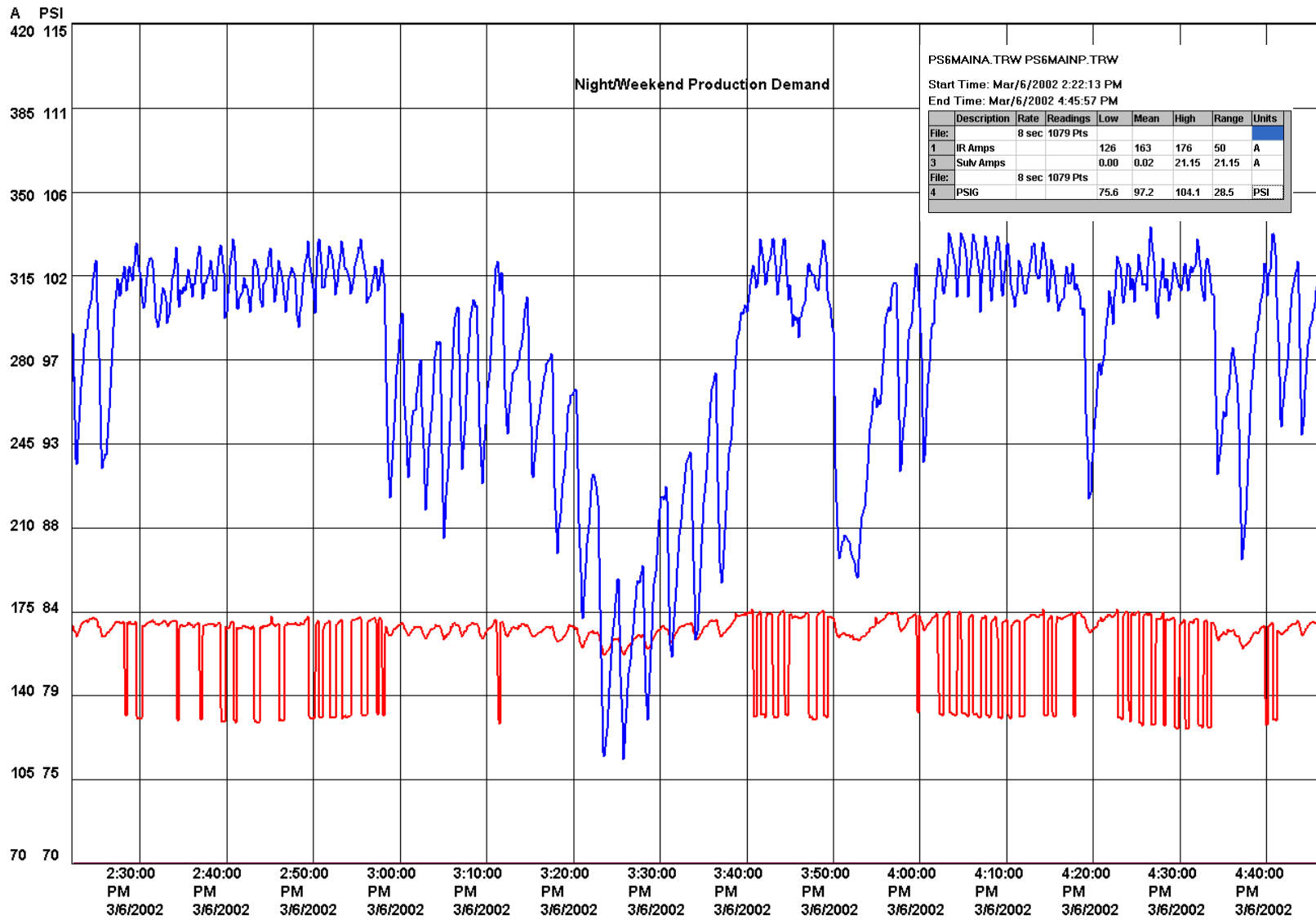
Attachment A

**General Process Inc.
Mobile, AL**

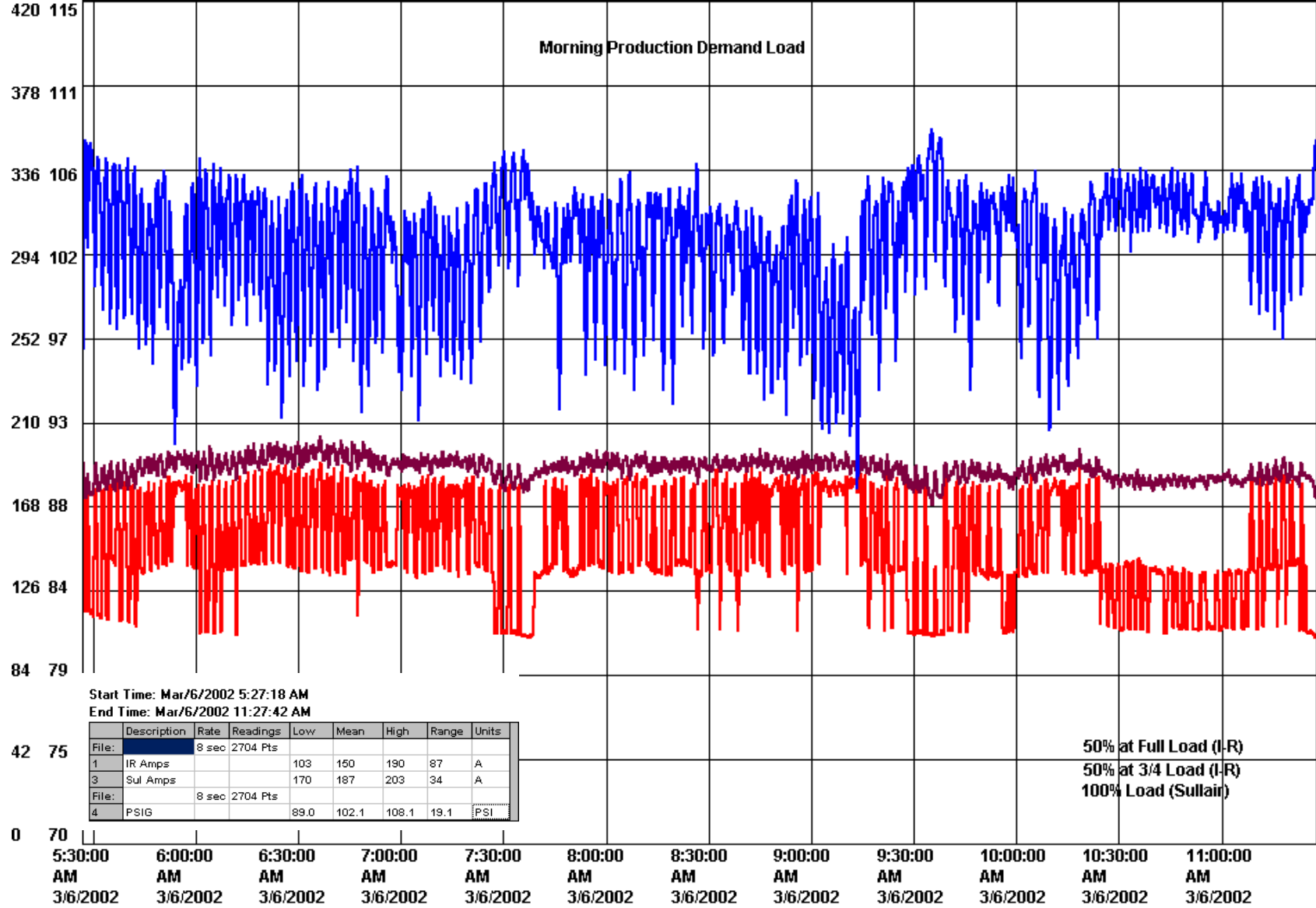
Constituents of Demand in SCFM						
	Morning Production		Afternoon Production		Evening Production	
	existing	proposed	existing	proposed	existing	proposed
Low Pressure						
General Production	1,291	1,291	1,137	1,137	668	668
Leak Load	413	207	413	207	413	207
Primary Baghouse	157	79	157	79	157	79
Secondary Baghouse	8	1	8	1	8	1
Diaphragm Pumps	55	25	35	15	0	0
Open Blowing	50	25	50	25	0	0
Totals:	1,974	1,627	1,800	1,463	1,246	954

Notes:	
General Production	<i>Productive use of compressed air.</i>
Leak Load	<i>Reduction of air waste through leak detection program. Can be accomplished with ultrasonic L.D.</i>
Primary Baghouse	<i>Install photohelic pressure differential sensors so that the baghouse pulses on demand and not timers.</i>
Secondary Baghouse	<i>Install one baghouse kit to reduce air consumption and increase efficiency of each pulse.</i>
Diaphragm Pumps	<i>Install regulators to reduce flow.</i>
Open Blowing	<i>Install low pressure high velocity air blow guns to reduce SCFM flow from each gun.</i>

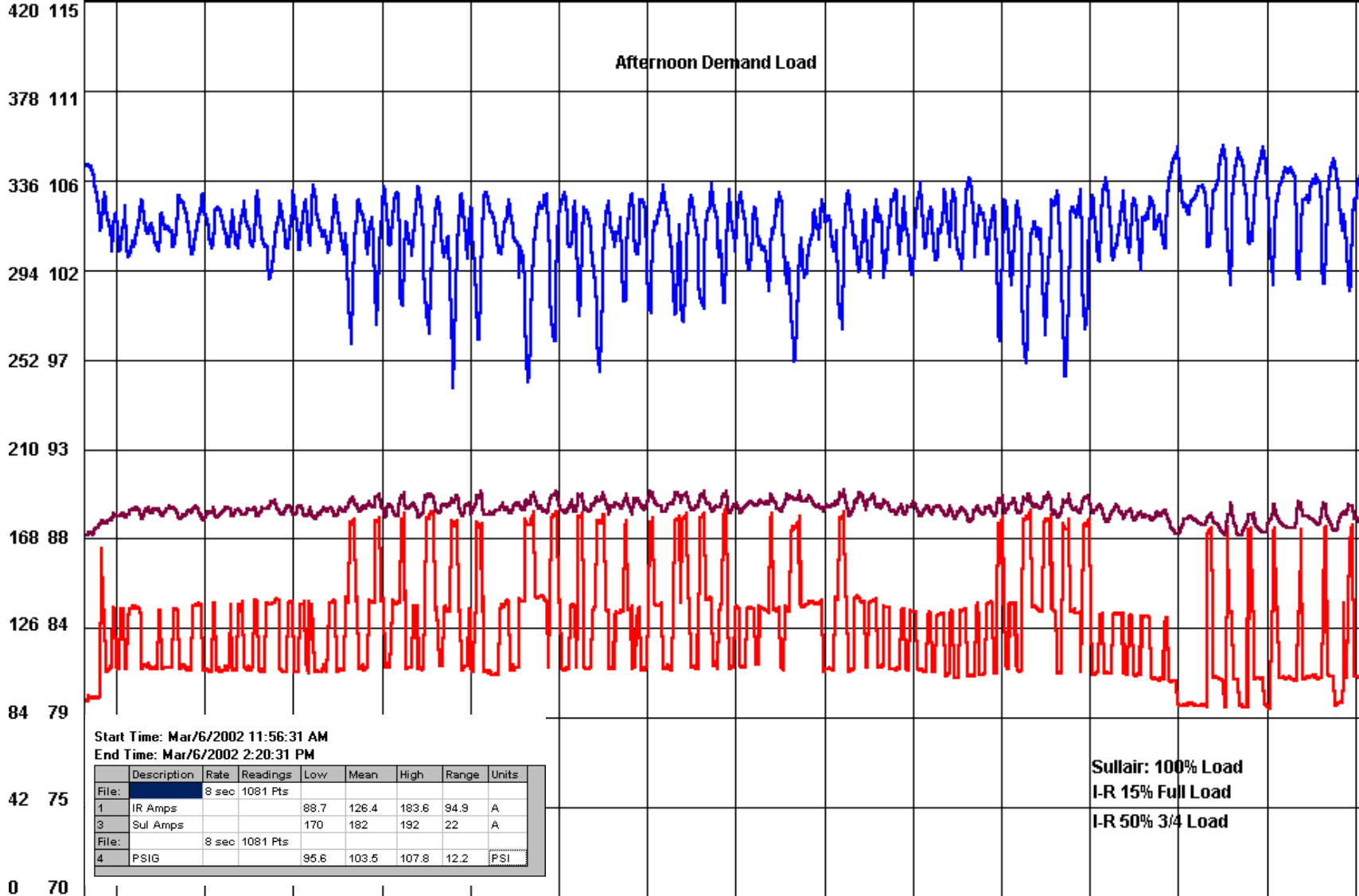




A PSI



A PSI



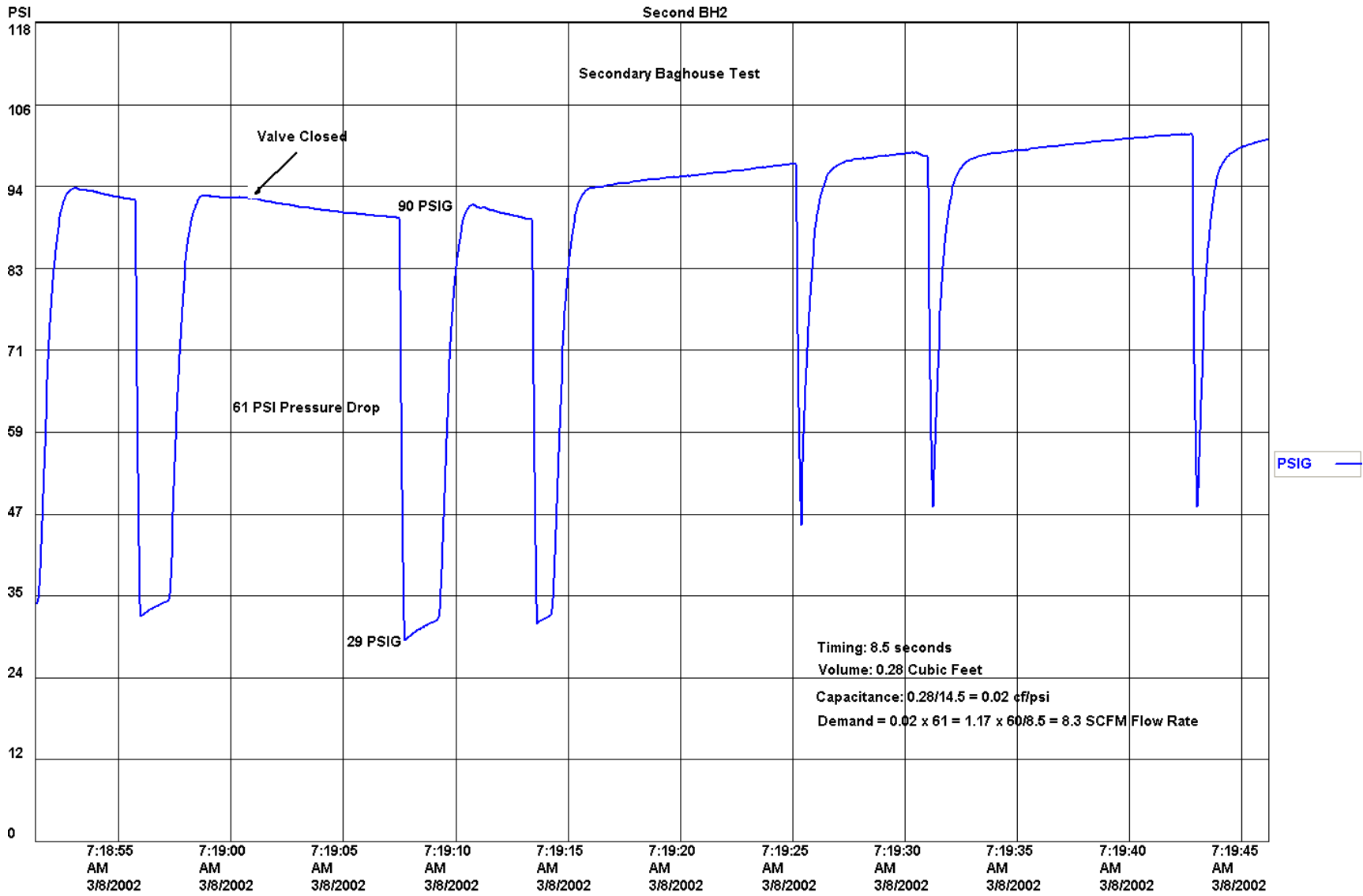
Main Amps
 IR Amps
 Sul Amps
Main P2
 PSIG

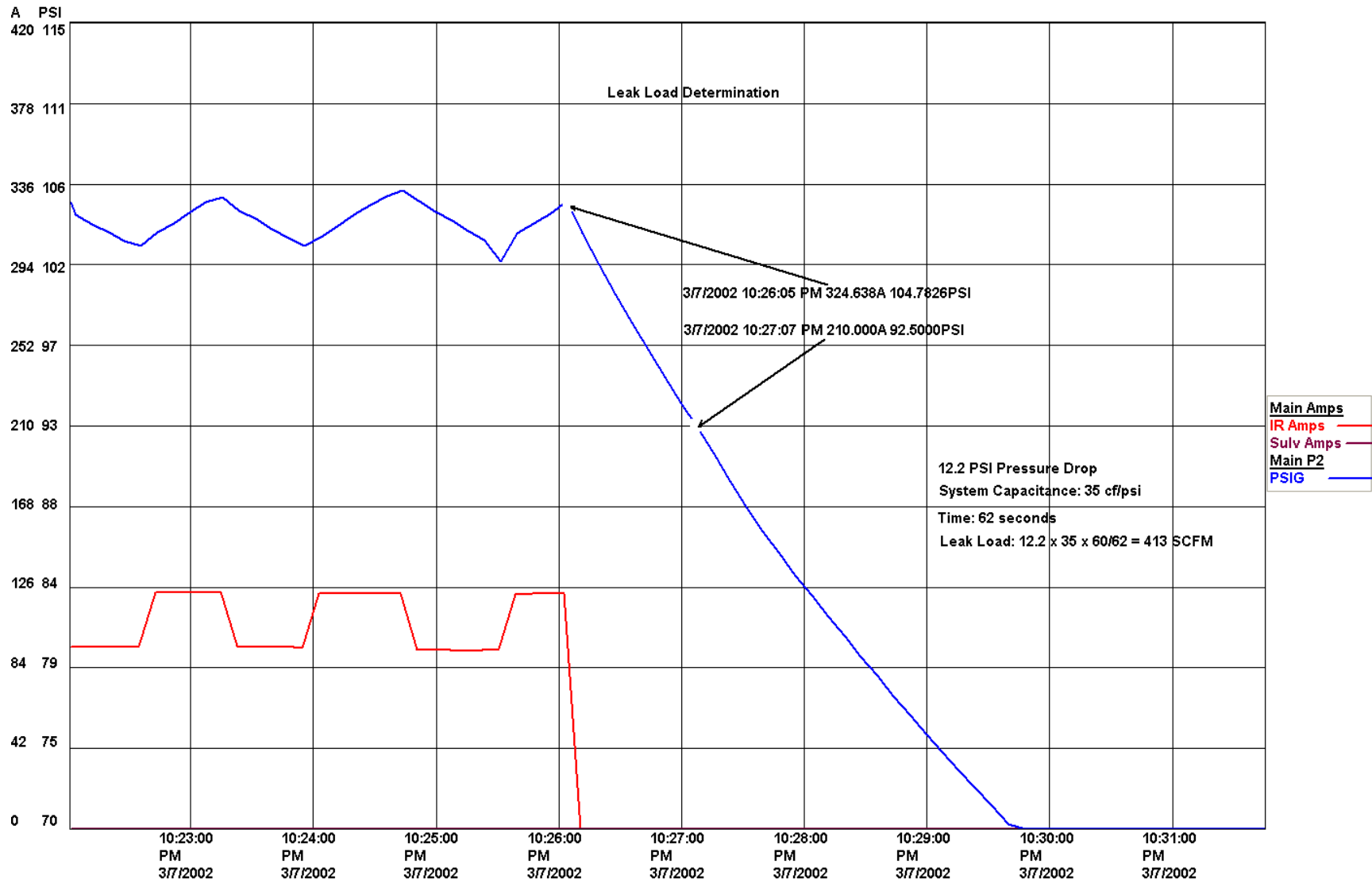
Start Time: Mar/6/2002 11:56:31 AM
 End Time: Mar/6/2002 2:20:31 PM

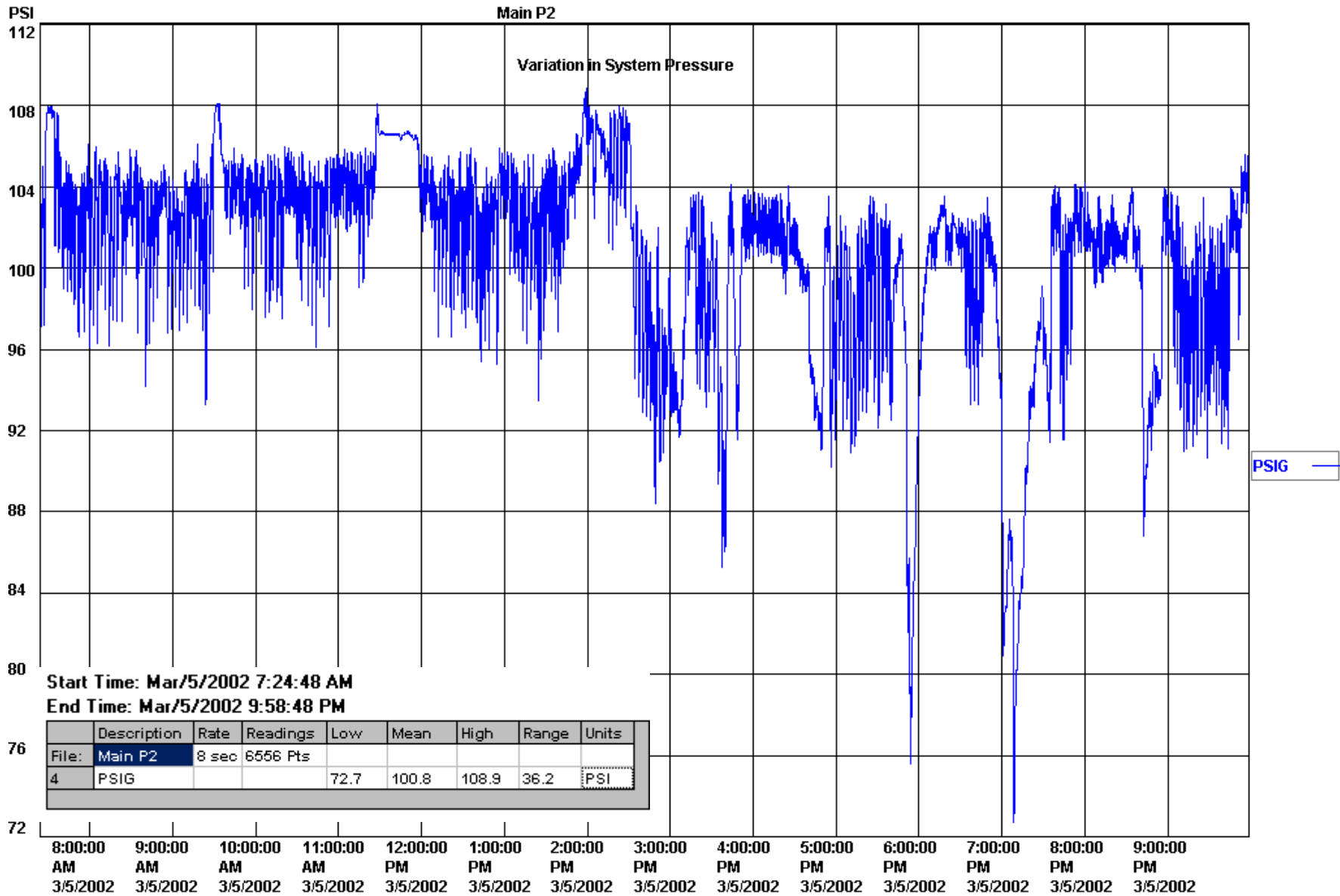
File:	Description	Rate	Readings	Low	Mean	High	Range	Units
1	IR Amps	8 sec	1081 Pts	88.7	126.4	183.6	94.9	A
3	Sul Amps			170	182	192	22	A
4	PSIG	8 sec	1081 Pts	95.6	103.5	107.8	12.2	PSI

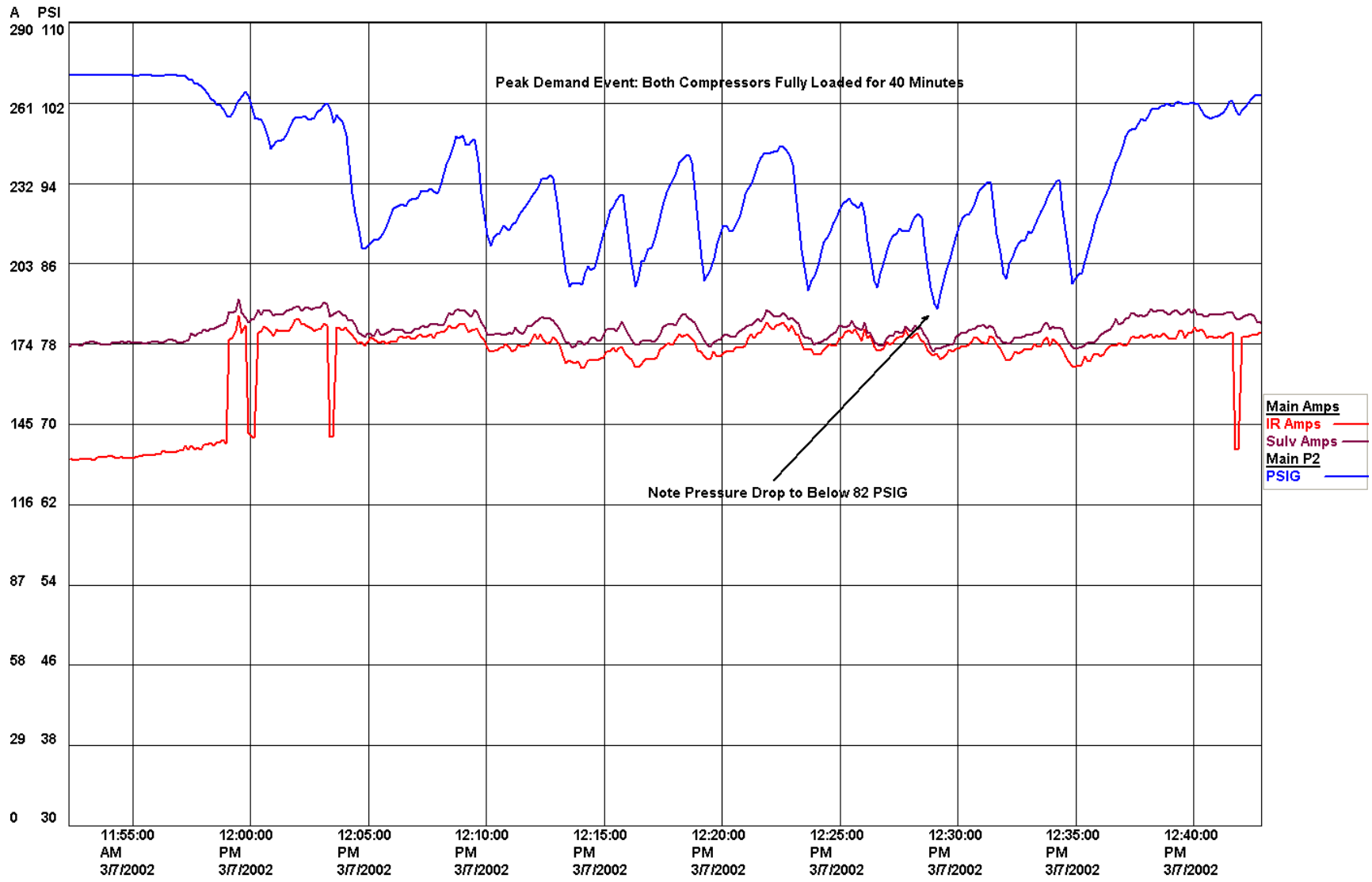
Sullair: 100% Load
 I-R 15% Full Load
 I-R 50% 3/4 Load

12:00:00 PM 3/6/2002 12:10:00 PM 3/6/2002 12:20:00 PM 3/6/2002 12:30:00 PM 3/6/2002 12:40:00 PM 3/6/2002 12:50:00 PM 3/6/2002 1:00:00 PM 3/6/2002 1:10:00 PM 3/6/2002 1:20:00 PM 3/6/2002 1:30:00 PM 3/6/2002 1:40:00 PM 3/6/2002 1:50:00 PM 3/6/2002 2:00:00 PM 3/6/2002 2:10:00 PM 3/6/2002 2:20:00 PM 3/6/2002

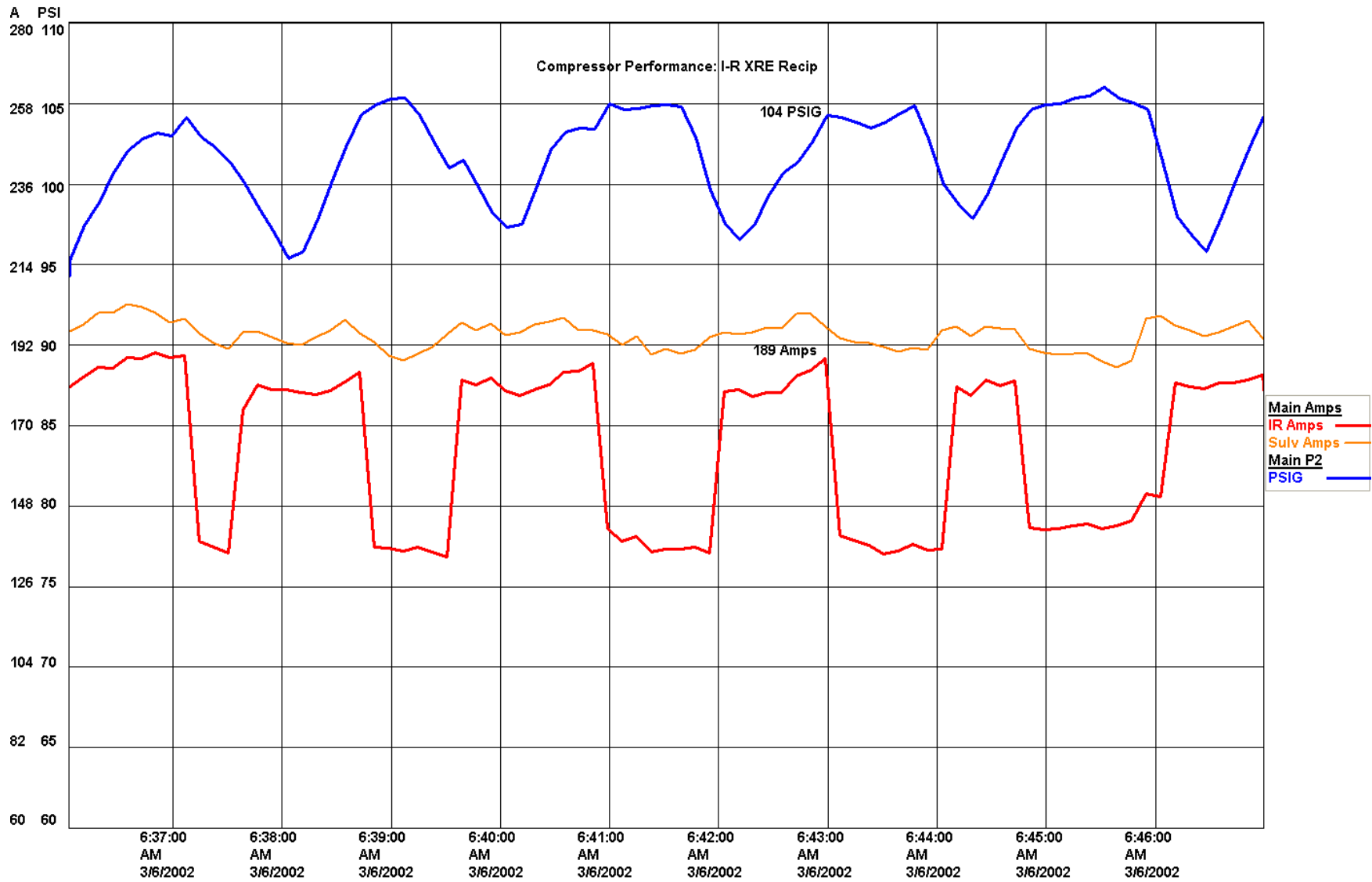


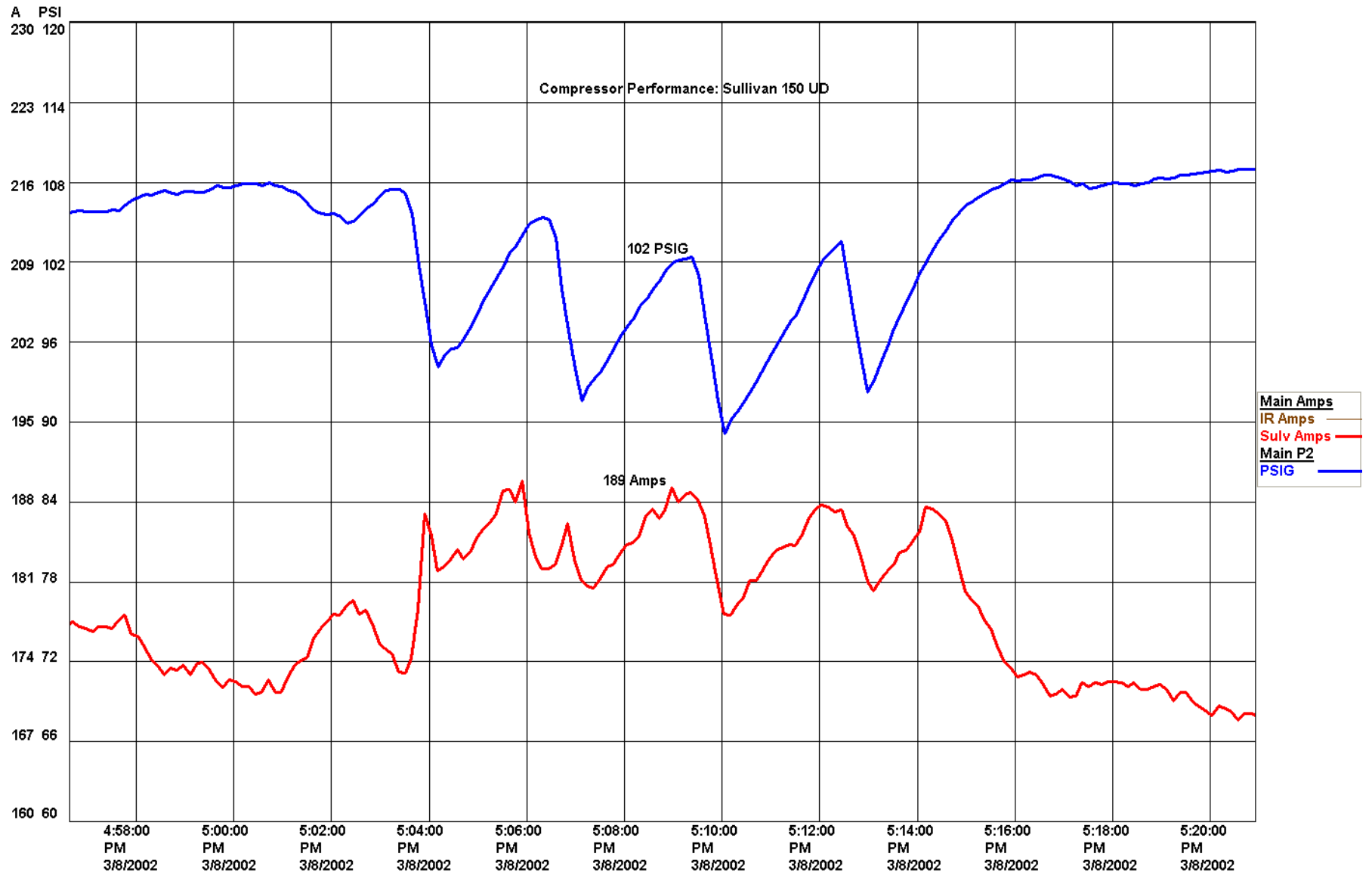


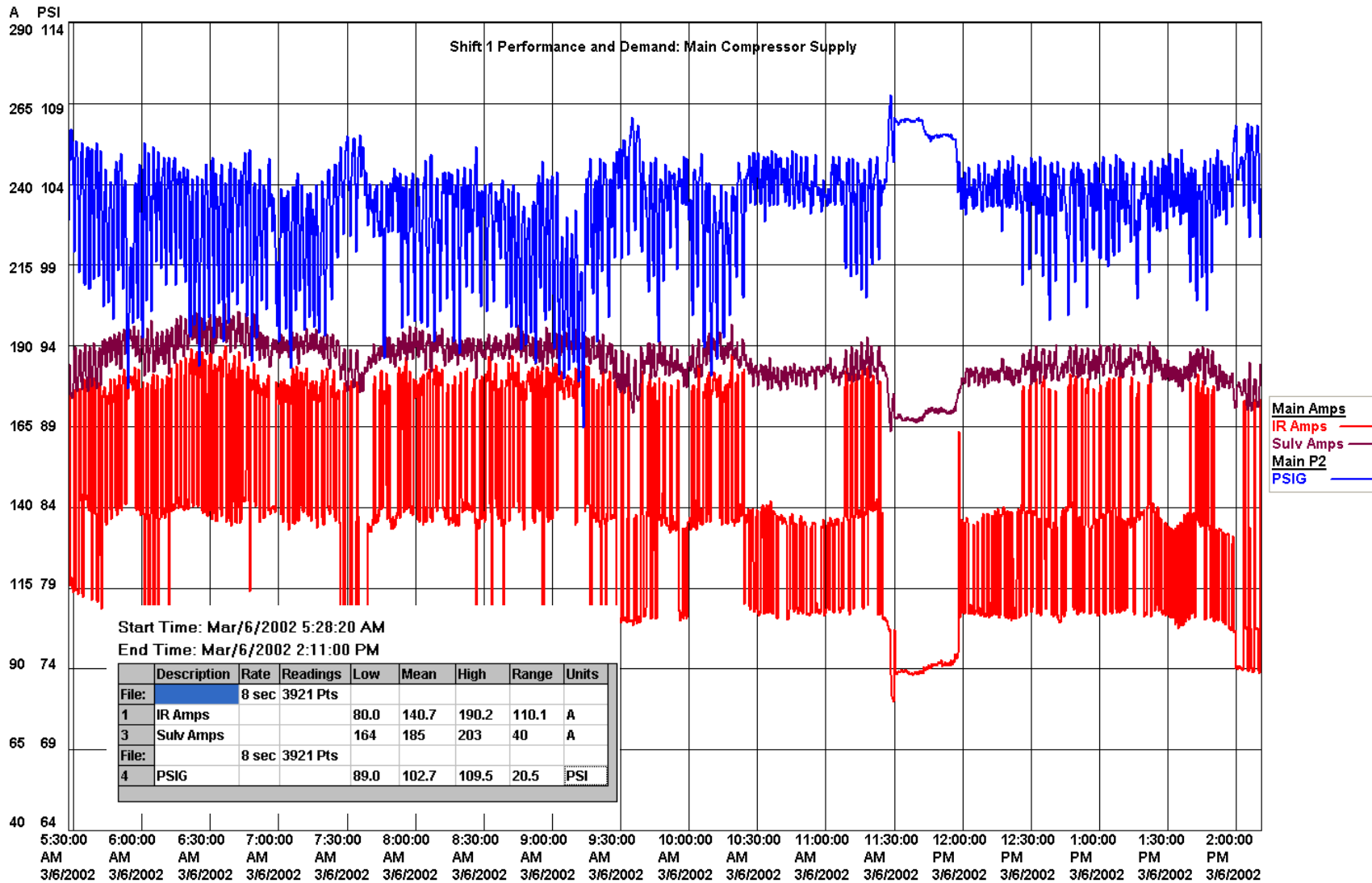




Attachment B







A PSI
420 115

378 111

336 106

294 102

252 97

210 93

168 88

126 84

84 79

42 75

0 70

Night Compressor Demand Load

Main Amps
IR Amps
Sulv Amps
Main P2
PSIG

Start Time: Mar/5/2002 2:35:42 PM
End Time: Mar/5/2002 9:52:06 PM

70% at Full Load
30% at 3/4 Full Load
816 SCFM Average

	Description	Rate	Readings	Low	Mean	High	Range	Units
File:		8 sec	3274 Pts					
1	IR Amps			126	163	179	53	A
3	Sulv Amps			0.00	0.00	0.00	0.00	A
File:		8 sec	3274 Pts					
4	PSIG			72.7	98.0	104.2	31.5	PSI

3:00:00 PM 3/5/2002 3:30:00 PM 3/5/2002 4:00:00 PM 3/5/2002 4:30:00 PM 3/5/2002 5:00:00 PM 3/5/2002 5:30:00 PM 3/5/2002 6:00:00 PM 3/5/2002 6:30:00 PM 3/5/2002 7:00:00 PM 3/5/2002 7:30:00 PM 3/5/2002 8:00:00 PM 3/5/2002 8:30:00 PM 3/5/2002 9:00:00 PM 3/5/2002 9:30:00 PM 3/5/2002

General Process Inc.
Mobile, AL

Compressor Data					
	#1	#2	#3	#4	#5
compressor #	IR SSR EP60	Sullair	IR SSR EP60	IR SSR EP100	IR SSR EP60
rated ICFM	237	720	237	446	241
Type	Screw	Screw	Screw	Screw	Screw
rated pressure	125	115	125	125	125
rated BHP	66	165	66	110	66
RPM	3540	1785	3540	1770	3540
voltage	460	452	460	460	460
service factor	1.15	1.25	1.15	1.15	1.15
power factor	0.87	0.88	0.87	0.88	0.87
nameplate bhp	60	150	60	100	60
nameplate amps	70	177	70	120	70
actual amps	85	184	85	127.5	70
motor efficiency	91.7%	94.1%	91.7%	91.0%	91.7%
calculated kW	58.9	126.8	58.9	89.4	48.5
calculated bhp	72	160	72	109	60
clean-up delta P	n/a	n/a	n/a	n/a	n/a
<i>Notes: There are no dryers or filters in place for the I-R or Sullair compressors supplying the main production area. PF estimated on Sullivan at 0.88 and fan amps of qty (5) taken out of readings. Fan amps of qty (4) taken out of reading for EP60.</i>					

General Process Inc.
Mobile, AL

Compressor Temperatures				
Temperatures °F	#1	#2	#3	#4
Compressor	IR SSR EP60	Sullair	IR SSR EP60	IR SSR EP100
Operating Pressure	100	100	100	100
Ambient	45	45	45	45
Relative Humidity	38%	38%	38%	38%
Oil to Air End	130	140	150	140
Air End Discharge	190	180	170	176
Rise Across Air End	60	40	20	36
Oil Cooler In	180	170	130	150
Oil Cooler Out	100	110	120	110
Temperature Rise	80	60	10	40
Aftercooler In	180	170	160	150
Aftercooler Out	85	85	85	85
Temperature Rise	40	40	40	40

**General Process Inc.
Mobile, AL**

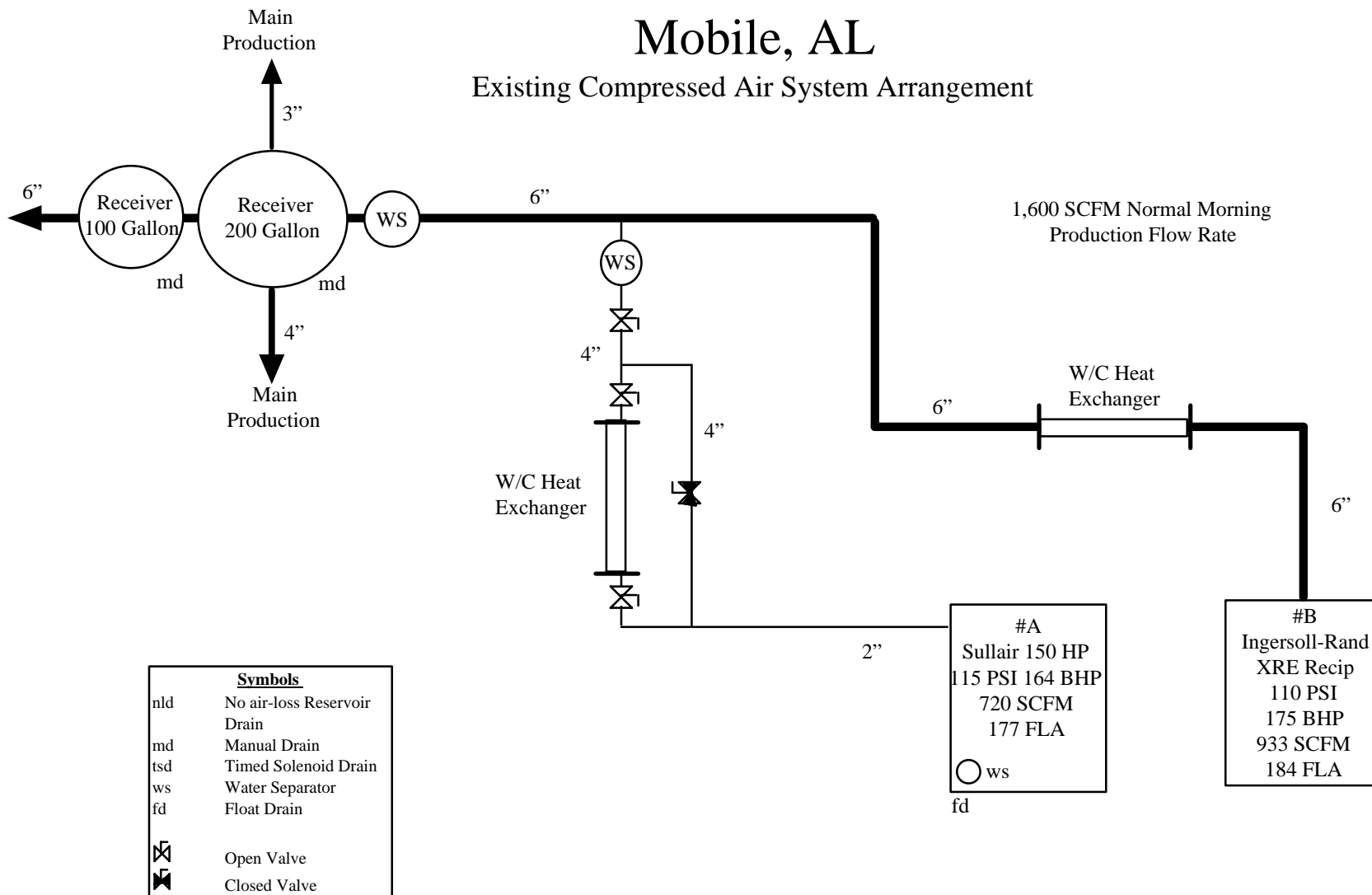
Dryer Data				
	#1	#2	#3	#4
Mfg				
Model #				
Type				
S/N				
Mfg Date				
SCFM rating @ Inlet Conditions of 100 PSIG, 100F/100F ambient	No Dryers Installed On-Site			
Refrigerant				
voltage				
Refrigerant Compressor HP				
Fan Quantity				

**General Process Inc.
Mobile, AL**

Existing compressor performance							Alt Corr	Voltage	Volt Corr	inlet	inlet	inlet	
							1.000	460	*	100	68	50	
										14.50	14.50	14.50	
Compressor	correct ICFM	rated ICFM	rated PSIG	rated BHP	actual PSIG	correct BHP	actual BHP	% of capability	Delivered ICFM	actual SCFM	actual SCFM	actual SCFM	
#1	IR SSR EP60	237	237	125	66	104	59	72	123%	237	224	237	245
#2	Sullair	720	720	115	165	104	156	160	103%	720	679	720	746
#3	IR SSR EP60	237	237	125	66	114	62	72	116%	237	224	237	245
#4	IR SSR EP100	446	446	125	110	120	107	109	102%	446	421	446	462
#5	IR SSR EP60	241	241	125	66	107	60	60	99%	241	227	241	250
Total Plant Air BHP:							474						
<p><i>Notes: Ambient air temperature was approximately 45 deg. F during compressor testing. Power on Sullair is higher than expected. The separator element in this compressor should be checked for maintenance. Power consumption is also high on EP 60. This unit should also be checked for proper separator condition and other factors which would result in high amp draw. Both the EP100 and EP60 were running during normal production hours in load/no-load compressor control.</i></p>													

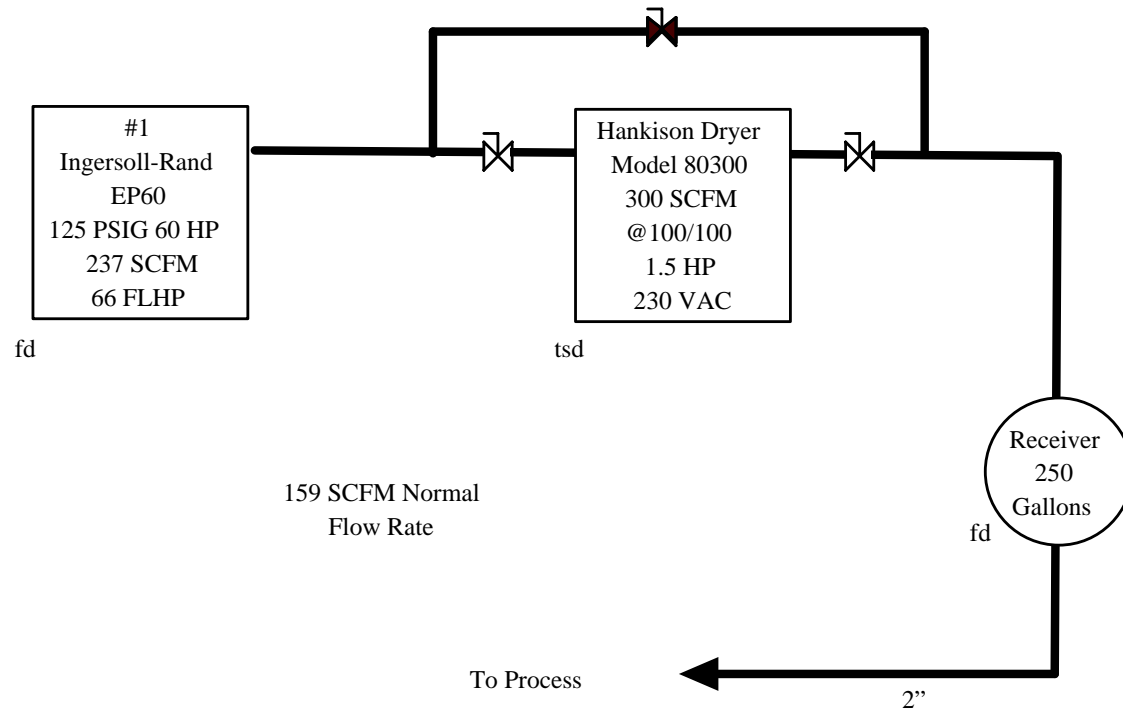
General Process Inc. - Mobile, AL



Existing Compressed Air System Arrangement



General Process Inc. - Mobile, AL

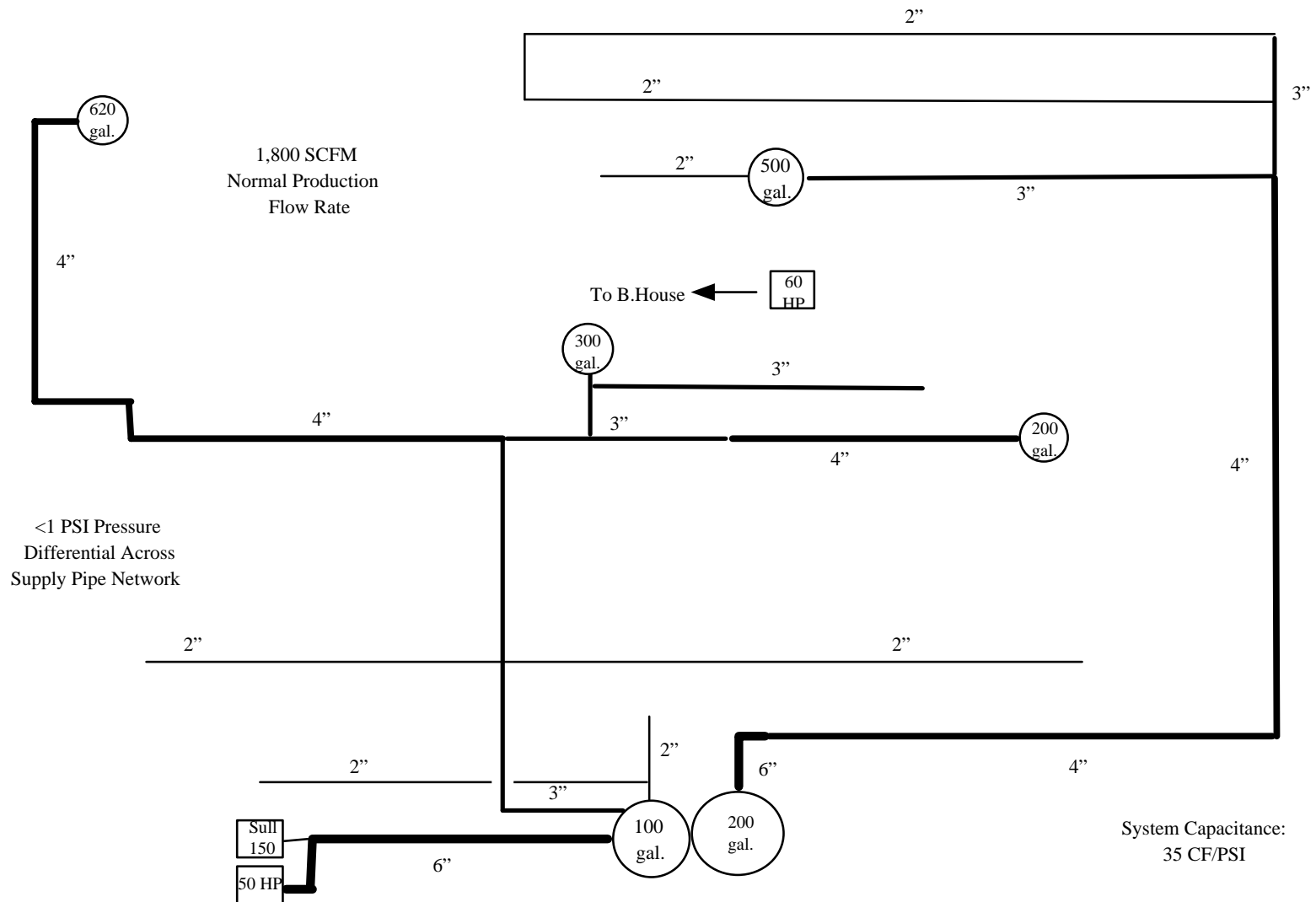
Existing Process Compressed Air System Arrangement



<u>Symbols</u>	
nld	No air-loss Reservoir Drain
md	Manual Drain
tsd	Timed Solenoid Drain
ws	Water Separator
fd	Float Drain
	Open Valve
	Closed Valve

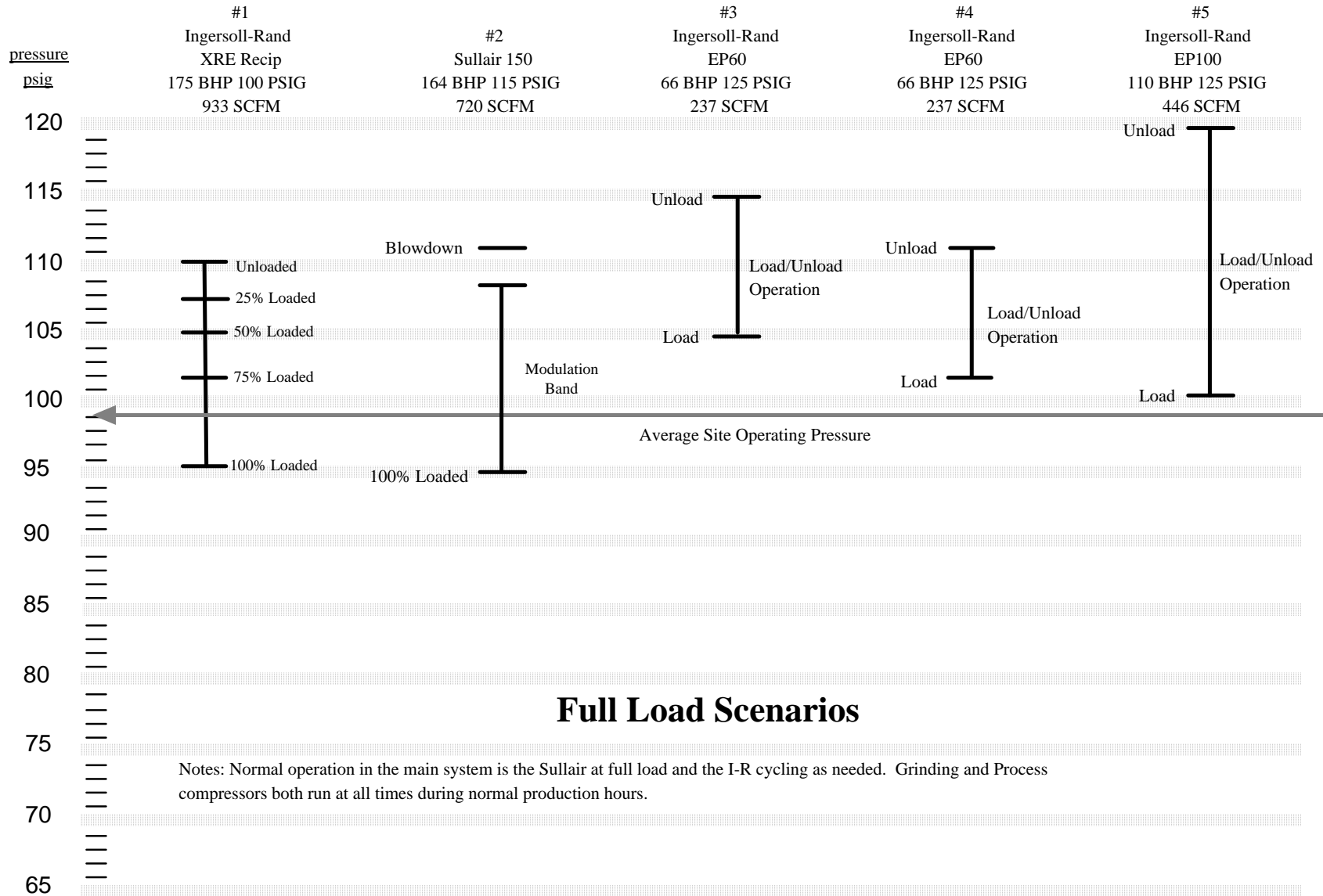
General Process Inc. - Mobile, AL

Existing Compressed Air System Arrangement Central Piping Header



General Process Inc. - Mobile, AL

Existing Compressed Air System Pressure Profile



General Process Inc. Compressed Air Piping Capacitance: Existing									
Pipe	Supply Side				Demand Side				
Pipe Size	Total Length Supply	Cubic Feet per 100 Linear Feet	Cubic Feet	Cu Ft/PSI	Total Length Demand	Cubic Feet	Cu.Ft/PSI		
16"	0	126.8			0				
14"	0	95.8			0				
12"	0	78.5			0				
10"	0	54.8			0				
8"	0	34.7			0				
6"	0	20.1			124	24.9	1.7		
5"	0	13.9			0				
4"	0	8.8			564	49.9	3.4		
3"	0	5.1			517	26.5	1.8		
2-1/2"	0	3.3			0				
2"	0	2.3			739	17.2	1.2		
1-1/2"	0	1.4			100	1.4	0.1		
		Total Cubic Feet:			Total Cubic Feet:	119.9			
		Cub. Feet/PSI:	0.0	+	8.3	=	8.3 Cubic Feet/PSI		
PLANT BAROMETRIC PRESSURE:				14.5 PSIA	Total Pipe Capacitance				
Reservoirs									
Gallons	Cubic Feet	Cubic Feet/PSI	# of Tanks	Total Ft3/PSI	Gallons	Cubic Feet	Cubic Ft/PSI	# of Tanks	Total Ft3/PSI
794	106.1	7.3	1	7.3	0	0.0	0.0	1	0.0
842	112.6	7.8	1	7.8	0	0.0	0.0	1	0.0
420	56.1	3.9	1	3.9	0	0.0	0.0	1	0.0
420	56.1	3.9	1	3.9	0	0.0	0.0	1	0.0
250	33.4	2.3	1	2.3	0	0.0	0.0	1	0.0
53	7.1	0.5	1	0.5	0	0.0	0.0	1	0.0
120	16.0	1.1	1	1.1	0	0.0	0.0	1	0.0
0	0.0	0.0	1	0.0	0	0.0	0.0	1	0.0
0	0.0	0.0	1	0.0	0	0.0	0.0	1	0.0
0	0.0	0.0	1	0.0	0	0.0	0.0	1	0.0
		Total cubic Feet/PSI: (rsvr)		26.7				Total cubic Feet/PSI: (rsvr)	0.0
		Total Supply Capacitance:		26.7				Total Demand Capacitance:	8.3
Total System Capacitance:				35.0 cubic feet/PSI					

Attachment C

**General Process Inc.
Mobile, AL**

Compressed Air Supply Power and Volume															
Existing Arrangement															
compressor	Morning Production					Afternoon Production					Evening Production				
	bhp	kW	scfm	% load	scfm /bhp	bhp	kW	scfm	% load	scfm /bhp	bhp	kW	scfm	% load	scfm /bhp
IR SSR EP60	143	117	211	89%	1.47	121	99	175	74%	1.45	153	125	223	94%	1.46
Sullair	185	146	720	100%	3.90	180	142	706	98%	3.93	0	0	0	0%	0.00
IR SSR EP60	65	53	159	67%	2.45	65	53	159	67%	2.45	65	53	159	67%	2.45
IR SSR EP100	63	52	89	20%	1.41	63	52	89	20%	1.41	63	52	89	20%	1.41
IR SSR EP60	56	45	121	50%	2.17	56	45	121	50%	2.17	56	45	121	50%	2.17
Drvers	5	4.3				5	4.3				5	4.3			
Totals	517	418	1,300		2.51	489	396	1,250		2.55	342	280	591		1.73

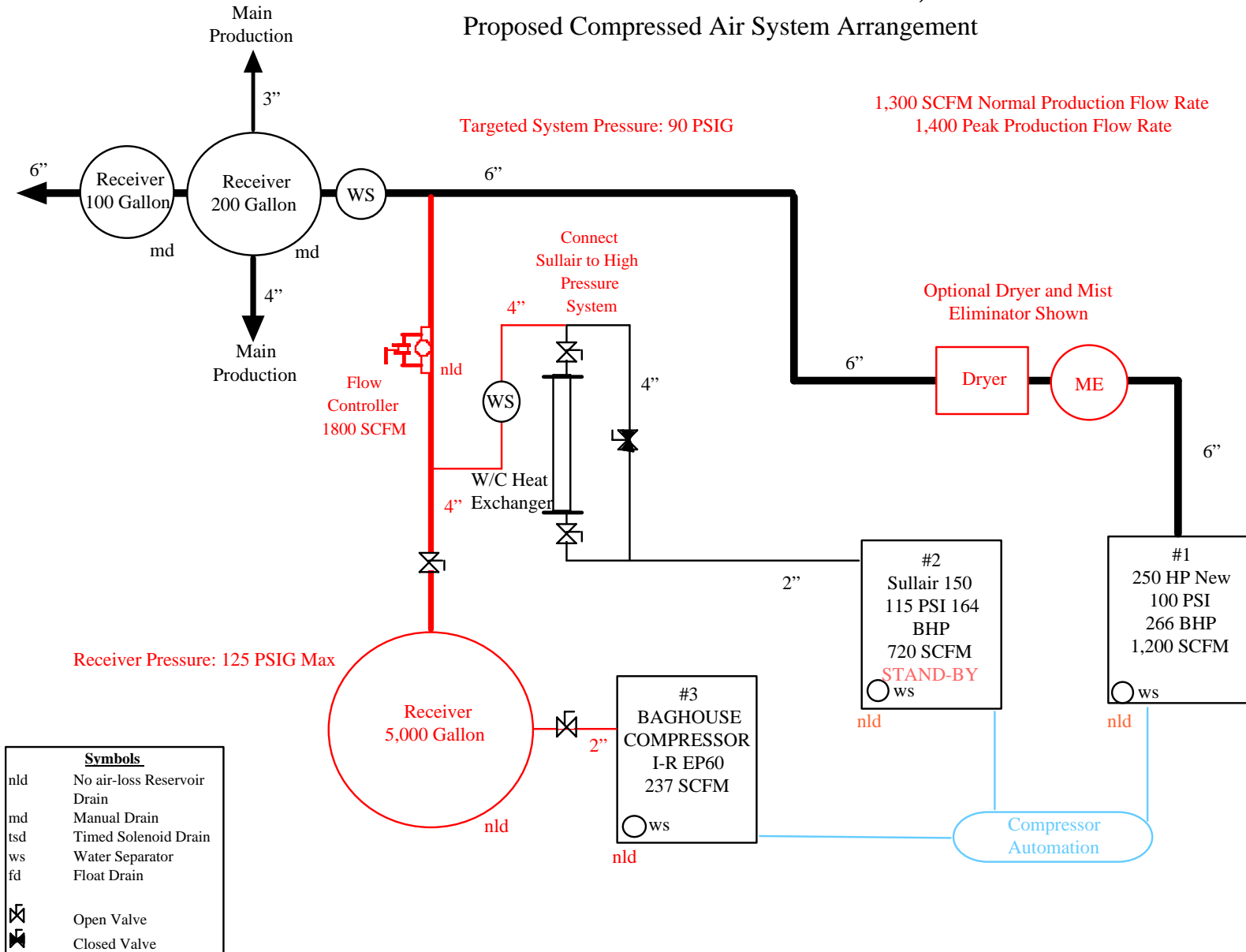
Notes: Existing arrangement utilizes manual control of on/off operation of compressors. Actual amp readings taken from datalogger graphs were used to generate energy profiles for each compressor. Other amp readings were taken before leak repairs were made in those areas.

Compressed Air Supply Power and Volume															
Proposed Arrangement															
compressor	Morning Production					Afternoon Production					Evening Production				
	bhp	kW	scfm	% load	scfm /bhp	bhp	kW	scfm	% load	scfm /bhp	bhp	kW	scfm	% load	scfm /bhp
IR SSR EP60	0	0	0	100%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
Sullair	0	0	0	100%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP60	42	34	142	60%	3.37	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP100	0	0	0	0%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP60	56	46	210	87%	3.75	56	46	210	87%	3.75	56	46	210	87%	3.75
Quincy OSI 1250	277	220	1,251	100%	4.52	275	218	1,238	99%	4.51	188	149	751	60%	4.00
Drver	5	4.3				5	4.3				5	4.3			
Totals	380	304	1,603		4.22	336	268	1,448		4.31	249	199	960		3.86
					1627					1,463					954

Notes: Proposed operating scenario is predicated on taking demand side actions to fix leaks, reduce consumption from the primary pumphouse and installing high flow, low pressure air blow guns. Blow gun demand not taken out of Proposed figures since those departments are not in operation after 2:30 PM. Peak demand event is plastic injection which occurs randomly for up to 3 hours per day. This demand is averaged in to all production loads.

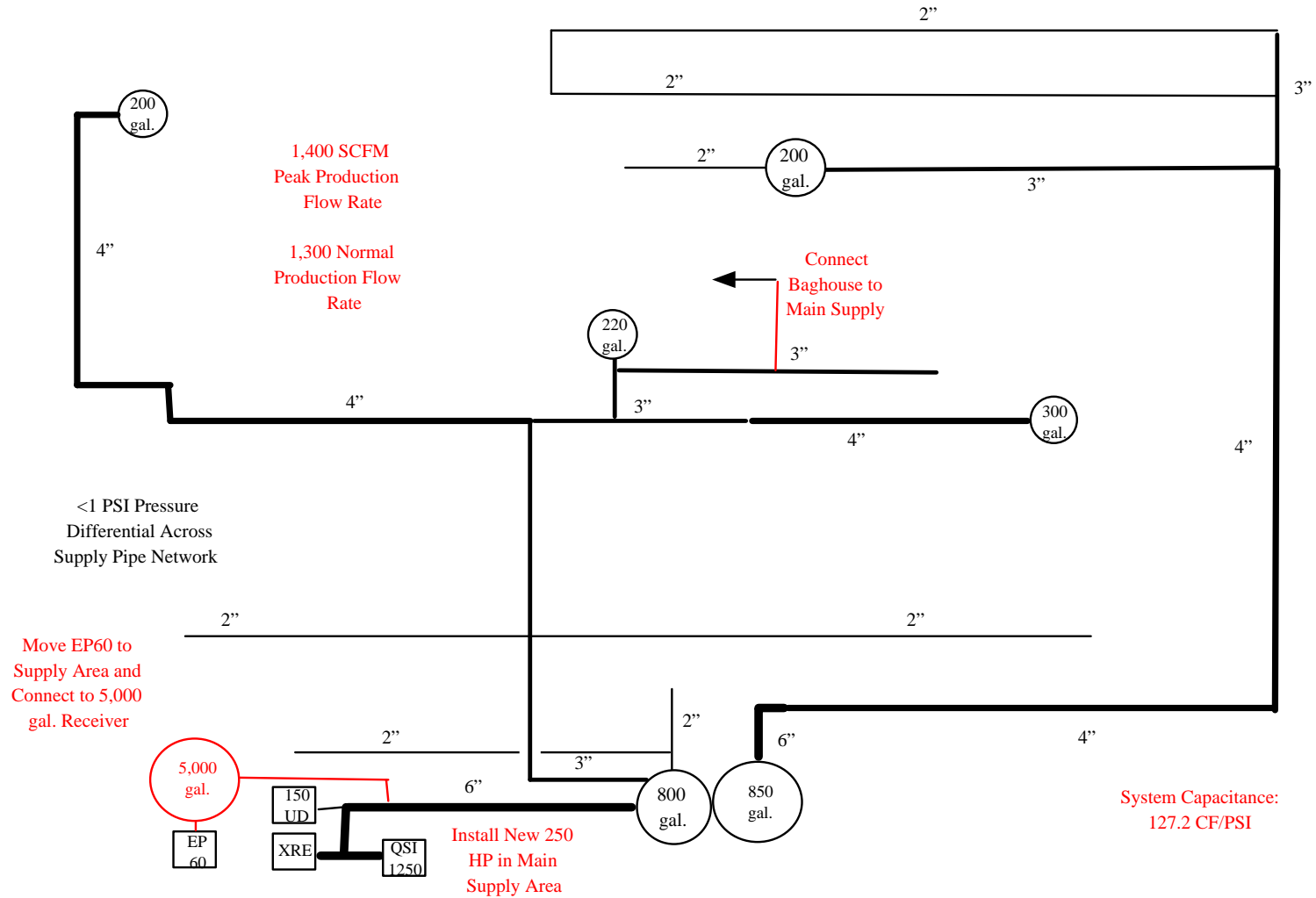
General Process - Mobile, AL

Proposed Compressed Air System Arrangement



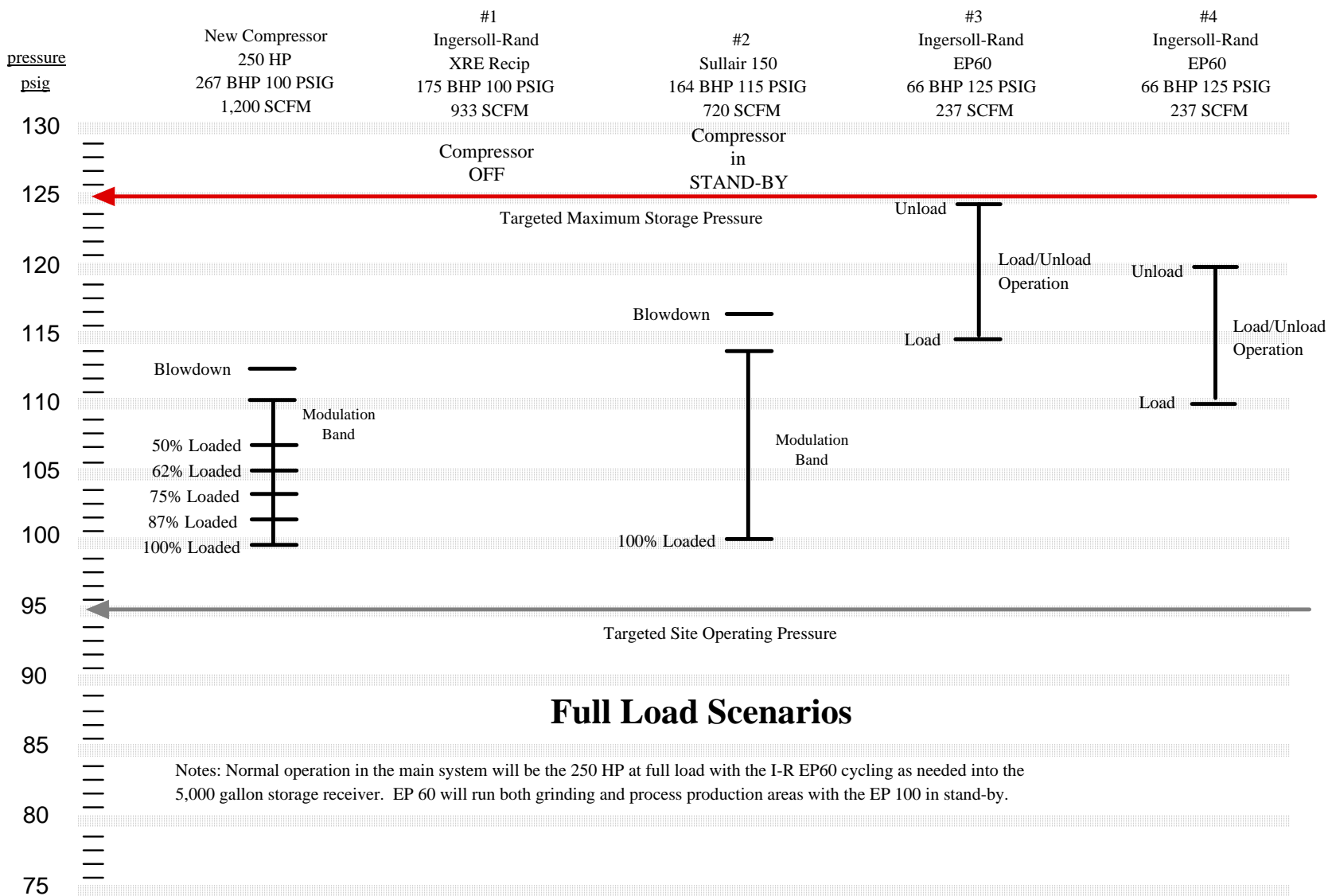
General Process Inc. - Mobile, AL

Proposed Compressed Air System Arrangement Central Piping Header



General Process Inc. - Mobile, AL

Proposed Compressed Air System Pressure Profile



General Process Inc. Compressed Air Piping Capacitance: Proposed										
Pipe	Supply Side				Demand Side					
Pipe Size	Total Length Supply	Cubic Feet per 100 Linear Feet	Cubic Feet	Cu Ft/PSI	Total Length Demand	Cubic Feet	Cu.Ft/PSI			
16"	0	126.8			0					
14"	0	95.8			0					
12"	0	78.5			0					
10"	0	54.8			0					
8"	0	34.7			0					
6"	0	20.1			124	24.9	1.7			
5"	0	13.9			0					
4"	0	8.8			564	49.9	3.4			
3"	0	5.1			517	26.5	1.8			
2-1/2"	0	3.3			0					
2"	0	2.3			739	17.2	1.2			
1-1/2"	0	1.4			100	1.4	0.1			
		Total Cubic Feet:			Total Cubic Feet:	119.9				
		Cub. Feet/PSI:	0.0	+	8.3	=	8.3 Cubic Feet/PSI			
PLANT BAROMETRIC PRESSURE:							14.5 PSIA	Total Pipe Capacitance		
Reservoirs	Gallons	Cubic Feet	Cubic Feet/PSI	# of Tanks	Total Ft3/PSI	Gallons	Cubic Feet	Cubic Ft./PSI	# of Tanks	Total Ft3/PSI
	794	106.1	7.3	1	7.3	0	0.0	0.0	1	0.0
	842	112.6	7.8	1	7.8	0	0.0	0.0	1	0.0
	420	56.1	3.9	1	3.9	0	0.0	0.0	1	0.0
	420	56.1	3.9	1	3.9	0	0.0	0.0	1	0.0
	250	33.4	2.3	1	2.3	0	0.0	0.0	1	0.0
	53	7.1	0.5	1	0.5	0	0.0	0.0	1	0.0
	120	16.0	1.1	1	1.1	0	0.0	0.0	1	0.0
	5,000	668.4	46.1	1	46.1	0	0.0	0.0	1	0.0
	0	0.0	0.0	1	0.0	0	0.0	0.0	1	0.0
	0	0.0	0.0	1	0.0	0	0.0	0.0	1	0.0
		Total cubic Feet/PSI: (rsvr)	72.8					Total cubic Feet/PSI: (rsvr)	0.0	
		Total Supply Capacitance:	72.8					Total Demand Capacitance:	8.3	
Total System Capacitance:					81.1 cubic feet/PSI					

Attachment D

General Process Inc.
Mobile, AL

Energy Calculations					
Existing Arrangement	bhp	kW	Hours	KWH	Costs
Morning Production	517	418	1,690	706,567	\$ 56,525
Afternoon Production	489	396	650	257,254	\$ 20,580
Evening Production	342	280	2,860	799,427	\$ 63,954
			5,200		
Totals				1,763,248	\$ 141,060

**based upon an average electrical rate \$ 0.0800 /kWh*

Proposed Arrangement	bhp	kW	Hours	KWH	Costs
Morning Production	380	304	1,690	513,234	\$ 41,059
Afternoon Production	336	268	650	174,088	\$ 13,927
Evening Production	249	199	2,860	568,666	\$ 45,493
			5,200		
Totals				\$ 1,255,988	\$ 100,479
<i>*based upon an average electrical rate \$ 0.0800 /kWh</i>					
				507,260	\$ 40,581
				Projected Savings:	

**General Process Inc.
Mobile, AL**

Compressed Air Supply Power and Volume															
Existing Arrangement															
Morning Production						Afternoon Production					Evening Production				
compressor	bhp	kW	scfm	load	/bhp	bhp	kW	scfm	load	/bhp	bhp	kW	scfm	load	/bhp
IR SSR EP60	143	117	211	89%	1.47	121	99	175	74%	1.45	153	125	223	94%	1.46
Sullair	185	146	720	100%	3.90	180	142	706	98%	3.93	0	0	0	0%	0.00
IR SSR EP60	65	53	159	67%	2.45	65	53	159	67%	2.45	65	53	159	67%	2.45
IR SSR EP100	63	52	89	20%	1.41	63	52	89	20%	1.41	63	52	89	20%	1.41
IR SSR EP60	56	45	121	50%	2.17	56	45	121	50%	2.17	56	45	121	50%	2.17
Drvers	5	4.3				5	4.3				5	4.3			
Totals	517	418	1,300		2.51	489	396	1,250		2.55	342	280	591		1.73

Notes: Existing arrangement utilizes manual control of on/off operation of compressors. Actual amp readings taken from datalogger graphs were used to generate energy profiles for each compressor. Other amp readings were taken before leak repairs were made in those areas.

Compressed Air Supply Power and Volume															
Proposed Arrangement															
Morning Production						Afternoon Production					Evening Production				
compressor	bhp	kW	scfm	load	/bhp	bhp	kW	scfm	load	/bhp	bhp	kW	scfm	load	/bhp
IR SSR EP60	0	0	0	100%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
Sullair	0	0	0	100%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP60	42	34	142	60%	3.37	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP100	0	0	0	0%	0.00	0	0	0	0%	0.00	0	0	0	0%	0.00
IR SSR EP60	56	46	210	87%	3.75	56	46	210	87%	3.75	56	46	210	87%	3.75
Quincy OSI 1250	277	220	1,251	100%	4.52	275	218	1,238	99%	4.51	188	149	751	60%	4.00
Drver	5	4.3				5	4.3				5	4.3			
Totals	380	304	1,603		4.22	336	268	1,448		4.31	249	199	960		3.86
1627						1,463					954				

Notes: Proposed operating scenario is predicated on taking demand side actions to fix leaks, reduce consumption from the primary pumphouse and installing high flow, low pressure air blow guns. Blow gun demand not taken out of Proposed figures since those departments are not in operation after 2:30 PM. Peak demand event is plastic injection which occurs randomly for up to 3 hours per day. This demand is averaged in to all production loads.

**General Process Inc.
Mobile, AL**

Compressed Air Systems Financials Summary			
<i>in US \$ dollars</i>			
Constituent	Existing	Proposed	Variance
1. Electricity	\$141,060	\$100,479	\$40,581
2. Internal Labor & Overhead	\$21,159	\$10,072	\$11,087
3. Contract Maint. & Repair	\$22,000	\$12,000	\$10,000
4. Water and Treatment	\$0	\$0	\$0
5. Depreciation	\$0	\$0	\$0
6. Rental compressors	\$18,000	\$0	\$18,000
7. Other charges	\$0	\$0	\$0
Total Cost Savings:	\$202,219	\$122,551	\$79,668
<i>Cost per hour/100 CFM</i>	\$2.493	\$1.225	\$1.268
<i>Cost per CFM/Year</i>	\$155.58	\$76.45	\$79.13
Total Savings	\$79,668		
Estimated retrofit costs	\$146,950		
Estimated simple payback	1.8	years	

Attachment E

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Prioritized Costed Action Plan						
Item	Description	Capital	Install	Shipping	Vendor	
1	Add one 150 HP air compressor to main supply system to replace both the I-R and Sullair 150 as primary supply compressors. 250 HP compressor has a nominal capacity of 1,200 CFM at 100 PSIG full load operating pressure.	\$40,000	\$1,500	\$900	Supplier	
2	Install (1) baghouse kit to reduce demand from timed pulse arrangement on baghouse. Baghouse kit consists of 120 gallon tank, relief valve, regulator (locked), gauge, check valve, metering valve, photohelic gauge for pulse on demand and installation drawing. The kit will provide for more effective pulsing of the baghouse.	\$2,000	\$950	\$500	Supplier	
3	Install baghouse photohelic gauges on primary baghouse to replace pulse on timer arrangement with pulse on demand. These gauges will provide for more effective pulsing of the primary baghouse and reduce air consumption when this system is switched over to the primary compressed air supply.	\$2,800	\$2,200	\$500	Supplier	
4	Purchase and install qty. (25) low pressure high flow air guns for replacement of standard compressed air blow guns in #12 Line and #14 Line areas and in polishing area where appropriate. Guns use 11.2 SCFM of compressed air and provide 12.4 oz. force.	\$1,500	\$250	\$25	Supplier	
5	Install a 5,000 gallon vertical receiver rated for 137 PSIG in main compressed air supply system to reduce the number and timing of cycles for trim compressors. This addition will increase system capacitance from 35 cubic feet/psi to 127.2 cubic feet/psi.	\$18,000	\$9,000	\$2,000	Supplier	
6	Add a Pressure-Flow controller for primary compressed air supply system. Model XYZ 3x3 flow controller with 3" inlet and 3" discharge flange connections. Set to control pressure in primary supply system pressure at 100 PSIG from 10,000 gallon storage receiver at 125 PSIG.	\$6,800	\$2,000	\$800	Supplier	
7	Install (6) no-loss drains to replace current units for all compressors, filters, dryers and receivers. No loss drains provide for reliable liquid removal from compressed air systems without compressed air loss.	\$2,800	\$1,800	\$400	Supplier	
8	Automation package for (5) compressors. Model XYZ-5, 24 volt control, 2 step, base load and trim. Will control and sequence compressors based on hours of operation, rate of demand increase/decrease and machine failure. Price does not include installation cost and start-up cost.	\$10,000	\$22,000	\$600	Supplier	
9	Refrigerated dryer rated for 1,500 SCFM at 110 PSIG and 120 degrees F to dry air prior to discharge into system on low pressure side. Intended for 250 HP system. Dew point will be lowered to approximately 38 degrees F.	\$10,550	\$2,500	\$500	Supplier	
10	1800 CFM mist eliminator to remove oil, liquid water and particulate contamination prior to entry into dryer and/or compressed air header system.	\$3,500	\$1,000	\$500	Supplier	
11	Ultrasonic leak detector to find compressed air leaks during production or non-production hours at this site. Includes leak detector, headphones and accessories.	\$2,800	\$0	\$50	Supplier	
12	Piping modifications and 1,000 gallon receiver for production area.	\$3,000	\$0	\$0	Supplier	
Sub Total		\$103,750	\$43,200	\$6,775		
					Grand Total	\$146,950