



505 Nicollet Mall  
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Minneapolis, MN 55459-0038

**PUBLIC DOCUMENT**  
**Trade Secret Information has been Excised**

July 3, 2017

Mr. Daniel Wolf  
Executive Secretary  
Minnesota Public Utilities Commission 350  
Metro Square Building  
121 East Seventh Place, Suite 350  
St. Paul, MN 55101-2147

**Re: CenterPoint Energy 's Request for Change in Demand Units  
Docket No. G008/M-17-\_\_\_\_\_**

Dear Mr. Wolf:

Pursuant to Minn. Rule 7825.2910, Subp. 2, CenterPoint Energy ("CenterPoint Energy" or the "Company") submits a Request for a Change in Demand Units (Request). CenterPoint Energy requests approval to implement its changes effective November 1, 2017.

CenterPoint Energy requests to decrease overall demand costs on November 1, 2017, by approximately \$1.2 million. Due to the decreased costs, the estimated per-unit charge should decrease by (\$0.00112) per therm from June 1, 2017 rates. The annual effect on a residential heating customer using 923 therms (2015 Rate Case residential use-per customer) is a decrease of about (\$1.03).

**CenterPoint Energy has designated information in this document trade secret. Specifically, Exhibit A, pages 1 and 2; Exhibit B3.** The information meets the definition of trade secret in Minn. Stat. § 13.37, subd.1(b), as follows: (1) the information was supplied by CenterPoint Energy, the affected organization; (2) CenterPoint Energy has taken all reasonable efforts to maintain the secrecy of the information, including protecting it from disclosure in this document; and (3) the protected information contains gas supply contract information which derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use.

The attached pages detail the implementation of CenterPoint Energy's 2017-2018 Heating Season Supply Plan. Feel free to contact me at 612-321-5078 if you have any questions.

Sincerely,

/s/\_\_\_\_\_

Marie Doyle  
Regulatory Analyst  
Regulatory Services  
[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

**ADDITIONAL INFORMATION**  
**Minn. Rule 7829.1300, Subp. 3**  
**CenterPoint Energy**

A. The name, address, and telephone number of the utility:

CenterPoint Energy Resources Corp., d/b/a/ CenterPoint Energy Minnesota Gas  
505 Nicollet Mall  
P.O. Box 59038  
Minneapolis, MN 55459-0038  
(612) 372-4664

B. The name, address, and telephone number of the attorney for the utility:

Brenda Bjorklund  
CenterPoint Energy  
505 Nicollet Mall  
P.O. Box 59038  
Minneapolis, MN 55459-0038  
(612) 321-4606  
[brenda.bjorklund@CenterPointEnergy.com](mailto:brenda.bjorklund@CenterPointEnergy.com)

C. The date of the filing and the date the proposed rate or service change will go into effect:

Date Filed:                      July 3, 2017  
Effective Date:                 November 1, 2017

D. The statute that the utility believes controls the time frame for processing the filing:

CenterPoint Energy is unaware of any statute that controls the time frame for processing this filing.

E. The signature and title of the utility employee responsible for the filing:

\_\_\_\_\_/s/\_\_\_\_\_  
Marie Doyle  
Regulatory Analyst  
(612) 321-5078  
[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

**SUMMARY OF MISCELLANEOUS TARIFF FILING**

**Minn. Rule 7829.1300, Subp. 1**

**CenterPoint Energy**

**Filing Upon a Change in Demand**

**Minn. Rule 7829.1300, Subp. 2**

A filing for a change in demand is required when there is an increase or decrease in demand, a redistribution of demand percentages among classes, or if one form of demand is exchanged for another. CenterPoint Energy will decrease total demand costs for the 2017-2018 heating season, and will decrease the per-unit demand costs on November 1 by \$0.00112 per therm from June 1, 2017 rates. The annual effect on a residential heating customer using 923 therms (2015 Rate Case residential use-per-customer) is a decrease of about \$1.03.

**Filing Upon a Change in Demand  
Minn. Rule 7829.1300, Subp. 2**

**CenterPoint Energy  
November 2017**

**7825.2910 FILING BY GAS UTILITIES**

**Subp.2. Filing upon a change in demand.** Gas utilities shall file for a change in demand to increase or decrease demand, to redistribute demand percentages among classes, or to exchange one form of demand for another. A filing must contain:

**A. A description of the factors contributing to the need for changing demand.**

Pipeline Entitlement:

Northern Natural Gas –

For this coming winter (2017-2018), the Company is adding additional entitlement on Northern Natural Gas' (NNG) system. The Company evaluated where our distribution system would need additional entitlements to support customer growth in the next few years.

Last year, under the terms of CenterPoint Energy's contract with NNG, the Company made its two-year growth elections to add 40,328 DT/day in the discount area and 9,775 DT/day in the non-discount area for the 2017-2018 heating season at the following receipt and delivery locations:

Rec Loc	Del Loc	Winter	Summer
Ventura	Anoka #1	2,166	1,091
Ventura	Anoka #1A	772	372
Ventura	Blaine #1	815	278
Ventura	Dayton #1	3,044	1,696
Ventura	Elk River #1	634	248
Ventura	Ham Lake #1	963	470
Ventura	Minneapolis #1D	16,000	9,117
Ventura	Mankato #1A	1,358	955
Ventura	Minneapolis #1Q	5,000	2,242
Ventura	Minneapolis #1P	9,576	4,546
<b>Total Discount</b>		<b>40,328</b>	<b>21,015</b>
Ventura	Belle Plaine #1	275	161
Ventura	Eagle Lake #1	1,000	617
Ventura	Elk River #1B	1,000	533
Ventura	Jordan #2	2,000	1,046
Ventura	New Prague #1	2,000	1,302
Ventura	St. Peter #1	2,500	1,636
Ventura	Willmar #1	1,000	734
<b>Total Non-Discount</b>		<b>9,775</b>	<b>6,029</b>
<b>Grand TOTAL</b>		<b>50,103</b>	<b>27,044</b>

Construction in the discount area was covered by the cost of service without additional contribution in aid in construction (“CIAC”) as allowed under the terms of the Company’s contract. In the non-discount area, the cost of construction was paid over the 2016-2017 heating season in the form of a CIAC by adjusting the discount rate to pay for the CIAC.

CenterPoint Energy also purchased several lots of open-season entitlements to meet the needs of its distribution system (non-discount areas) at the following receipt and delivery locations:

<b>Rec Loc</b>	<b>Del Loc</b>	<b>Winter</b>	<b>Summer</b>
Welcome	Madelia	221	221
Welcome	Springfield	198	198
Welcome	Sleepy Eye	162	162
Welcome	St. James	19	19
Chisago	Grasston MN #1	60	60
Chisago	Centerville MN #1	27	27
Chisago	Hastings MN #1C	1,512	1,512
Carlton	Hastings MN #1C	283	283
Carlton	Coates MN #1	500	500
Carlton	Hastings MN #1B	202	202
<b>Total Additional Capacity</b>		<b>3,184</b>	<b>3,184</b>

**Viking Pipeline -**

CenterPoint Energy’s entitlements on the Viking pipeline will decrease by 10,000 DT/day in the winter. CenterPoint Energy had been contracting for these entitlements on a year-to-year contract, and due to market activity, the capacity may not be available for the upcoming winter.

**Peaking Supply -**

During a periodic engineering review of our distribution system and peak shaving system capacities, we have determined that the current Design Day aggregate delivery capability of CNP’s propane-air peak shaving facilities into the CNP distribution system is 158,000 Dth/Day, which is a decrease of 22,000 Dth/day.

**Additional Storage - NNG FDD**

NNG offered 6.1 Bcf of Firm Deferred Delivery (“FDD”) storage service last winter during an open season. CenterPoint Energy submitted a binding bid for the full 6.1 Bcf FDD for a 15-year term, but several other shippers placed bids for longer terms and the Company was awarded 2.8 Bcf of the total. NNG only accepted bids at maximum tariff rate, so the winning bids were awarded based upon requested term, with the greatest term winning and tied bids prorated between those bidders. In addition to the open season FDD storage, CenterPoint Energy acquired another 0.5 Bcf of FDD storage as a permanent release from a NNG shipper. With the open season awarded capacity of 2.8 Bcf plus the permanent release of 0.5 Bcf, the total new FDD storage is 3.3 Bcf effective June 1, 2017.

Storage availability on NNG is a rarity. This storage offering was made possible by recent work NNG completed on its storage field facilities and compression. The completed work allowed NNG to convert interruptible storage service to firm service.

Benefits of NNG Storage: The storage offers several benefits for CenterPoint Energy and its customers:

- NNG storage provides operational dependability and flexibility as a quick source of load-following gas supply when our customer’s demand changes rapidly.
- NNG storage can also be used for monthly balancing of gas transported, eliminating potential cash-out fees.
- NNG storage reduces the amount of winter base load and daily swing gas that CenterPoint Energy now purchases, creating gas cost reductions for customers.
- NNG storage does not incur additional upstream pipeline transport fees to move the stored gas to the distribution systems (this cost would be approximately \$2 million annually on the NGPL system).

Including the new NNG storage for 3.3 Bcf, total storage services will be 31.1 Bcf:

Storage Capacity	Space (Bcf)	% of Winter Demand	Withdrawal (Dth/Day)	% of Design Day	End of Term
NGPL	15.8	16%	210,986	16%	4/30/2019, evergreen to 2022
NNG	3.3	3%	57,094	4%	5/31/2032
Marketer	10.0	10%	120,000	9%	3/31/2019
Company Owned - Waterville	2.0	2%	50,000	4%	n/a
<b>TOTAL</b>	<b>31.1</b>	<b>32%</b>	<b>438,080</b>	<b>33%</b>	

The 3.3 Bcf NNG FDD storage has a maximum withdrawal right of 57,094 Dth per day, which, along with existing storage, will cover 33% of Design Day demand (1.3 Bcf) and 32% of winter demand (96.4 Bcf). These are comfortable levels of storage service for meeting Minnesota customers’ gas demand. Having the additional storage during the next two winter seasons will allow us to reduce the amount of winter base load gas purchased. It will also reduce the amount of gas purchased with hedging instruments since the gas will come at the average inventory price of the summer injections, adding price stabilization effects similar to fixed price gas.

Like the NGPL storage, the cost for NNG’s storage is subject to increase as a result of future FERC rate cases; however, the current cost of the NNG storage is favorable compared to the third-party storage:

	<u>100% Load Factor Reservation Fee per Dth</u>
NNG	\$0.7134
NGPL	\$1.3800 (includes upstream transportation to NNG)
Marketer storage	\$1.0040 (includes upstream transportation to NNG)

**B. The Utility's Design Day demand by customer class and the change in Design Day demand, if any, necessitating the demand revision.**

Design Day Model:

CenterPoint Energy's Design Day Estimate for 2017-2018

	<b>Current Year 2017-2018</b>	<b>Prior Year 2016-2017</b>
<b>Requirements</b>		
Calculated Design Day	1,357,000	1,328,000
<u>Physical Reserve</u>	<u>36,000</u>	<u>36,000</u>
Total Requirements	1,393,000	1,353,000
 <b>Supply</b>		
Pipeline Entitlement	1,109,596	1,067,270
Underground Storage (UG)	50,000	50,000
Liquefied Natural Gas (LNG)	72,000	72,000
<u>Propane</u>	<u>158,000</u>	<u>180,200</u>
Net Supply	1,355,151	1,375,470
 <b>Reserve Margin Range</b>		
Available Capacity Net Requirements	6,596	11,470
As a Percentage of Total Requirements	0.5%	0.8%
Available including Physical Reserve	42,596	47,470
(Reserve / Design Day)	3.1%	3.6%

CenterPoint Energy's Design Day modeling process was completed this year by adding the results of two models together, as described below.

(1) Traditional Design Day Model:

CenterPoint Energy's traditional firm Design Day forecasting dataset includes daily firm usage data from all winter days for the past six heating seasons (November 2011 – March 2017), includes the monthly count of firm customers, and includes both HDDs and the square of the HDDs as independent variables to account for the non-linear relationships between HDD and usage. The model estimates the expected use-per customer ("UPC") at various levels of HDD. This model uses many observations, which reflect recent customer use patterns. There is a good fit, as the actual observations (high R squared of 0.9767) and the coefficients are consistent with expectations and are statistically significant. (See Exhibit B1 for model specifications and statistical test results, and Exhibit B5 for the firm daily data set.)

To account for the limited observations available at extremely cold temperatures, CenterPoint Energy calculates the UPC level from the model at the upper level of the 95% confidence interval. This limits the likelihood of the actual UPC being above the estimate to a 2.5% chance, which CenterPoint Energy believes is necessary in Minnesota's cold climate. CenterPoint Energy's estimated Design Day for the traditional firm 2017-2018 heating season is 1,338,000, assuming 90 HDDs.

CenterPoint Energy uses the model to be sure we have enough capacity to delivery gas when the temperature is approaching a Design Day scenario; we have to be extremely cautious about the Design Day estimate. It is critically important that we have the capacity to serve firm customers if a Design Day occurs; using a 95% Confidence Interval upper limit is responsible, if not necessary, to assure sufficient capacity.

By using the 95% confidence level, the likelihood the actual use per customer being above the estimate is a 2.5% chance; therefore, CPE is comfortable with the 3% reserve margin. The company also has about 42,600 DT of available reserve to cover that 2.5% chance, but continues to look for additional options, either entitlements or peaking service, to cover the requirements.

(2) Customer Migration Design Day Model

CenterPoint Energy reviewed its Dual Fuel programs as part of an assessment of potential service reliability issues related to our Dual Fuel customers and the impacts of our Dual Fuel programs on firm service customer classes. As a result of these efforts, the Company identified a group of Dual Fuel customers that are expected to migrate to firm service by November 2017. Since these customers were not part of the historical firm daily usage database, the Company added a second model to include the usage of these customers in the total firm sales forecast. Because the customers were served under Dual Fuel tariffs, the Company had daily use history available to use for modeling. In addition to the traditional firm customer model, we added a second model for the newly converted customers that used daily sales data for the same six-year historical period.

For the traditional firm customer UPC modeling, CenterPoint Energy removed the customers' usage for those who had converted to firm sales service before the 2016-2017 heating season from the total firm daily sales for the 2016-2017 heating season, so that each data set was consistent with all five previous winter seasons. The rest of the model fitting and calculation for the traditional firm Design Day followed the same methodology as last year.

The Company compiled six years of usage data for the group of customers converting to firm and developed regression models similar to the traditional firm models to estimate expected use under Design Day conditions. The Company used information provided by the customers or their agents regarding which service they expected to elect: either Sales Service or Transportation Service. The Design Day estimate for customers expected to use the Company's entitlement under Sales Service was added to the traditional forecast. Model results are shown in Exhibit B1, and the data in B6.

Because the customer count (of customers that move from Dual Fuel to firm service) is the same (343 customers) for the whole period, the regression was modeled directly on the combined group usage, instead of the Use Per Customer (UPC).

We added the model estimates from the-two models together (the traditional UPC and the Dual Fuel conversion) to reach the total design day estimate for the upcoming winter season 2017-18.

Traditional	1,338,000
New conversions	<u>19,000</u>
Total	1,357,000



Exhibit B details CenterPoint Energy's design day models, along with related data requested annually by the Department of Commerce (DOC) to complete its analysis.

Cost Estimates:

Exhibit A, Page 1 contains the Annual Demand Cost Calculation that the Company will make effective November 1, 2017, reflecting updated entitlement expense. Prior to implementation, CenterPoint Energy plans to update noted values when they become final.

Exhibit A, Page 2 shows the current (June 1, 2016) and proposed (November 1, 2017) Annual Demand Cost Calculation, provided for comparison purposes as requested in previous demand filings.

**Note:** Exhibit A is trade secret because it contains details on contracted units and rates, and disclosure of this information would adversely affect our ability to negotiate future contracts with capacity suppliers. A public version is supplied in the public document that summarizes available capacity, removing detailed information that CenterPoint Energy considers to be trade secret.

**C. A summary of the levels of winter versus summer usage for all customer classes.**  
12 months ended March 2017 (in Dekatherms) –

Throughput in Dekatherms (Dth)			
Class	Winter	Summer	Total
SALES SERVICE			
<b>Small Firm</b>	74,040,901	24,388,753	98,429,654
<b>Large Firm</b>	151,601	96,582	248,183
<b>Small Dual Fuel</b>	6,911,365	3,416,126	10,327,491
<b>Large Dual Fuel</b>	3,076,612	1,307,141	4,383,753
subtotal	84,180,479	29,208,602	113,389,081
TRANSPORT			
<b>Small Firm</b>	517,323	6,376	523,699
<b>Large Firm</b>	10,680,728	19,300,429	29,981,157
<b>Small Dual Fuel</b>	1,484,400	986,630	2,471,030
<b>Large Dual Fuel</b>	12,815,834	18,406,863	31,222,697
subtotal	25,498,285	38,700,298	64,198,583

**D. A description of Design Day gas supply from all sources under the new level, allocation, or form of demand.**

Exhibits A and B contain the detailed pipeline entitlements and other demand costs.

**Filing Upon a Change in Demand  
Minn. Rule 7829.1300, Subp. 2**

**CenterPoint Energy Summary of Exhibits**

- EXHIBIT A**      Page 1 of 2      \*Annual Demand Cost Calculation - Proposed November 1, 2017  
Page 2 of 2      \*Annual Demand Cost Calculation - Effective June 1, 2017
- EXHIBIT B**      Additional Information Request from the Department of Commerce Additional information pursuant to the Department's request to all utilities concerning demand entitlement changes dated October 1, 1993.
- B1                  Design Day Study Model Specification – Traditional  
Design Day Study Model Specification – New Data
- B2                  Heating Degree Day (HDD) data for the most recent 12 month period  
Historical and Projected Design Day and Peak Day requirements
- B3                  \*Demand Profile
- B4                  Historic gas price change comparisons
- B5                  Firm Design Day Data - Traditional
- B6                  Migration Firm Sales Design Day Data
- EXHIBIT C**      None at this time
- EXHIBIT D**      Intervenor Notification Filing Requirements pursuant to Minn. Rule 7825.2910, Subp. 3.

\* - indicates Trade Secret data is contained





SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.988291985
R Square	0.976721047
<b>Adjusted R Square</b>	<b>0.976669602</b>
Standard Error	0.036003824
Observations	908

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	49.22128376	24.61064188	18985.65929	0
Residual	905	1.173129179	0.001296275		
Total	907	50.39441294			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<b>Intercept</b>	<b>0.056058923</b>	0.006369779	8.80076398	<b>6.7923E-18</b>	0.043557667	0.06856018	0.043557667	0.06856018
<b>HDDs</b>	<b>0.013344025</b>	0.000333414	40.02244861	<b>2.0072E-202</b>	0.012689672	0.013998379	0.012689672	0.013998379
<b>HDDs^2</b>	<b>2.88195E-05</b>	4.10593E-06	7.018992022	<b>4.38198E-12</b>	2.07612E-05	3.68777E-05	2.07612E-05	3.68777E-05

<u>Year</u>	<u>HDDs</u>	<u>Customer #</u>	<u>UPC @ DD</u>	<u>Volume @ DD</u>	<u>UPC @ 95% CI UL</u>	<u>Volume @ 95% CI UL</u>	<u>Diff</u>
2018	90	855,362	1.490	1,274,000	1.564	1,338,000	64,000
2019	90	863,912	1.490	1,287,000	1.564	1,351,000	64,000
2020	90	872,542	1.490	1,300,000	1.564	1,365,000	65,000
2021	90	881,254	1.490	1,313,000	1.564	1,378,000	65,000
2022	90	890,050	1.490	1,326,000	1.564	1,392,000	66,000

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.977394727
R Square	0.955300453
<b>Adjusted R Square</b>	<b>0.95520167</b>
Standard Error	581.2067362
Observations	908

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	6533512430	3266756215	9670.645147	0
Residual	905	305710149.6	337801.2703		
Total	907	6839222579			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<b>Intercept</b>	<b>1512.644531</b>	102.8268163	14.71060357	<b>4.41848E-44</b>	1310.83778	1714.451282	1310.83778	1714.451282
<b>HDDs</b>	<b>159.0847723</b>	5.382266675	29.55720739	<b>6.2703E-135</b>	148.5215964	169.6479482	148.5215964	169.6479482
<b>HDDs^2</b>	<b>0.264750031</b>	0.066281687	3.994316426	<b>7.01485E-05</b>	0.134666339	0.394833723	0.134666339	0.394833723

<u>Year</u>	<u>HDDs</u>	<u>Usage @ DD</u>	<u>Usage @ 95% CI UL</u>
2018	90	17,975	19,163
2019	90	17,975	19,163
2020	90	17,975	19,163
2021	90	17,975	19,163
2022	90	17,975	19,163

## CENTERPOINT ENERGY

### ADDITIONAL INFORMATION REQUESTED FROM THE DOC

**1 Provide Heating Degree Day (HDD) data for the most recent 12 month period, ending March 31 or October 30.**

		Peak Season ( <u>Nov-Mar</u> )	Off Peak ( <u>Apr-Oct</u> )	Total <u>Actual</u>
Total Heating Degree Day (April 2016 - March 2017)	Actual	5,234	1,112	6,346
	Normal (10 yr) (2007-2016)	6,014	1,297	7,311
Total Annual Firm Sales (In Dekatherms (April 2016 - March 2017))				98,429,654
Average Annual Firm Customers (April 2016 - March 2017)				841,750
Use per Firm Customer				116.9
Projected Peak Day HDD (Typical) (-12 degrees F.)				77
Projected Design Day HDD (-25 degrees F.)				90

### 2 Historical and Projected Design Day and Peak Day Requirements

Heating Season	Firm Sales Customers (January)	Design Day Dekatherms	Total Requirements plus Peak Shaving	Firm Peak Day Sendout
2017/2018 P	857,092	1,357,000	1,333,596	N/A
2016/2017	847,780	1,328,000	1,369,470	978,931
2015/2016	839,291	1,317,000	1,343,566	994,146
2014/2015	830,377	1,290,000	1,344,418	959,990
2013/2014	821,220	1,288,000	1,340,099	1,086,330
2012/2013	813,605	1,280,000	1,346,781	961,134

P = projected

**CenterPoint Energy Demand Profile  
2017-2018**

**PUBLIC INFORMATION**  
Trade Secret Information has been Excised  
Exhibit B3  
Page 1 of 2

[TRADE SECRET DATA BEGINS...]

(1)	Northern Natural	TF-12 Base					
(2)	Northern Natural	TF-12 Base					
(3)	Northern Natural	TF-12 Base-Disc					
(4)	Northern Natural	TF-12 Base-Disc					
(5)	Northern Natural	TF-12 Variable					
(6)	Northern Natural	TF-12 Variable					
(7)	Northern Natural	TF-12 Variable-Disc					
(8)	<u>Northern Natural</u>	<u>TF-12 Variable-Disc</u>					
(9)	Northern Natural	TF-12 Base					A
(10)	Northern Natural	TF-12 Base					A
(11)	<u>Northern Natural</u>	<u>TF 5</u>					<u>A</u>
(12)	Northern Natural	TF-12 Base					
(13)	Northern Natural	TF-12 Base					
(14)	Northern Natural	TF-12 Variable					
(15)	Northern Natural	TF-12 Variable					
(16)	Northern Natural	TF 5					
(17)	Northern Natural	TF 5					
(18)	<u>Northern Natural</u>	<u>TF 5</u>					<u>B</u>
(19)	<u>Northern Natural</u>	<u>TFX</u>					<u>B</u>
(20)	Northern Natural	TF 5					
(21)	Northern Natural	TF 5					
(22)	Northern Natural	TFX					C
(23)	Northern Natural	TFX					C
(24)	Northern Natural	TFX - A1					
(25)	Northern Natural	TFX - A1					
(26)	Northern Natural	TFX - A1					
(27)	Northern Natural	TFX - A1					
(28)	Northern Natural	TFX - A2					
(29)	Northern Natural	TFX - A2					
(30)	Northern Natural	TFX - B1					
(31)	Northern Natural	TFX - B1					
(32)	Northern Natural	TFX - B1					
(33)	Northern Natural	TFX - B1					
(34)	Northern Natural	TFX - C1					
(35)	Northern Natural	TFX - C1					
(36)	Northern Natural	TFX - C2					E
(37)	Northern Natural	TFX - C2					E
(38)	Northern Natural	TFX - C2					F
(39)	Northern Natural	TFX - C2					<u>F</u>

...TRADE SECRET DATA ENDS ]

(43)		Total NNG Demand Winter	1,021,056	1,021,056	1,025,375	1,079,602	54,227
(44)		Total NNG Demand Summer	574,667	574,667	575,466	606,428	30,962
(45)		Total	1,595,723	1,595,723	1,600,841	1,686,030	<b>85,189</b>
(46)							
(47)							
(48)	Northern Natural	Waterville	50,000	50,000	50,000	50,000	0
(49)	Northern Natural	Backhaul			50,000	50,000	0
(50)	Northern Natural	SMS	30,000	30,000	30,000	30,000	0

[TRADE SECRET DATA BEGINS...]

(53)	VIKING PIPELINE	FT-A	Annual				
(54)	VIKING PIPELINE	FT-A	Annual				
(55)	VIKING PIPELINE	FT-A	Winter				H
(56)							
(57)		Total Viking Demand	66,809	66,809	66,809	56,809	(10,000)
(58)							



**CenterPoint Energy Demand Profile  
2017-2018**

**PUBLIC INFORMATION**  
Trade Secret Information has been Excised  
Exhibit B3  
Page 2 of 2

(59)	Trailblazer	FTS Backhaul	Winter	Discounted	100,000	100,000	100,000	100,000	0
(60)									
(61)					<b>[TRADE SECRET DATA BEGINS...</b>				
(62)	Seasonal Reservation *								
(63)	Storage NGPL								
(64)	Storage Tennaska								
(65)	Storage BP Canada								
(66)	Storage NNG								I
(67)	Waterville - Underground (Medford)								
(68)		* seasonal reservation included peaking service last year							
(69)							<b>...TRADE SECRET DATA ENDS ]</b>		
(70)	Peaking Service *					6,000	10,000	4,000	J
(71)	LNG Peak Shaving				72,000	72,000	72,000	6,000	(66,000)
(72)	Propane Peak Shaving				171,000	180,200	180,200	158,000	(22,200)
(73)									K
(74)	NNG/Viking Overlap				(24,914)	(24,914)	(24,914)	(26,815)	
(75)									
(76)	Total Capacity				1,355,951	1,365,151	1,375,470	1,333,596	(41,874)
(77)	Total Peak-Shaving Capacity/On-line Storage				293,000	302,200	308,200	224,000	(84,200)
(78)	Total Annual Transportation				631,476	631,476	632,275	663,237	30,962
(79)	Total Seasonal Transportation (Adj for NNG/Viking overlap)				1,062,951	1,062,951	1,067,270	1,109,596	42,326
(80)	Total Capacity				21.6%	22.1%	22.4%	16.8%	
(81)	% of Total Capacity				46.6%	46.3%	46.0%	49.7%	
(82)	as % of Total Capacity				78.4%	77.9%	77.6%	83.2%	
(83)	Transportation as % of				62.7%	62.7%	62.8%	62.6%	
(84)									
(85)	Design Day				1,317,000	1,328,000	1,328,000	1,357,000	29,000
(86)	Physical Res				36,000	36,000	36,000	36,000	0
(87)	Tota				1,353,000	1,364,000	1,364,000	1,393,000	29,000
(88)									
(89)	Pipeline				1,062,951	1,062,951	1,067,270	1,109,596	42,326
(90)	Peaking				293,000	302,200	308,200	224,000	(84,200)
(91)	Net Supply				1,355,951	1,365,151	1,375,470	1,333,596	(41,874)
(92)									
(93)	Avail Net Cap				2,951	1,151	11,470	(59,404)	(70,874)
(94)	%				0%	0%	1%	-4.3%	1%
(95)									
(96)	Avail incl Physical				38,951	37,151	47,470	(23,404)	(70,874)
(97)	%				3%	3%	3%	-1.7%	1%

**Footnotes:**

- A Additional Units contracted in non-discount area - Growth elections (lines 9,10,11)
- B Increase in volumes from 4,379 to 6,963 - additional 2,584 year-round (lines 23,24)
- C Increase of 600 Units year-round
- D New discount rate - reduction in per-unit
- E Additional Units - 940 Winter / 734 Summer contracted in last growth cycle (2015) to be added 11-1-2017
- F Additional units - growth election 40,328 Winter / 21,015 Summer units
- G Updated estimates of units eligible for commodity credit
- H Viking Entitlement - contracted year-to-year. Not available this winter due to demand on Viking
- I Contracted additional Storage on NNG - propose allocation based on contract terms
- J Peaking Service - anticipate - not yet contracted
- K Reduction in Propane deliverability total on Peak

	Last Rate Case (G008/MR-15- 728 and GR-15- 524)	Last Demand Change (G008/M-16- 571) (12/2016)	June 1, 2017	November 2017 PGA (M-17-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Residential</b>								
Commodity Cost of Gas (WACOG) (4)	\$3.4897	\$3.3747	\$3.0480	\$3.0480	-12.66%	-9.68%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7646	\$0.8070	\$0.8047	\$0.7935	<b>3.78%</b>	<b>-1.67%</b>	<b>-1.39%</b>	<b>(\$0.0112)</b>
Commodity Margin (2) (3)	\$1.8458	\$2.0648	\$2.0648	\$2.0648	11.86%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.1001	\$6.2465	\$5.9175	\$5.9063	-3.18%	-5.45%	-0.19%	(\$0.0112)
Average Annual Usage (Dk)	100	100	100	100				
Average Annual Total Cost of Gas	\$610.01	\$624.65	\$591.75	\$590.63	-3.18%	-5.45%	-0.19%	(\$1.12)
Average Annual Total Demand Cost of Gas								<b>(\$1.12)</b>

	Last Rate Case (G008/MR-15- 728 and GR-15- 524)	Last Demand Change (G008/M-16- 571) (12/2016)	June 1, 2017	November 2017 PGA (M-17-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - A</b>								
Commodity Cost of Gas (WACOG)	\$4.0181	\$3.3747	\$3.0480	\$3.0480	-24.14%	-9.68%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7646	\$0.8070	\$0.8047	\$0.7935	<b>3.78%</b>	<b>-1.67%</b>	<b>-1.39%</b>	<b>(\$0.0112)</b>
Commodity Margin	\$1.4129	\$2.0658	\$2.0658	\$2.0658	46.21%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.1956	\$6.2475	\$5.9185	\$5.9073	-4.65%	-5.45%	-0.19%	(\$0.0112)
Average Annual Usage (Dk)	80	80	80	80				
Average Annual Total Cost of Gas	\$495.65	\$499.80	\$473.48	\$472.58	-4.65%	-5.45%	-0.19%	(\$0.90)
Average Annual Total Demand Cost of Gas								<b>(\$0.90)</b>

	Last Rate Case (G008/MR-15- 728 and GR-15- 524)	Last Demand Change (G008/M-16- 571) (12/2016)	June 1, 2017	November 2017 PGA (M-17-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - B</b>								
Commodity Cost of Gas (WACOG)	\$4.0181	\$3.3747	\$3.0480	\$3.0480	-24.14%	-9.68%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7646	\$0.8070	\$0.8047	\$0.7935	<b>3.78%</b>	<b>-1.67%</b>	<b>-1.39%</b>	<b>(\$0.0112)</b>
Commodity Margin	\$1.3329	\$1.6740	\$1.6740	\$1.6740	25.59%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.1156	\$5.8557	\$5.5267	\$5.5155	-9.81%	-5.81%	-0.20%	(\$0.0112)
Average Annual Usage (Dk)	2,860	2,860	2,860	2,860				
Average Annual Total Cost of Gas	\$17,490.62	\$16,747.30	\$15,806.36	\$15,774.33	-9.81%	-5.81%	-0.20%	(\$32.03)
Average Annual Total Demand Cost of Gas								<b>(\$32.03)</b>

	Last Rate Case (G008/MR-15- 728 and GR-15- 524)	Last Demand Change (G008/M-16- 571) (12/2016)	June 1, 2017	November 2017 PGA (M-17-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - C</b>								
Commodity Cost of Gas (WACOG)	\$3.9806	\$3.3747	\$3.0480	\$3.0480	-23.43%	-9.68%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7646	\$0.8070	\$0.8047	\$0.7935	<b>3.78%</b>	<b>-1.67%</b>	<b>-1.39%</b>	<b>(\$0.0112)</b>
Commodity Margin	\$1.3969	\$1.5429	\$1.5429	\$1.5429	10.45%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.1421	\$5.7246	\$5.3956	\$5.3844	-12.34%	-5.94%	-0.21%	(\$0.0112)
Average Annual Usage (Dk)	14,300	14,300	14,300	14,300				
Average Annual Total Cost of Gas	\$87,832.03	\$81,861.78	\$77,157.08	\$76,996.92	-12.34%	-5.94%	-0.21%	(\$160.16)
Average Annual Total Demand Cost of Gas								<b>(\$160.16)</b>

Summary	Commodity Change (\$/Dk)	Commodity Change (Percent)	Demand Change (\$/Dk)	Demand Change (Percent)	Total Change (\$/Dk)	Total Change (Percent)
Change from most recent PGA						
Customer Class						
Residential	\$0.0000	0.00%	-\$0.0112	-1.39%	(\$1.12)	-0.19%
Commercial/Industrial Firm A	\$0.0000	0.00%	-\$0.0112	-1.39%	(\$0.90)	-0.19%
Commercial/Industrial Firm B	\$0.0000	0.00%	-\$0.0112	-1.39%	(\$32.03)	-0.20%
Commercial/Industrial Firm C	\$0.0000	0.00%	-\$0.0112	-1.39%	(\$160.16)	-0.21%

(1) Does not include Demand Smoothing; November PGA inadvertently excluded Waterville storage volumes/costs

(2) Does not reflect GAP, Interim or GCR Factors.

(3) Reflects current base rate plus CCRA.

(4) WACOG value in the Dec 2015 is Dec 2015 (Last Demand change)

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
11/01/11	196,244	49.1	804,484	0.244	15.9	253	1	0	0	0
11/02/11	264,826	42.0	804,484	0.329	23.0	529	1	0	0	0
11/03/11	278,061	40.2	804,484	0.346	24.8	615	1	0	0	0
11/04/11	243,998	45.1	804,484	0.303	19.9	396	1	0	0	0
11/05/11	199,215	50.4	804,484	0.248	14.6	213	1	0	0	0
11/06/11	245,977	45.3	804,484	0.306	19.7	388	1	0	0	0
11/07/11	266,585	41.5	804,484	0.331	23.5	552	1	0	0	0
11/08/11	279,347	41.6	804,484	0.347	23.4	548	1	0	0	0
11/09/11	299,481	39.8	804,484	0.372	25.2	635	1	0	0	0
11/10/11	368,962	34.8	804,484	0.459	30.2	912	1	0	0	0
11/11/11	275,045	41.3	804,484	0.342	23.7	562	1	0	0	0
11/12/11	199,341	51.8	804,484	0.248	13.2	174	1	0	0	0
11/13/11	280,192	42.4	804,484	0.348	22.6	511	1	0	0	0
11/14/11	277,740	41.8	804,484	0.345	23.2	538	1	0	0	0
11/15/11	337,202	36.1	804,484	0.419	28.9	835	1	0	0	0
11/16/11	453,024	26.3	804,484	0.563	38.7	1498	1	0	0	0
11/17/11	412,752	31.8	804,484	0.513	33.2	1102	1	0	0	0
11/18/11	307,244	39.9	804,484	0.382	25.1	630	1	0	0	0
11/19/11	464,589	24.6	804,484	0.577	40.4	1632	1	0	0	0
11/20/11	495,764	22.1	804,484	0.616	42.9	1840	1	0	0	0
11/21/11	397,382	33.8	804,484	0.494	31.2	973	1	0	0	0
11/22/11	355,440	36.8	804,484	0.442	28.2	795	1	0	0	0
11/23/11	273,907	43.3	804,484	0.340	21.7	471	1	0	0	0
11/24/11	202,931	51.8	804,484	0.252	13.2	174	1	0	0	0
11/25/11	205,456	49.4	804,484	0.255	15.6	243	1	0	0	0
11/26/11	329,949	37.9	804,484	0.410	27.1	734	1	0	0	0
11/27/11	419,449	30.7	804,484	0.521	34.3	1176	1	0	0	0
11/28/11	394,581	32.8	804,484	0.490	32.2	1037	1	0	0	0
11/29/11	424,726	30.3	804,484	0.528	34.7	1204	1	0	0	0
11/30/11	392,193	34.4	804,484	0.488	30.6	936	1	0	0	0
12/01/11	500,770	22.6	806,620	0.621	42.4	1798	0	1	0	0
12/02/11	449,086	30.8	806,620	0.557	34.2	1170	0	1	0	0
12/03/11	427,673	29.2	806,620	0.530	35.8	1282	0	1	0	0
12/04/11	502,906	22.9	806,620	0.623	42.1	1772	0	1	0	0
12/05/11	578,077	17.8	806,620	0.717	47.2	2228	0	1	0	0
12/06/11	606,781	14.7	806,620	0.752	50.3	2530	0	1	0	0
12/07/11	506,542	24.4	806,620	0.628	40.6	1648	0	1	0	0
12/08/11	602,851	15.1	806,620	0.747	49.9	2490	0	1	0	0
12/09/11	663,304	11.1	806,620	0.822	53.9	2905	0	1	0	0
12/10/11	533,198	23.9	806,620	0.661	41.1	1689	0	1	0	0
12/11/11	392,659	37.3	806,620	0.487	27.7	767	0	1	0	0
12/12/11	352,872	37.1	806,620	0.437	27.9	778	0	1	0	0
12/13/11	358,853	36.4	806,620	0.445	28.6	818	0	1	0	0
12/14/11	367,015	35.9	806,620	0.455	29.1	847	0	1	0	0
12/15/11	528,586	24.0	806,620	0.655	41.0	1681	0	1	0	0
12/16/11	514,399	23.4	806,620	0.638	41.6	1731	0	1	0	0
12/17/11	465,926	28.0	806,620	0.578	37.0	1369	0	1	0	0
12/18/11	356,303	39.3	806,620	0.442	25.7	660	0	1	0	0
12/19/11	477,138	27.4	806,620	0.592	37.6	1414	0	1	0	0
12/20/11	489,986	25.2	806,620	0.607	39.8	1584	0	1	0	0
12/21/11	482,797	27.7	806,620	0.599	37.3	1391	0	1	0	0
12/22/11	521,587	23.7	806,620	0.647	41.3	1706	0	1	0	0
12/23/11	492,848	26.4	806,620	0.611	38.6	1490	0	1	0	0
12/24/11	377,981	36.8	806,620	0.469	28.2	795	0	1	0	0
12/25/11	379,692	34.0	806,620	0.471	31.0	961	0	1	0	0
12/26/11	341,755	41.7	806,620	0.424	23.3	543	0	1	0	0
12/27/11	452,731	26.8	806,620	0.561	38.2	1459	0	1	0	0
12/28/11	387,554	34.3	806,620	0.480	30.7	942	0	1	0	0
12/29/11	403,440	31.0	806,620	0.500	34.0	1156	0	1	0	0
12/30/11	410,557	31.3	806,620	0.509	33.7	1136	0	1	0	0
12/31/11	391,182	34.8	806,620	0.485	30.2	912	0	1	0	0
01/01/12	578,941	21.5	807,922	0.717	43.5	1892	0	0	0	0
01/02/12	630,964	14.5	807,922	0.781	50.5	2550	0	0	0	0
01/03/12	546,748	25.8	807,922	0.677	39.2	1537	0	0	0	0
01/04/12	439,015	30.8	807,922	0.543	34.2	1170	0	0	0	0
01/05/12	345,839	41.1	807,922	0.428	23.9	571	0	0	0	0
01/06/12	346,585	37.1	807,922	0.429	27.9	778	0	0	0	0
01/07/12	444,948	29.0	807,922	0.551	36.0	1296	0	0	0	0
01/08/12	396,939	35.8	807,922	0.491	29.2	853	0	0	0	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
01/09/12	348,850	37.8	807,922	0.432	27.2	740	0	0	0	0
01/10/12	314,387	40.8	807,922	0.389	24.2	586	0	0	0	0
01/11/12	588,769	18.4	807,922	0.729	46.6	2172	0	0	0	0
01/12/12	712,329	12.5	807,922	0.882	52.5	2756	0	0	0	0
01/13/12	688,499	9.7	807,922	0.852	55.3	3058	0	0	0	0
01/14/12	581,823	18.9	807,922	0.720	46.1	2125	0	0	0	0
01/15/12	431,655	32.1	807,922	0.534	32.9	1082	0	0	0	0
01/16/12	551,701	21.9	807,922	0.683	43.1	1858	0	0	0	0
01/17/12	723,245	8.5	807,922	0.895	56.5	3192	0	0	0	0
01/18/12	767,373	6.5	807,922	0.950	58.5	3422	0	0	0	0
01/19/12	830,044	0.8	807,922	1.027	64.2	4122	0	0	0	0
01/20/12	757,486	5.4	807,922	0.938	59.6	3552	0	0	0	0
01/21/12	654,611	18.4	807,922	0.810	46.6	2172	0	0	0	0
01/22/12	547,989	24.0	807,922	0.678	41.0	1681	0	0	0	0
01/23/12	574,007	20.4	807,922	0.710	44.6	1989	0	0	0	0
01/24/12	548,875	22.2	807,922	0.679	42.8	1832	0	0	0	0
01/25/12	458,690	29.3	807,922	0.568	35.7	1274	0	0	0	0
01/26/12	439,862	29.3	807,922	0.544	35.7	1274	0	0	0	0
01/27/12	518,024	26.8	807,922	0.641	38.2	1459	0	0	0	0
01/28/12	537,674	21.5	807,922	0.666	43.5	1892	0	0	0	0
01/29/12	558,124	19.8	807,922	0.691	45.2	2043	0	0	0	0
01/30/12	388,287	35.1	807,922	0.481	29.9	894	0	0	0	0
01/31/12	380,555	33.6	807,922	0.471	31.4	986	0	0	0	0
02/01/12	401,887	30.8	808,293	0.497	34.2	1170	0	0	1	0
02/02/12	404,628	32.1	808,293	0.501	32.9	1082	0	0	1	0
02/03/12	453,732	28.8	808,293	0.561	36.2	1310	0	0	1	0
02/04/12	444,208	29.4	808,293	0.550	35.6	1267	0	0	1	0
02/05/12	477,428	28.3	808,293	0.591	36.7	1347	0	0	1	0
02/06/12	385,875	34.3	808,293	0.477	30.7	942	0	0	1	0
02/07/12	563,483	19.8	808,293	0.697	45.2	2043	0	0	1	0
02/08/12	530,688	24.0	808,293	0.657	41.0	1681	0	0	1	0
02/09/12	496,100	26.5	808,293	0.614	38.5	1482	0	0	1	0
02/10/12	729,135	8.1	808,293	0.902	56.9	3238	0	0	1	0
02/11/12	686,037	12.6	808,293	0.849	52.4	2746	0	0	1	0
02/12/12	547,973	23.0	808,293	0.678	42.0	1764	0	0	1	0
02/13/12	499,218	26.6	808,293	0.618	38.4	1475	0	0	1	0
02/14/12	457,732	29.0	808,293	0.566	36.0	1296	0	0	1	0
02/15/12	427,158	31.9	808,293	0.528	33.1	1096	0	0	1	0
02/16/12	411,406	32.4	808,293	0.509	32.6	1063	0	0	1	0
02/17/12	429,591	29.9	808,293	0.531	35.1	1232	0	0	1	0
02/18/12	442,534	28.0	808,293	0.547	37.0	1369	0	0	1	0
02/19/12	391,241	34.2	808,293	0.484	30.8	949	0	0	1	0
02/20/12	403,680	35.6	808,293	0.499	29.4	864	0	0	1	0
02/21/12	457,371	29.5	808,293	0.566	35.5	1260	0	0	1	0
02/22/12	417,409	30.7	808,293	0.516	34.3	1176	0	0	1	0
02/23/12	417,584	32.0	808,293	0.517	33.0	1089	0	0	1	0
02/24/12	569,909	18.8	808,293	0.705	46.2	2134	0	0	1	0
02/25/12	488,400	25.5	808,293	0.604	39.5	1560	0	0	1	0
02/26/12	506,067	29.0	808,293	0.626	36.0	1296	0	0	1	0
02/27/12	470,323	27.2	808,293	0.582	37.8	1429	0	0	1	0
02/28/12	459,633	32.1	808,293	0.569	32.9	1082	0	0	1	0
02/29/12	424,640	32.0	808,293	0.525	33.0	1089	0	0	1	0
03/01/12	385,031	32.4	807,665	0.477	32.6	1063	0	0	0	1
03/02/12	439,940	26.7	807,665	0.545	38.3	1467	0	0	0	1
03/03/12	560,982	17.6	807,665	0.695	47.4	2247	0	0	0	1
03/04/12	517,269	21.6	807,665	0.640	43.4	1884	0	0	0	1
03/05/12	460,880	31.0	807,665	0.571	34.0	1156	0	0	0	1
03/06/12	243,296	51.7	807,665	0.301	13.3	177	0	0	0	1
03/07/12	425,519	30.5	807,665	0.527	34.5	1190	0	0	0	1
03/08/12	484,305	26.5	807,665	0.600	38.5	1482	0	0	0	1
03/09/12	405,954	34.6	807,665	0.503	30.4	924	0	0	0	1
03/10/12	191,690	55.6	807,665	0.237	9.4	88	0	0	0	1
03/11/12	176,082	54.5	807,665	0.218	10.5	110	0	0	0	1
03/12/12	249,537	45.0	807,665	0.309	20.0	400	0	0	0	1
03/13/12	159,704	55.5	807,665	0.198	9.5	90	0	0	0	1
03/14/12	130,418	58.4	807,665	0.161	6.6	44	0	0	0	1
03/15/12	170,161	53.5	807,665	0.211	11.5	132	0	0	0	1
03/16/12	90,378	67.1	807,665	0.112	0.0	0	0	0	0	1
03/17/12	81,543	70.5	807,665	0.101	0.0	0	0	0	0	1

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
03/18/12	87,451	70.2	807,665	0.108	0.0	0	0	0	0	1
03/19/12	82,821	65.8	807,665	0.103	0.0	0	0	0	0	1
03/20/12	99,993	60.1	807,665	0.124	4.9	24	0	0	0	1
03/21/12	105,198	60.0	807,665	0.130	5.0	25	0	0	0	1
03/22/12	103,483	61.9	807,665	0.128	3.1	10	0	0	0	1
03/23/12	84,460	62.2	807,665	0.105	2.8	8	0	0	0	1
03/24/12	116,549	54.9	807,665	0.144	10.1	102	0	0	0	1
03/25/12	185,806	47.6	807,665	0.230	17.4	303	0	0	0	1
03/26/12	316,285	42.1	807,665	0.392	22.9	524	0	0	0	1
03/27/12	162,431	53.5	807,665	0.201	11.5	132	0	0	0	1
03/28/12	202,336	46.3	807,665	0.251	18.7	350	0	0	0	1
03/29/12	168,668	49.3	807,665	0.209	15.7	246	0	0	0	1
03/30/12	194,993	44.2	807,665	0.241	20.8	433	0	0	0	1
03/31/12	199,787	47.5	807,665	0.247	17.5	306	0	0	0	1
11/01/12	307,225	35.9	811,114	0.379	29.1	847	1	0	0	0
11/02/12	323,801	37.5	811,114	0.399	27.5	756	1	0	0	0
11/03/12	309,667	37.5	811,114	0.382	27.5	756	1	0	0	0
11/04/12	286,563	41.4	811,114	0.353	23.6	557	1	0	0	0
11/05/12	293,718	41.3	811,114	0.362	23.7	562	1	0	0	0
11/06/12	300,748	39.8	811,114	0.371	25.2	635	1	0	0	0
11/07/12	287,479	39.9	811,114	0.354	25.1	630	1	0	0	0
11/08/12	249,963	43.3	811,114	0.308	21.7	471	1	0	0	0
11/09/12	224,816	47.3	811,114	0.277	17.7	313	1	0	0	0
11/10/12	174,624	53.8	811,114	0.215	11.2	125	1	0	0	0
11/11/12	449,010	24.9	811,114	0.554	40.1	1608	1	0	0	0
11/12/12	524,323	22.4	811,114	0.646	42.6	1815	1	0	0	0
11/13/12	349,460	36.9	811,114	0.431	28.1	790	1	0	0	0
11/14/12	263,688	43.6	811,114	0.325	21.4	458	1	0	0	0
11/15/12	330,197	35.9	811,114	0.407	29.1	847	1	0	0	0
11/16/12	329,654	36.8	811,114	0.406	28.2	795	1	0	0	0
11/17/12	219,662	49.0	811,114	0.271	16.0	256	1	0	0	0
11/18/12	196,452	50.4	811,114	0.242	14.6	213	1	0	0	0
11/19/12	215,001	46.3	811,114	0.265	18.7	350	1	0	0	0
11/20/12	247,642	45.0	811,114	0.305	20.0	400	1	0	0	0
11/21/12	161,947	56.5	811,114	0.200	8.5	72	1	0	0	0
11/22/12	360,375	31.7	811,114	0.444	33.3	1109	1	0	0	0
11/23/12	551,707	18.5	811,114	0.680	46.5	2162	1	0	0	0
11/24/12	478,911	27.3	811,114	0.590	37.7	1421	1	0	0	0
11/25/12	498,388	23.1	811,114	0.614	41.9	1756	1	0	0	0
11/26/12	569,345	18.1	811,114	0.702	46.9	2200	1	0	0	0
11/27/12	474,521	29.3	811,114	0.585	35.7	1274	1	0	0	0
11/28/12	417,455	30.7	811,114	0.515	34.3	1176	1	0	0	0
11/29/12	395,313	34.5	811,114	0.487	30.5	930	1	0	0	0
11/30/12	383,381	35.3	811,114	0.473	29.7	882	1	0	0	0
12/01/12	322,331	39.3	812,553	0.397	25.7	660	0	1	0	0
12/02/12	327,142	40.9	812,553	0.403	24.1	581	0	1	0	0
12/03/12	281,835	44.3	812,553	0.347	20.7	428	0	1	0	0
12/04/12	462,568	25.3	812,553	0.569	39.7	1576	0	1	0	0
12/05/12	406,844	37.8	812,553	0.501	27.2	740	0	1	0	0
12/06/12	367,630	33.4	812,553	0.452	31.6	999	0	1	0	0
12/07/12	444,670	28.0	812,553	0.547	37.0	1369	0	1	0	0
12/08/12	409,188	30.8	812,553	0.504	34.2	1170	0	1	0	0
12/09/12	505,871	22.9	812,553	0.623	42.1	1772	0	1	0	0
12/10/12	624,225	9.3	812,553	0.768	55.7	3102	0	1	0	0
12/11/12	607,940	17.0	812,553	0.748	48.0	2304	0	1	0	0
12/12/12	417,427	37.4	812,553	0.514	27.6	762	0	1	0	0
12/13/12	455,817	27.5	812,553	0.561	37.5	1406	0	1	0	0
12/14/12	395,568	33.5	812,553	0.487	31.5	992	0	1	0	0
12/15/12	380,605	34.7	812,553	0.468	30.3	918	0	1	0	0
12/16/12	516,676	21.7	812,553	0.636	43.3	1875	0	1	0	0
12/17/12	507,739	23.8	812,553	0.625	41.2	1697	0	1	0	0
12/18/12	471,763	27.8	812,553	0.581	37.2	1384	0	1	0	0
12/19/12	460,079	27.0	812,553	0.566	38.0	1444	0	1	0	0
12/20/12	620,644	16.8	812,553	0.764	48.2	2323	0	1	0	0
12/21/12	625,145	13.7	812,553	0.769	51.3	2632	0	1	0	0
12/22/12	561,124	19.1	812,553	0.691	45.9	2107	0	1	0	0
12/23/12	599,746	16.4	812,553	0.738	48.6	2362	0	1	0	0
12/24/12	668,095	9.0	812,553	0.822	56.0	3136	0	1	0	0
12/25/12	715,967	7.2	812,553	0.881	57.8	3341	0	1	0	0

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12/26/12	673,635	12.5	812,553	0.829	52.5	2756	0	1	0	0
12/27/12	606,782	18.8	812,553	0.747	46.2	2134	0	1	0	0
12/28/12	559,126	19.4	812,553	0.688	45.6	2079	0	1	0	0
12/29/12	664,060	8.6	812,553	0.817	56.4	3181	0	1	0	0
12/30/12	621,446	16.9	812,553	0.765	48.1	2314	0	1	0	0
12/31/12	730,350	4.0	812,553	0.899	61.0	3721	0	1	0	0
01/01/13	688,935	13.7	813,605	0.847	51.3	2632	0	0	0	0
01/02/13	617,490	16.8	813,605	0.759	48.2	2323	0	0	0	0
01/03/13	639,791	15.3	813,605	0.786	49.7	2470	0	0	0	0
01/04/13	545,654	20.3	813,605	0.671	44.7	1998	0	0	0	0
01/05/13	572,764	18.3	813,605	0.704	46.7	2181	0	0	0	0
01/06/13	570,148	21.5	813,605	0.701	43.5	1892	0	0	0	0
01/07/13	476,479	27.2	813,605	0.586	37.8	1429	0	0	0	0
01/08/13	462,921	31.3	813,605	0.569	33.7	1136	0	0	0	0
01/09/13	444,889	29.5	813,605	0.547	35.5	1260	0	0	0	0
01/10/13	397,847	35.5	813,605	0.489	29.5	870	0	0	0	0
01/11/13	413,862	32.4	813,605	0.509	32.6	1063	0	0	0	0
01/12/13	705,978	7.4	813,605	0.868	57.6	3318	0	0	0	0
01/13/13	777,312	6.0	813,605	0.955	59.0	3481	0	0	0	0
01/14/13	710,666	11.7	813,605	0.873	53.3	2841	0	0	0	0
01/15/13	550,828	26.3	813,605	0.677	38.7	1498	0	0	0	0
01/16/13	594,587	19.8	813,605	0.731	45.2	2043	0	0	0	0
01/17/13	631,806	17.4	813,605	0.777	47.6	2266	0	0	0	0
01/18/13	434,528	33.7	813,605	0.534	31.3	980	0	0	0	0
01/19/13	676,182	12.8	813,605	0.831	52.2	2725	0	0	0	0
01/20/13	852,848	(0.1)	813,605	1.048	65.1	4238	0	0	0	0
01/21/13	961,134	(6.9)	813,605	1.181	71.9	5170	0	0	0	0
01/22/13	841,471	3.0	813,605	1.034	62.0	3844	0	0	0	0
01/23/13	839,349	1.9	813,605	1.032	63.1	3982	0	0	0	0
01/24/13	801,212	10.1	813,605	0.985	54.9	3014	0	0	0	0
01/25/13	737,493	10.2	813,605	0.906	54.8	3003	0	0	0	0
01/26/13	630,692	22.2	813,605	0.775	42.8	1832	0	0	0	0
01/27/13	486,825	31.2	813,605	0.598	33.8	1142	0	0	0	0
01/28/13	435,624	31.0	813,605	0.535	34.0	1156	0	0	0	0
01/29/13	483,077	27.1	813,605	0.594	37.9	1436	0	0	0	0
01/30/13	730,758	9.1	813,605	0.898	55.9	3125	0	0	0	0
01/31/13	919,219	(5.9)	813,605	1.130	70.9	5027	0	0	0	0
02/01/13	816,844	0.3	814,223	1.003	64.7	4186	0	0	1	0
02/02/13	708,072	7.2	814,223	0.870	57.8	3341	0	0	1	0
02/03/13	692,681	9.7	814,223	0.851	55.3	3058	0	0	1	0
02/04/13	647,045	15.3	814,223	0.795	49.7	2470	0	0	1	0
02/05/13	603,769	15.3	814,223	0.742	49.7	2470	0	0	1	0
02/06/13	582,564	21.1	814,223	0.715	43.9	1927	0	0	1	0
02/07/13	556,766	22.0	814,223	0.684	43.0	1849	0	0	1	0
02/08/13	525,703	21.3	814,223	0.646	43.7	1910	0	0	1	0
02/09/13	493,459	26.0	814,223	0.606	39.0	1521	0	0	1	0
02/10/13	485,604	30.8	814,223	0.596	34.2	1170	0	0	1	0
02/11/13	571,707	21.8	814,223	0.702	43.2	1866	0	0	1	0
02/12/13	484,926	26.5	814,223	0.596	38.5	1482	0	0	1	0
02/13/13	427,336	32.5	814,223	0.525	32.5	1056	0	0	1	0
02/14/13	554,503	19.2	814,223	0.681	45.8	2098	0	0	1	0
02/15/13	661,122	9.9	814,223	0.812	55.1	3036	0	0	1	0
02/16/13	631,804	12.5	814,223	0.776	52.5	2756	0	0	1	0
02/17/13	508,693	27.9	814,223	0.625	37.1	1376	0	0	1	0
02/18/13	674,176	14.9	814,223	0.828	50.1	2510	0	0	1	0
02/19/13	808,222	2.8	814,223	0.993	62.2	3869	0	0	1	0
02/20/13	706,152	12.0	814,223	0.867	53.0	2809	0	0	1	0
02/21/13	602,844	20.6	814,223	0.740	44.4	1971	0	0	1	0
02/22/13	524,048	24.0	814,223	0.644	41.0	1681	0	0	1	0
02/23/13	520,587	21.6	814,223	0.639	43.4	1884	0	0	1	0
02/24/13	476,977	28.3	814,223	0.586	36.7	1347	0	0	1	0
02/25/13	472,546	27.5	814,223	0.580	37.5	1406	0	0	1	0
02/26/13	464,870	32.3	814,223	0.571	32.7	1069	0	0	1	0
02/27/13	431,229	32.2	814,223	0.530	32.8	1076	0	0	1	0
02/28/13	515,657	26.9	814,223	0.633	38.1	1452	0	0	1	0
03/01/13	533,662	22.0	814,551	0.655	43.0	1849	0	0	0	1
03/02/13	484,756	23.6	814,551	0.595	41.4	1714	0	0	0	1
03/03/13	470,739	28.2	814,551	0.578	36.8	1354	0	0	0	1
03/04/13	535,288	25.5	814,551	0.657	39.5	1560	0	0	0	1

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03/05/13	504,327	25.4	814,551	0.619	39.6	1568	0	0	0	1
03/06/13	545,786	20.0	814,551	0.670	45.0	2025	0	0	0	1
03/07/13	486,969	24.7	814,551	0.598	40.3	1624	0	0	0	1
03/08/13	387,185	35.0	814,551	0.475	30.0	900	0	0	0	1
03/09/13	393,953	36.1	814,551	0.484	28.9	835	0	0	0	1
03/10/13	482,549	31.7	814,551	0.592	33.3	1109	0	0	0	1
03/11/13	507,328	26.6	814,551	0.623	38.4	1475	0	0	0	1
03/12/13	539,477	23.2	814,551	0.662	41.8	1747	0	0	0	1
03/13/13	468,207	26.8	814,551	0.575	38.2	1459	0	0	0	1
03/14/13	371,041	33.8	814,551	0.456	31.2	973	0	0	0	1
03/15/13	471,024	28.1	814,551	0.578	36.9	1362	0	0	0	1
03/16/13	547,044	18.0	814,551	0.672	47.0	2209	0	0	0	1
03/17/13	523,983	25.8	814,551	0.643	39.2	1537	0	0	0	1
03/18/13	643,074	15.3	814,551	0.789	49.7	2470	0	0	0	1
03/19/13	658,246	13.4	814,551	0.808	51.6	2663	0	0	0	1
03/20/13	644,459	14.0	814,551	0.791	51.0	2601	0	0	0	1
03/21/13	545,252	21.0	814,551	0.669	44.0	1936	0	0	0	1
03/22/13	441,787	27.9	814,551	0.542	37.1	1376	0	0	0	1
03/23/13	411,784	32.1	814,551	0.506	32.9	1082	0	0	0	1
03/24/13	466,804	29.6	814,551	0.573	35.4	1253	0	0	0	1
03/25/13	407,250	32.2	814,551	0.500	32.8	1076	0	0	0	1
03/26/13	408,283	31.6	814,551	0.501	33.4	1116	0	0	0	1
03/27/13	366,039	34.3	814,551	0.449	30.7	942	0	0	0	1
03/28/13	329,700	37.1	814,551	0.405	27.9	778	0	0	0	1
03/29/13	280,746	42.8	814,551	0.345	22.2	493	0	0	0	1
03/30/13	278,436	42.6	814,551	0.342	22.4	502	0	0	0	1
03/31/13	435,064	29.8	814,551	0.534	35.2	1239	0	0	0	1
11/01/13	260,159	42.3	818,523	0.318	22.7	515	1	0	0	0
11/02/13	289,097	42.3	818,523	0.353	22.7	515	1	0	0	0
11/03/13	236,978	49.2	818,523	0.290	15.8	250	1	0	0	0
11/04/13	314,108	39.9	818,523	0.384	25.1	630	1	0	0	0
11/05/13	352,238	36.6	818,523	0.430	28.4	807	1	0	0	0
11/06/13	370,632	32.9	818,523	0.453	32.1	1030	1	0	0	0
11/07/13	422,025	29.7	818,523	0.516	35.3	1246	1	0	0	0
11/08/13	340,633	42.8	818,523	0.416	22.2	493	1	0	0	0
11/09/13	346,247	38.6	818,523	0.423	26.4	697	1	0	0	0
11/10/13	355,609	35.8	818,523	0.434	29.2	853	1	0	0	0
11/11/13	558,987	19.0	818,523	0.683	46.0	2116	1	0	0	0
11/12/13	519,267	24.8	818,523	0.634	40.2	1616	1	0	0	0
11/13/13	320,820	42.1	818,523	0.392	22.9	524	1	0	0	0
11/14/13	316,502	40.3	818,523	0.387	24.7	610	1	0	0	0
11/15/13	249,500	47.0	818,523	0.305	18.0	324	1	0	0	0
11/16/13	265,288	45.3	818,523	0.324	19.7	388	1	0	0	0
11/17/13	380,344	36.0	818,523	0.465	29.0	841	1	0	0	0
11/18/13	452,662	28.9	818,523	0.553	36.1	1303	1	0	0	0
11/19/13	343,053	43.2	818,523	0.419	21.8	475	1	0	0	0
11/20/13	332,804	38.8	818,523	0.407	26.2	686	1	0	0	0
11/21/13	509,198	25.3	818,523	0.622	39.7	1576	1	0	0	0
11/22/13	574,041	19.3	818,523	0.701	45.7	2088	1	0	0	0
11/23/13	663,634	12.7	818,523	0.811	52.3	2735	1	0	0	0
11/24/13	531,897	28.3	818,523	0.650	36.7	1347	1	0	0	0
11/25/13	461,092	31.8	818,523	0.563	33.2	1102	1	0	0	0
11/26/13	632,752	16.5	818,523	0.773	48.5	2352	1	0	0	0
11/27/13	565,510	22.4	818,523	0.691	42.6	1815	1	0	0	0
11/28/13	565,579	20.2	818,523	0.691	44.8	2007	1	0	0	0
11/29/13	505,603	28.4	818,523	0.618	36.6	1340	1	0	0	0
11/30/13	427,827	31.7	818,523	0.523	33.3	1109	1	0	0	0
12/01/13	451,675	30.5	820,313	0.551	34.5	1190	0	1	0	0
12/02/13	410,717	35.1	820,313	0.501	29.9	894	0	1	0	0
12/03/13	422,560	32.9	820,313	0.515	32.1	1030	0	1	0	0
12/04/13	569,447	19.6	820,313	0.694	45.4	2061	0	1	0	0
12/05/13	786,137	2.0	820,313	0.958	63.0	3969	0	1	0	0
12/06/13	865,403	(3.7)	820,313	1.055	68.7	4720	0	1	0	0
12/07/13	850,293	(0.4)	820,313	1.037	65.4	4277	0	1	0	0
12/08/13	745,786	8.3	820,313	0.909	56.7	3215	0	1	0	0
12/09/13	826,831	1.8	820,313	1.008	63.2	3994	0	1	0	0
12/10/13	804,486	3.2	820,313	0.981	61.8	3819	0	1	0	0
12/11/13	847,431	1.3	820,313	1.033	63.7	4058	0	1	0	0
12/12/13	658,704	16.3	820,313	0.803	48.7	2372	0	1	0	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
12/13/13	695,246	12.8	820,313	0.848	52.2	2725	0	1	0	0
12/14/13	747,492	5.8	820,313	0.911	59.2	3505	0	1	0	0
12/15/13	798,126	2.4	820,313	0.973	62.6	3919	0	1	0	0
12/16/13	669,197	20.2	820,313	0.816	44.8	2007	0	1	0	0
12/17/13	626,442	17.4	820,313	0.764	47.6	2266	0	1	0	0
12/18/13	525,856	27.1	820,313	0.641	37.9	1436	0	1	0	0
12/19/13	653,216	17.3	820,313	0.796	47.7	2275	0	1	0	0
12/20/13	615,169	18.4	820,313	0.750	46.6	2172	0	1	0	0
12/21/13	602,408	19.0	820,313	0.734	46.0	2116	0	1	0	0
12/22/13	718,679	9.0	820,313	0.876	56.0	3136	0	1	0	0
12/23/13	904,190	(4.4)	820,313	1.102	69.4	4816	0	1	0	0
12/24/13	770,114	9.3	820,313	0.939	55.7	3102	0	1	0	0
12/25/13	615,169	16.8	820,313	0.750	48.2	2323	0	1	0	0
12/26/13	571,937	21.7	820,313	0.697	43.3	1875	0	1	0	0
12/27/13	460,757	31.3	820,313	0.562	33.7	1136	0	1	0	0
12/28/13	516,400	24.5	820,313	0.630	40.5	1640	0	1	0	0
12/29/13	893,763	(7.0)	820,313	1.090	72.0	5184	0	1	0	0
12/30/13	903,236	(2.7)	820,313	1.101	67.7	4583	0	1	0	0
12/31/13	926,621	(5.0)	820,313	1.130	70.0	4900	0	1	0	0
01/01/14	892,852	(1.9)	821,220	1.087	66.9	4476	0	0	0	0
01/02/14	902,940	(2.7)	821,220	1.100	67.7	4583	0	0	0	0
01/03/14	674,191	22.5	821,220	0.821	42.5	1806	0	0	0	0
01/04/14	783,780	2.8	821,220	0.954	62.2	3869	0	0	0	0
01/05/14	1,045,732	(14.5)	821,220	1.273	79.5	6320	0	0	0	0
01/06/14	1,086,330	(13.8)	821,220	1.323	78.8	6209	0	0	0	0
01/07/14	909,815	(2.6)	821,220	1.108	67.6	4570	0	0	0	0
01/08/14	898,060	(1.4)	821,220	1.094	66.4	4409	0	0	0	0
01/09/14	695,186	17.4	821,220	0.847	47.6	2266	0	0	0	0
01/10/14	528,248	28.3	821,220	0.643	36.7	1347	0	0	0	0
01/11/14	520,417	27.3	821,220	0.634	37.7	1421	0	0	0	0
01/12/14	444,652	34.8	821,220	0.541	30.2	912	0	0	0	0
01/13/14	484,290	26.9	821,220	0.590	38.1	1452	0	0	0	0
01/14/14	687,622	10.8	821,220	0.837	54.2	2938	0	0	0	0
01/15/14	629,869	21.8	821,220	0.767	43.2	1866	0	0	0	0
01/16/14	755,215	9.0	821,220	0.920	56.0	3136	0	0	0	0
01/17/14	710,491	9.9	821,220	0.865	55.1	3036	0	0	0	0
01/18/14	593,127	20.3	821,220	0.722	44.7	1998	0	0	0	0
01/19/14	458,959	31.6	821,220	0.559	33.4	1116	0	0	0	0
01/20/14	807,551	0.9	821,220	0.983	64.1	4109	0	0	0	0
01/21/14	859,867	1.5	821,220	1.047	63.5	4032	0	0	0	0
01/22/14	939,132	(5.8)	821,220	1.144	70.8	5013	0	0	0	0
01/23/14	903,346	1.7	821,220	1.100	63.3	4007	0	0	0	0
01/24/14	623,215	21.9	821,220	0.759	43.1	1858	0	0	0	0
01/25/14	740,592	6.3	821,220	0.902	58.7	3446	0	0	0	0
01/26/14	896,955	(1.8)	821,220	1.092	66.8	4462	0	0	0	0
01/27/14	1,013,460	(11.3)	821,220	1.234	76.3	5822	0	0	0	0
01/28/14	934,603	(3.5)	821,220	1.138	68.5	4692	0	0	0	0
01/29/14	622,124	23.8	821,220	0.758	41.2	1697	0	0	0	0
01/30/14	765,957	3.2	821,220	0.933	61.8	3819	0	0	0	0
01/31/14	767,161	4.3	821,220	0.934	60.7	3684	0	0	0	0
02/01/14	742,210	6.2	821,951	0.903	58.8	3457	0	0	1	0
02/02/14	767,201	4.6	821,951	0.933	60.4	3648	0	0	1	0
02/03/14	747,100	7.8	821,951	0.909	57.2	3272	0	0	1	0
02/04/14	813,285	3.5	821,951	0.989	61.5	3782	0	0	1	0
02/05/14	903,288	(2.6)	821,951	1.099	67.6	4570	0	0	1	0
02/06/14	875,965	(0.8)	821,951	1.066	65.8	4330	0	0	1	0
02/07/14	802,105	5.0	821,951	0.976	60.0	3600	0	0	1	0
02/08/14	762,332	7.4	821,951	0.927	57.6	3318	0	0	1	0
02/09/14	863,250	(2.7)	821,951	1.050	67.7	4583	0	0	1	0
02/10/14	878,879	(2.0)	821,951	1.069	67.0	4489	0	0	1	0
02/11/14	747,125	11.3	821,951	0.909	53.7	2884	0	0	1	0
02/12/14	599,842	20.4	821,951	0.730	44.6	1989	0	0	1	0
02/13/14	713,019	10.6	821,951	0.867	54.4	2959	0	0	1	0
02/14/14	726,273	7.5	821,951	0.884	57.5	3306	0	0	1	0
02/15/14	680,208	14.8	821,951	0.828	50.2	2520	0	0	1	0
02/16/14	621,395	19.0	821,951	0.756	46.0	2116	0	0	1	0
02/17/14	552,739	22.9	821,951	0.672	42.1	1772	0	0	1	0
02/18/14	438,311	31.5	821,951	0.533	33.5	1122	0	0	1	0
02/19/14	407,689	34.4	821,951	0.496	30.6	936	0	0	1	0



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02/20/14	551,513	21.8	821,951	0.671	43.2	1866	0	0	1	0
02/21/14	682,078	11.0	821,951	0.830	54.0	2916	0	0	1	0
02/22/14	691,246	8.6	821,951	0.841	56.4	3181	0	0	1	0
02/23/14	716,126	8.3	821,951	0.871	56.7	3215	0	0	1	0
02/24/14	763,209	5.0	821,951	0.929	60.0	3600	0	0	1	0
02/25/14	861,631	(2.4)	821,951	1.048	67.4	4543	0	0	1	0
02/26/14	857,478	(3.2)	821,951	1.043	68.2	4651	0	0	1	0
02/27/14	883,960	(5.0)	821,951	1.075	70.0	4900	0	0	1	0
02/28/14	797,741	6.5	821,951	0.971	58.5	3422	0	0	1	0
03/01/14	931,911	(6.3)	822,177	1.133	71.3	5084	0	0	0	1
03/02/14	893,144	(3.8)	822,177	1.086	68.8	4733	0	0	0	1
03/03/14	793,372	6.7	822,177	0.965	58.3	3399	0	0	0	1
03/04/14	654,645	16.0	822,177	0.796	49.0	2401	0	0	0	1
03/05/14	598,914	18.0	822,177	0.728	47.0	2209	0	0	0	1
03/06/14	564,977	24.3	822,177	0.687	40.7	1656	0	0	0	1
03/07/14	540,896	25.2	822,177	0.658	39.8	1584	0	0	0	1
03/08/14	500,163	22.9	822,177	0.608	42.1	1772	0	0	0	1
03/09/14	393,788	38.0	822,177	0.479	27.0	729	0	0	0	1
03/10/14	291,729	44.0	822,177	0.355	21.0	441	0	0	0	1
03/11/14	431,105	32.3	822,177	0.524	32.7	1069	0	0	0	1
03/12/14	483,403	24.8	822,177	0.588	40.2	1616	0	0	0	1
03/13/14	307,016	42.7	822,177	0.373	22.3	497	0	0	0	1
03/14/14	418,521	31.3	822,177	0.509	33.7	1136	0	0	0	1
03/15/14	526,833	22.5	822,177	0.641	42.5	1806	0	0	0	1
03/16/14	531,181	22.6	822,177	0.646	42.4	1798	0	0	0	1
03/17/14	450,154	31.5	822,177	0.548	33.5	1122	0	0	0	1
03/18/14	454,709	30.7	822,177	0.553	34.3	1176	0	0	0	1
03/19/14	463,131	29.8	822,177	0.563	35.2	1239	0	0	0	1
03/20/14	351,375	35.7	822,177	0.427	29.3	858	0	0	0	1
03/21/14	495,618	27.0	822,177	0.603	38.0	1444	0	0	0	1
03/22/14	621,205	15.1	822,177	0.756	49.9	2490	0	0	0	1
03/23/14	577,846	21.0	822,177	0.703	44.0	1936	0	0	0	1
03/24/14	573,786	21.6	822,177	0.698	43.4	1884	0	0	0	1
03/25/14	602,373	18.6	822,177	0.733	46.4	2153	0	0	0	1
03/26/14	414,848	36.9	822,177	0.505	28.1	790	0	0	0	1
03/27/14	439,292	32.6	822,177	0.534	32.4	1050	0	0	0	1
03/28/14	429,334	30.5	822,177	0.522	34.5	1190	0	0	0	1
03/29/14	334,433	38.4	822,177	0.407	26.6	708	0	0	0	1
03/30/14	225,216	50.6	822,177	0.274	14.4	207	0	0	0	1
03/31/14	327,421	39.3	822,177	0.398	25.7	660	0	0	0	1
11/01/14	367,563	36.5	827,395	0.444	28.5	812	1	0	0	0
11/02/14	231,159	47.9	827,395	0.279	17.1	292	1	0	0	0
11/03/14	233,899	47.7	827,395	0.283	17.3	299	1	0	0	0
11/04/14	268,421	41.9	827,395	0.324	23.1	534	1	0	0	0
11/05/14	326,320	36.8	827,395	0.394	28.2	795	1	0	0	0
11/06/14	340,678	35.8	827,395	0.412	29.2	853	1	0	0	0
11/07/14	335,309	40.5	827,395	0.405	24.5	600	1	0	0	0
11/08/14	322,365	38.5	827,395	0.390	26.5	702	1	0	0	0
11/09/14	393,884	32.0	827,395	0.476	33.0	1089	1	0	0	0
11/10/14	508,087	26.0	827,395	0.614	39.0	1521	1	0	0	0
11/11/14	553,993	20.3	827,395	0.670	44.7	1998	1	0	0	0
11/12/14	560,707	21.0	827,395	0.678	44.0	1936	1	0	0	0
11/13/14	585,474	17.2	827,395	0.708	47.8	2285	1	0	0	0
11/14/14	613,431	13.3	827,395	0.741	51.7	2673	1	0	0	0
11/15/14	585,907	18.0	827,395	0.708	47.0	2209	1	0	0	0
11/16/14	659,920	10.8	827,395	0.798	54.2	2938	1	0	0	0
11/17/14	714,806	10.5	827,395	0.864	54.5	2970	1	0	0	0
11/18/14	644,371	16.5	827,395	0.779	48.5	2352	1	0	0	0
11/19/14	626,852	17.6	827,395	0.758	47.4	2247	1	0	0	0
11/20/14	681,400	10.6	827,395	0.824	54.4	2959	1	0	0	0
11/21/14	517,790	30.3	827,395	0.626	34.7	1204	1	0	0	0
11/22/14	372,244	40.0	827,395	0.450	25.0	625	1	0	0	0
11/23/14	384,723	35.6	827,395	0.465	29.4	864	1	0	0	0
11/24/14	651,368	15.9	827,395	0.787	49.1	2411	1	0	0	0
11/25/14	573,152	22.3	827,395	0.693	42.7	1823	1	0	0	0
11/26/14	632,391	14.1	827,395	0.764	50.9	2591	1	0	0	0
11/27/14	691,455	7.9	827,395	0.836	57.1	3260	1	0	0	0
11/28/14	576,838	21.9	827,395	0.697	43.1	1858	1	0	0	0
11/29/14	495,652	24.8	827,395	0.599	40.2	1616	1	0	0	0

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11/30/14	759,517	6.8	827,395	0.918	58.2	3387	1	0	0	0
12/01/14	790,337	6.0	829,243	0.953	59.0	3481	0	1	0	0
12/02/14	667,030	17.8	829,243	0.804	47.2	2228	0	1	0	0
12/03/14	624,334	17.8	829,243	0.753	47.2	2228	0	1	0	0
12/04/14	499,938	29.0	829,243	0.603	36.0	1296	0	1	0	0
12/05/14	498,939	26.8	829,243	0.602	38.2	1459	0	1	0	0
12/06/14	500,326	26.3	829,243	0.603	38.7	1498	0	1	0	0
12/07/14	458,325	33.6	829,243	0.553	31.4	986	0	1	0	0
12/08/14	557,999	23.2	829,243	0.673	41.8	1747	0	1	0	0
12/09/14	577,744	21.3	829,243	0.697	43.7	1910	0	1	0	0
12/10/14	518,127	26.9	829,243	0.625	38.1	1452	0	1	0	0
12/11/14	467,898	31.1	829,243	0.564	33.9	1149	0	1	0	0
12/12/14	400,232	35.9	829,243	0.483	29.1	847	0	1	0	0
12/13/14	284,196	45.8	829,243	0.343	19.2	369	0	1	0	0
12/14/14	258,361	48.3	829,243	0.312	16.7	279	0	1	0	0
12/15/14	405,457	33.9	829,243	0.489	31.1	967	0	1	0	0
12/16/14	638,372	16.4	829,243	0.770	48.6	2362	0	1	0	0
12/17/14	652,468	15.5	829,243	0.787	49.5	2450	0	1	0	0
12/18/14	596,151	20.5	829,243	0.719	44.5	1980	0	1	0	0
12/19/14	501,724	28.4	829,243	0.605	36.6	1340	0	1	0	0
12/20/14	459,592	31.6	829,243	0.554	33.4	1116	0	1	0	0
12/21/14	410,299	36.5	829,243	0.495	28.5	812	0	1	0	0
12/22/14	406,959	35.3	829,243	0.491	29.7	882	0	1	0	0
12/23/14	412,973	34.9	829,243	0.498	30.1	906	0	1	0	0
12/24/14	412,651	32.5	829,243	0.498	32.5	1056	0	1	0	0
12/25/14	414,740	32.7	829,243	0.500	32.3	1043	0	1	0	0
12/26/14	481,652	28.3	829,243	0.581	36.7	1347	0	1	0	0
12/27/14	590,972	15.2	829,243	0.713	49.8	2480	0	1	0	0
12/28/14	663,340	12.7	829,243	0.800	52.3	2735	0	1	0	0
12/29/14	854,543	0.7	829,243	1.031	64.3	4134	0	1	0	0
12/30/14	940,053	(2.4)	829,243	1.134	67.4	4543	0	1	0	0
12/31/14	776,560	11.7	829,243	0.936	53.3	2841	0	1	0	0
01/01/15	618,564	18.6	821,220	0.753	46.4	2153	0	0	0	0
01/02/15	586,734	24.1	830,376	0.707	40.9	1673	0	0	0	0
01/03/15	663,484	15.6	830,376	0.799	49.4	2440	0	0	0	0
01/04/15	950,644	(5.9)	830,376	1.145	70.9	5027	0	0	0	0
01/05/15	944,214	(2.8)	830,376	1.137	67.8	4597	0	0	0	0
01/06/15	939,937	(0.4)	830,376	1.132	65.4	4277	0	0	0	0
01/07/15	949,471	(2.4)	830,376	1.143	67.4	4543	0	0	0	0
01/08/15	879,746	5.1	830,376	1.059	59.9	3588	0	0	0	0
01/09/15	876,851	0.7	830,376	1.056	64.3	4134	0	0	0	0
01/10/15	772,023	9.8	830,376	0.930	55.2	3047	0	0	0	0
01/11/15	783,629	6.7	830,376	0.944	58.3	3399	0	0	0	0
01/12/15	911,739	(2.5)	830,376	1.098	67.5	4556	0	0	0	0
01/13/15	756,958	13.4	830,376	0.912	51.6	2663	0	0	0	0
01/14/15	590,481	22.5	830,376	0.711	42.5	1806	0	0	0	0
01/15/15	507,661	29.2	830,376	0.611	35.8	1282	0	0	0	0
01/16/15	514,955	28.1	830,376	0.620	36.9	1362	0	0	0	0
01/17/15	466,621	32.9	830,376	0.562	32.1	1030	0	0	0	0
01/18/15	454,265	30.5	830,376	0.547	34.5	1190	0	0	0	0
01/19/15	441,767	32.4	830,376	0.532	32.6	1063	0	0	0	0
01/20/15	491,225	29.0	830,376	0.592	36.0	1296	0	0	0	0
01/21/15	525,076	26.6	830,376	0.632	38.4	1475	0	0	0	0
01/22/15	541,206	26.7	830,376	0.652	38.3	1467	0	0	0	0
01/23/15	427,079	32.6	830,376	0.514	32.4	1050	0	0	0	0
01/24/15	402,152	33.5	830,376	0.484	31.5	992	0	0	0	0
01/25/15	521,749	24.6	830,376	0.628	40.4	1632	0	0	0	0
01/26/15	395,529	37.1	830,376	0.476	27.9	778	0	0	0	0
01/27/15	456,665	30.9	830,376	0.550	34.1	1163	0	0	0	0
01/28/15	485,348	30.6	830,376	0.584	34.4	1183	0	0	0	0
01/29/15	611,743	19.9	830,376	0.737	45.1	2034	0	0	0	0
01/30/15	560,072	23.0	830,376	0.674	42.0	1764	0	0	0	0
01/31/15	593,192	22.4	830,376	0.714	42.6	1815	0	0	0	0
02/01/15	762,696	8.6	831,145	0.918	56.4	3181	0	0	1	0
02/02/15	749,680	9.5	831,145	0.902	55.5	3080	0	0	1	0
02/03/15	702,139	13.5	831,145	0.845	51.5	2652	0	0	1	0
02/04/15	795,294	3.7	831,145	0.957	61.3	3758	0	0	1	0
02/05/15	701,447	14.8	831,145	0.844	50.2	2520	0	0	1	0
02/06/15	531,220	23.8	831,145	0.639	41.2	1697	0	0	1	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
02/07/15	456,349	30.8	831,145	0.549	34.2	1170	0	0	1	0
02/08/15	537,857	25.2	831,145	0.647	39.8	1584	0	0	1	0
02/09/15	500,250	25.6	831,145	0.602	39.4	1552	0	0	1	0
02/10/15	581,851	24.5	831,145	0.700	40.5	1640	0	0	1	0
02/11/15	772,821	6.5	831,145	0.930	58.5	3422	0	0	1	0
02/12/15	768,543	8.4	831,145	0.925	56.6	3204	0	0	1	0
02/13/15	691,486	14.8	831,145	0.832	50.2	2520	0	0	1	0
02/14/15	840,306	1.3	831,145	1.011	63.7	4058	0	0	1	0
02/15/15	807,592	7.5	831,145	0.972	57.5	3306	0	0	1	0
02/16/15	747,739	11.0	831,145	0.900	54.0	2916	0	0	1	0
02/17/15	872,945	0.8	831,145	1.050	64.2	4122	0	0	1	0
02/18/15	959,990	(4.5)	831,145	1.155	69.5	4830	0	0	1	0
02/19/15	800,579	5.5	831,145	0.963	59.5	3540	0	0	1	0
02/20/15	638,483	20.8	831,145	0.768	44.2	1954	0	0	1	0
02/21/15	763,072	5.8	831,145	0.918	59.2	3505	0	0	1	0
02/22/15	945,749	(6.0)	831,145	1.138	71.0	5041	0	0	1	0
02/23/15	708,701	20.0	831,145	0.853	45.0	2025	0	0	1	0
02/24/15	620,386	18.7	831,145	0.746	46.3	2144	0	0	1	0
02/25/15	783,255	7.1	831,145	0.942	57.9	3352	0	0	1	0
02/26/15	830,745	2.8	831,145	1.000	62.2	3869	0	0	1	0
02/27/15	774,493	6.7	831,145	0.932	58.3	3399	0	0	1	0
02/28/15	685,372	15.5	831,145	0.825	49.5	2450	0	0	1	0
03/01/15	627,674	19.5	831,261	0.755	45.5	2070	0	0	0	1
03/02/15	570,691	22.1	831,261	0.687	42.9	1840	0	0	0	1
03/03/15	691,313	12.7	831,261	0.832	52.3	2735	0	0	0	1
03/04/15	842,930	1.8	831,261	1.014	63.2	3994	0	0	0	1
03/05/15	725,944	10.7	831,261	0.873	54.3	2948	0	0	0	1
03/06/15	470,830	31.8	831,261	0.566	33.2	1102	0	0	0	1
03/07/15	381,236	35.9	831,261	0.459	29.1	847	0	0	0	1
03/08/15	355,291	39.5	831,261	0.427	25.5	650	0	0	0	1
03/09/15	298,854	46.8	831,261	0.360	18.2	331	0	0	0	1
03/10/15	262,695	46.4	831,261	0.316	18.6	346	0	0	0	1
03/11/15	252,506	46.0	831,261	0.304	19.0	361	0	0	0	1
03/12/15	212,362	53.5	831,261	0.255	11.5	132	0	0	0	1
03/13/15	231,551	46.7	831,261	0.279	18.3	335	0	0	0	1
03/14/15	219,062	50.3	831,261	0.264	14.7	216	0	0	0	1
03/15/15	173,085	58.2	831,261	0.208	6.8	46	0	0	0	1
03/16/15	291,740	42.7	831,261	0.351	22.3	497	0	0	0	1
03/17/15	355,797	37.0	831,261	0.428	28.0	784	0	0	0	1
03/18/15	354,330	40.0	831,261	0.426	25.0	625	0	0	0	1
03/19/15	312,948	42.3	831,261	0.376	22.7	515	0	0	0	1
03/20/15	300,948	41.1	831,261	0.362	23.9	571	0	0	0	1
03/21/15	395,428	33.2	831,261	0.476	31.8	1011	0	0	0	1
03/22/15	457,962	31.0	831,261	0.551	34.0	1156	0	0	0	1
03/23/15	451,317	28.5	831,261	0.543	36.5	1332	0	0	0	1
03/24/15	419,337	33.0	831,261	0.504	32.0	1024	0	0	0	1
03/25/15	459,571	33.5	831,261	0.553	31.5	992	0	0	0	1
03/26/15	489,174	28.1	831,261	0.588	36.9	1362	0	0	0	1
03/27/15	436,770	27.8	831,261	0.525	37.2	1384	0	0	0	1
03/28/15	359,926	36.7	831,261	0.433	28.3	801	0	0	0	1
03/29/15	321,955	44.0	831,261	0.387	21.0	441	0	0	0	1
03/30/15	270,307	44.5	831,261	0.325	20.5	420	0	0	0	1
03/31/15	180,486	54.0	831,261	0.217	11.0	121	0	0	0	1
11/01/15	186,784	50.7	835,774	0.223	14.3	204	1	0	0	0
11/02/15	138,970	56.5	835,774	0.166	8.5	72	1	0	0	0
11/03/15	109,063	57.6	835,774	0.130	7.4	55	1	0	0	0
11/04/15	115,379	60.4	835,774	0.138	4.6	21	1	0	0	0
11/05/15	183,702	48.6	835,774	0.220	16.4	269	1	0	0	0
11/06/15	276,913	40.7	835,774	0.331	24.3	590	1	0	0	0
11/07/15	259,975	44.8	835,774	0.311	20.2	408	1	0	0	0
11/08/15	203,064	51.0	835,774	0.243	14.0	196	1	0	0	0
11/09/15	184,526	49.3	835,774	0.221	15.7	246	1	0	0	0
11/10/15	182,491	50.5	835,774	0.218	14.5	210	1	0	0	0
11/11/15	241,315	46.1	835,774	0.289	18.9	357	1	0	0	0
11/12/15	350,921	37.4	835,774	0.420	27.6	762	1	0	0	0
11/13/15	325,752	37.6	835,774	0.390	27.4	751	1	0	0	0
11/14/15	239,847	47.4	835,774	0.287	17.6	310	1	0	0	0
11/15/15	173,240	53.7	835,774	0.207	11.3	128	1	0	0	0
11/16/15	219,808	48.8	835,774	0.263	16.2	262	1	0	0	0

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
11/17/15	182,261	53.7	835,774	0.218	11.3	128	1	0	0	0
11/18/15	299,903	40.3	835,774	0.359	24.7	610	1	0	0	0
11/19/15	483,830	30.3	835,774	0.579	34.7	1204	1	0	0	0
11/20/15	508,067	24.5	835,774	0.608	40.5	1640	1	0	0	0
11/21/15	512,731	22.3	835,774	0.613	42.7	1823	1	0	0	0
11/22/15	460,295	28.6	835,774	0.551	36.4	1325	1	0	0	0
11/23/15	376,597	35.5	835,774	0.451	29.5	870	1	0	0	0
11/24/15	349,079	39.3	835,774	0.418	25.7	660	1	0	0	0
11/25/15	312,036	41.6	835,774	0.373	23.4	548	1	0	0	0
11/26/15	479,519	25.6	835,774	0.574	39.4	1552	1	0	0	0
11/27/15	552,812	20.1	835,774	0.661	44.9	2016	1	0	0	0
11/28/15	508,314	24.0	835,774	0.608	41.0	1681	1	0	0	0
11/29/15	451,483	30.7	835,774	0.540	34.3	1176	1	0	0	0
11/30/15	437,944	33.0	835,774	0.524	32.0	1024	1	0	0	0
12/01/15	442,535	29.5	837,760	0.528	35.5	1260	0	1	0	0
12/02/15	447,920	30.4	837,760	0.535	34.6	1197	0	1	0	0
12/03/15	472,297	28.2	837,760	0.564	36.8	1354	0	1	0	0
12/04/15	368,165	39.1	837,760	0.439	25.9	671	0	1	0	0
12/05/15	328,862	41.1	837,760	0.393	23.9	571	0	1	0	0
12/06/15	403,379	33.8	837,760	0.481	31.2	973	0	1	0	0
12/07/15	374,391	37.3	837,760	0.447	27.7	767	0	1	0	0
12/08/15	381,841	36.8	837,760	0.456	28.2	795	0	1	0	0
12/09/15	327,136	42.7	837,760	0.390	22.3	497	0	1	0	0
12/10/15	334,222	41.0	837,760	0.399	24.0	576	0	1	0	0
12/11/15	363,681	36.8	837,760	0.434	28.2	795	0	1	0	0
12/12/15	343,595	39.6	837,760	0.410	25.4	645	0	1	0	0
12/13/15	368,992	38.5	837,760	0.440	26.5	702	0	1	0	0
12/14/15	437,799	33.2	837,760	0.523	31.8	1011	0	1	0	0
12/15/15	436,476	34.2	837,760	0.521	30.8	949	0	1	0	0
12/16/15	488,553	29.6	837,760	0.583	35.4	1253	0	1	0	0
12/17/15	603,595	20.8	837,760	0.720	44.2	1954	0	1	0	0
12/18/15	698,006	13.1	837,760	0.833	51.9	2694	0	1	0	0
12/19/15	566,103	25.3	837,760	0.676	39.7	1576	0	1	0	0
12/20/15	434,205	34.4	837,760	0.518	30.6	936	0	1	0	0
12/21/15	458,336	31.3	837,760	0.547	33.7	1136	0	1	0	0
12/22/15	447,446	33.7	837,760	0.534	31.3	980	0	1	0	0
12/23/15	471,586	29.4	837,760	0.563	35.6	1267	0	1	0	0
12/24/15	512,214	25.7	837,760	0.611	39.3	1544	0	1	0	0
12/25/15	475,231	28.4	837,760	0.567	36.6	1340	0	1	0	0
12/26/15	508,144	27.1	837,760	0.607	37.9	1436	0	1	0	0
12/27/15	640,955	15.6	837,760	0.765	49.4	2440	0	1	0	0
12/28/15	638,266	21.7	837,760	0.762	43.3	1875	0	1	0	0
12/29/15	564,844	22.7	837,760	0.674	42.3	1789	0	1	0	0
12/30/15	595,136	18.7	837,760	0.710	46.3	2144	0	1	0	0
12/31/15	642,391	16.6	837,760	0.767	48.4	2343	0	1	0	0
01/01/16	572,008	21.3	839,290	0.682	43.7	1910	0	0	0	0
01/02/16	523,491	26.5	839,290	0.624	38.5	1482	0	0	0	0
01/03/16	576,480	21.3	839,290	0.687	43.7	1910	0	0	0	0
01/04/16	599,468	20.9	839,290	0.714	44.1	1945	0	0	0	0
01/05/16	528,614	26.4	839,290	0.630	38.6	1490	0	0	0	0
01/06/16	476,750	30.8	839,290	0.568	34.2	1170	0	0	0	0
01/07/16	444,228	32.6	839,290	0.529	32.4	1050	0	0	0	0
01/08/16	546,913	22.8	839,290	0.652	42.2	1781	0	0	0	0
01/09/16	871,416	(2.3)	839,290	1.038	67.3	4529	0	0	0	0
01/10/16	921,350	(5.3)	839,290	1.098	70.3	4942	0	0	0	0
01/11/16	873,927	0.9	839,290	1.041	64.1	4109	0	0	0	0
01/12/16	888,242	(1.4)	839,290	1.058	66.4	4409	0	0	0	0
01/13/16	670,113	17.6	839,290	0.798	47.4	2247	0	0	0	0
01/14/16	586,633	23.5	839,290	0.699	41.5	1722	0	0	0	0
01/15/16	707,301	12.6	839,290	0.843	52.4	2746	0	0	0	0
01/16/16	955,546	(6.7)	839,290	1.139	71.7	5141	0	0	0	0
01/17/16	994,146	(8.2)	839,290	1.185	73.2	5358	0	0	0	0
01/18/16	958,427	(2.8)	839,290	1.142	67.8	4597	0	0	0	0
01/19/16	824,586	7.2	839,290	0.982	57.8	3341	0	0	0	0
01/20/16	647,507	20.3	839,290	0.771	44.7	1998	0	0	0	0
01/21/16	620,688	20.9	839,290	0.740	44.1	1945	0	0	0	0
01/22/16	617,111	20.6	839,290	0.735	44.4	1971	0	0	0	0
01/23/16	593,340	22.8	839,290	0.707	42.2	1781	0	0	0	0
01/24/16	508,263	28.5	839,290	0.606	36.5	1332	0	0	0	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
01/25/16	535,877	26.9	839,290	0.638	38.1	1452	0	0	0	0
01/26/16	595,250	22.1	839,290	0.709	42.9	1840	0	0	0	0
01/27/16	485,934	36.0	839,290	0.579	29.0	841	0	0	0	0
01/28/16	547,422	24.7	839,290	0.652	40.3	1624	0	0	0	0
01/29/16	481,943	31.0	839,290	0.574	34.0	1156	0	0	0	0
01/30/16	408,721	36.7	839,290	0.487	28.3	801	0	0	0	0
01/31/16	435,251	31.9	839,290	0.519	33.1	1096	0	0	0	0
02/01/16	490,305	29.7	839,679	0.584	35.3	1246	0	0	1	0
02/02/16	579,907	24.7	839,679	0.691	40.3	1624	0	0	1	0
02/03/16	630,886	15.3	839,679	0.751	49.7	2470	0	0	1	0
02/04/16	653,631	16.4	839,679	0.778	48.6	2362	0	0	1	0
02/05/16	571,112	24.8	839,679	0.680	40.2	1616	0	0	1	0
02/06/16	453,128	34.3	839,679	0.540	30.7	942	0	0	1	0
02/07/16	563,434	24.3	839,679	0.671	40.7	1656	0	0	1	0
02/08/16	754,508	11.9	839,679	0.899	53.1	2820	0	0	1	0
02/09/16	758,905	9.7	839,679	0.904	55.3	3058	0	0	1	0
02/10/16	776,442	8.5	839,679	0.925	56.5	3192	0	0	1	0
02/11/16	719,315	13.0	839,679	0.857	52.0	2704	0	0	1	0
02/12/16	834,719	2.5	839,679	0.994	62.5	3906	0	0	1	0
02/13/16	763,627	7.8	839,679	0.909	57.2	3272	0	0	1	0
02/14/16	672,416	18.0	839,679	0.801	47.0	2209	0	0	1	0
02/15/16	486,405	30.3	839,679	0.579	34.7	1204	0	0	1	0
02/16/16	541,235	24.4	839,679	0.645	40.6	1648	0	0	1	0
02/17/16	538,297	26.9	839,679	0.641	38.1	1452	0	0	1	0
02/18/16	435,593	37.4	839,679	0.519	27.6	762	0	0	1	0
02/19/16	382,817	40.3	839,679	0.456	24.7	610	0	0	1	0
02/20/16	427,988	33.4	839,679	0.510	31.6	999	0	0	1	0
02/21/16	460,019	31.7	839,679	0.548	33.3	1109	0	0	1	0
02/22/16	444,186	33.0	839,679	0.529	32.0	1024	0	0	1	0
02/23/16	433,803	35.7	839,679	0.517	29.3	858	0	0	1	0
02/24/16	456,317	32.7	839,679	0.543	32.3	1043	0	0	1	0
02/25/16	487,889	28.7	839,679	0.581	36.3	1318	0	0	1	0
02/26/16	383,094	36.2	839,679	0.456	28.8	829	0	0	1	0
02/27/16	261,306	47.0	839,679	0.311	18.0	324	0	0	1	0
02/28/16	469,162	32.8	839,679	0.559	32.2	1037	0	0	1	0
02/29/16	571,942	20.6	839,679	0.681	44.4	1971	0	0	1	0
03/01/16	604,214	18.7	839,821	0.719	46.3	2144	0	0	0	1
03/02/16	503,024	26.4	839,821	0.599	38.6	1490	0	0	0	1
03/03/16	473,071	30.9	839,821	0.563	34.1	1163	0	0	0	1
03/04/16	462,937	33.1	839,821	0.551	31.9	1018	0	0	0	1
03/05/16	421,111	33.2	839,821	0.501	31.8	1011	0	0	0	1
03/06/16	263,251	48.0	839,821	0.313	17.0	289	0	0	0	1
03/07/16	162,870	58.2	839,821	0.194	6.8	46	0	0	0	1
03/08/16	209,168	49.3	839,821	0.249	15.7	246	0	0	0	1
03/09/16	366,032	37.5	839,821	0.436	27.5	756	0	0	0	1
03/10/16	351,183	39.2	839,821	0.418	25.8	666	0	0	0	1
03/11/16	184,191	55.8	839,821	0.219	9.2	85	0	0	0	1
03/12/16	138,386	56.8	839,821	0.165	8.2	67	0	0	0	1
03/13/16	211,457	51.4	839,821	0.252	13.6	185	0	0	0	1
03/14/16	176,403	53.6	839,821	0.210	11.4	130	0	0	0	1
03/15/16	240,550	48.1	839,821	0.286	16.9	286	0	0	0	1
03/16/16	343,811	41.0	839,821	0.409	24.0	576	0	0	0	1
03/17/16	395,690	36.0	839,821	0.471	29.0	841	0	0	0	1
03/18/16	437,428	32.0	839,821	0.521	33.0	1089	0	0	0	1
03/19/16	416,289	33.7	839,821	0.496	31.3	980	0	0	0	1
03/20/16	386,858	35.3	839,821	0.461	29.7	882	0	0	0	1
03/21/16	302,660	44.3	839,821	0.360	20.7	428	0	0	0	1
03/22/16	305,767	41.8	839,821	0.364	23.2	538	0	0	0	1
03/23/16	468,691	30.7	839,821	0.558	34.3	1176	0	0	0	1
03/24/16	366,263	36.2	839,821	0.436	28.8	829	0	0	0	1
03/25/16	305,318	42.4	839,821	0.364	22.6	511	0	0	0	1
03/26/16	295,649	44.3	839,821	0.352	20.7	428	0	0	0	1
03/27/16	371,481	36.2	839,821	0.442	28.8	829	0	0	0	1
03/28/16	235,553	48.1	839,821	0.280	16.9	286	0	0	0	1
03/29/16	196,464	52.5	839,821	0.234	12.5	156	0	0	0	1
03/30/16	281,201	44.3	839,821	0.335	20.7	428	0	0	0	1
03/31/16	288,851	42.5	839,821	0.344	22.5	506	0	0	0	1
11/01/16	175,072	51.1	844,135	0.207	13.9	193	1	0	0	0
11/02/16	186,417	52.1	844,135	0.221	12.9	166	1	0	0	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
11/03/16	172,566	52.3	844,135	0.204	12.7	161	1	0	0	0
11/04/16	156,468	55.0	844,135	0.185	10.0	100	1	0	0	0
11/05/16	136,099	57.5	844,135	0.161	7.5	56	1	0	0	0
11/06/16	131,950	56.2	844,135	0.156	8.8	77	1	0	0	0
11/07/16	162,758	54.3	844,135	0.193	10.7	114	1	0	0	0
11/08/16	215,179	47.0	844,135	0.255	18.0	324	1	0	0	0
11/09/16	190,860	51.7	844,135	0.226	13.3	177	1	0	0	0
11/10/16	174,476	53.0	844,135	0.207	12.0	144	1	0	0	0
11/11/16	276,831	40.8	844,135	0.328	24.2	586	1	0	0	0
11/12/16	241,953	46.9	844,135	0.287	18.1	328	1	0	0	0
11/13/16	194,238	50.8	844,135	0.230	14.2	202	1	0	0	0
11/14/16	270,600	43.8	844,135	0.321	21.2	449	1	0	0	0
11/15/16	243,103	52.8	844,135	0.288	12.2	149	1	0	0	0
11/16/16	189,518	49.1	844,135	0.225	15.9	253	1	0	0	0
11/17/16	213,586	50.8	844,135	0.253	14.2	202	1	0	0	0
11/18/16	415,709	34.0	844,135	0.492	31.0	961	1	0	0	0
11/19/16	478,597	22.6	844,135	0.567	42.4	1798	1	0	0	0
11/20/16	491,166	23.2	844,135	0.582	41.8	1747	1	0	0	0
11/21/16	418,750	34.5	844,135	0.496	30.5	930	1	0	0	0
11/22/16	430,470	34.7	844,135	0.510	30.3	918	1	0	0	0
11/23/16	399,935	34.5	844,135	0.474	30.5	930	1	0	0	0
11/24/16	379,014	34.7	844,135	0.449	30.3	918	1	0	0	0
11/25/16	416,966	33.2	844,135	0.494	31.8	1011	1	0	0	0
11/26/16	367,054	36.7	844,135	0.435	28.3	801	1	0	0	0
11/27/16	353,234	42.6	844,135	0.418	22.4	502	1	0	0	0
11/28/16	307,138	43.1	844,135	0.364	21.9	480	1	0	0	0
11/29/16	383,593	36.5	844,135	0.454	28.5	812	1	0	0	0
11/30/16	378,595	36.8	844,135	0.449	28.2	795	1	0	0	0
12/01/16	412,153	34.3	846,295	0.487	30.7	942	0	1	0	0
12/02/16	449,223	31.0	846,295	0.531	34.0	1156	0	1	0	0
12/03/16	431,970	31.1	846,295	0.510	33.9	1149	0	1	0	0
12/04/16	432,984	33.7	846,295	0.512	31.3	980	0	1	0	0
12/05/16	443,162	34.7	846,295	0.524	30.3	918	0	1	0	0
12/06/16	649,140	19.8	846,295	0.767	45.2	2043	0	1	0	0
12/07/16	692,108	17.7	846,295	0.818	47.3	2237	0	1	0	0
12/08/16	667,608	19.2	846,295	0.789	45.8	2098	0	1	0	0
12/09/16	722,261	11.5	846,295	0.853	53.5	2862	0	1	0	0
12/10/16	747,754	12.7	846,295	0.884	52.3	2735	0	1	0	0
12/11/16	675,077	14.0	846,295	0.798	51.0	2601	0	1	0	0
12/12/16	810,694	0.8	846,295	0.958	64.2	4122	0	1	0	0
12/13/16	816,313	6.7	846,295	0.965	58.3	3399	0	1	0	0
12/14/16	906,759	(0.7)	846,295	1.071	65.7	4316	0	1	0	0
12/15/16	858,174	2.4	846,295	1.014	62.6	3919	0	1	0	0
12/16/16	747,945	10.3	846,295	0.884	54.7	2992	0	1	0	0
12/17/16	924,082	(5.5)	846,295	1.092	70.5	4970	0	1	0	0
12/18/16	949,423	(3.5)	846,295	1.122	68.5	4692	0	1	0	0
12/19/16	653,513	22.9	846,295	0.772	42.1	1772	0	1	0	0
12/20/16	504,744	30.2	846,295	0.596	34.8	1211	0	1	0	0
12/21/16	481,716	32.1	846,295	0.569	32.9	1082	0	1	0	0
12/22/16	469,154	33.0	846,295	0.554	32.0	1024	0	1	0	0
12/23/16	441,680	34.0	846,295	0.522	31.0	961	0	1	0	0
12/24/16	433,424	33.5	846,295	0.512	31.5	992	0	1	0	0
12/25/16	479,834	34.0	846,295	0.567	31.0	961	0	1	0	0
12/26/16	675,623	19.3	846,295	0.798	45.7	2088	0	1	0	0
12/27/16	600,168	21.7	846,295	0.709	43.3	1875	0	1	0	0
12/28/16	491,979	31.6	846,295	0.581	33.4	1116	0	1	0	0
12/29/16	573,751	25.6	846,295	0.678	39.4	1552	0	1	0	0
12/30/16	542,270	27.7	846,295	0.641	37.3	1391	0	1	0	0
12/31/16	549,216	24.0	846,295	0.649	41.0	1681	0	1	0	0
01/01/17	508,525	28.5	847,757	0.600	36.5	1332	0	0	0	0
01/02/17	511,900	30.8	847,757	0.604	34.2	1170	0	0	0	0
01/03/17	846,353	5.0	847,757	0.998	60.0	3600	0	0	0	0
01/04/17	940,036	(1.0)	847,757	1.109	66.0	4356	0	0	0	0
01/05/17	978,931	(4.5)	847,757	1.155	69.5	4830	0	0	0	0
01/06/17	909,170	0.7	847,757	1.072	64.3	4134	0	0	0	0
01/07/17	890,781	2.0	847,757	1.051	63.0	3969	0	0	0	0
01/08/17	774,766	13.8	847,757	0.914	51.2	2621	0	0	0	0
01/09/17	632,137	24.7	847,757	0.746	40.3	1624	0	0	0	0
01/10/17	754,928	11.4	847,757	0.890	53.6	2873	0	0	0	0

Date	Firm Thoughtput	Temperature	Firm Customer	UPC	HDD	HDDs^2	Nov	Dec	Feb	Mar
01/11/17	807,263	6.4	847,757	0.952	58.6	3434	0	0	0	0
01/12/17	885,763	1.2	847,757	1.045	63.8	4070	0	0	0	0
01/13/17	854,082	5.0	847,757	1.007	60.0	3600	0	0	0	0
01/14/17	720,147	12.5	847,757	0.849	52.5	2756	0	0	0	0
01/15/17	615,077	21.5	847,757	0.726	43.5	1892	0	0	0	0
01/16/17	545,259	21.5	847,757	0.643	43.5	1892	0	0	0	0
01/17/17	506,007	31.0	847,757	0.597	34.0	1156	0	0	0	0
01/18/17	428,495	34.4	847,757	0.505	30.6	936	0	0	0	0
01/19/17	394,126	35.5	847,757	0.465	29.5	870	0	0	0	0
01/20/17	413,769	35.3	847,757	0.488	29.7	882	0	0	0	0
01/21/17	402,935	36.3	847,757	0.475	28.7	824	0	0	0	0
01/22/17	415,957	36.1	847,757	0.491	28.9	835	0	0	0	0
01/23/17	456,613	33.4	847,757	0.539	31.6	999	0	0	0	0
01/24/17	482,793	31.8	847,757	0.569	33.2	1102	0	0	0	0
01/25/17	528,087	29.2	847,757	0.623	35.8	1282	0	0	0	0
01/26/17	572,244	24.6	847,757	0.675	40.4	1632	0	0	0	0
01/27/17	542,594	25.6	847,757	0.640	39.4	1552	0	0	0	0
01/28/17	565,273	25.8	847,757	0.667	39.2	1537	0	0	0	0
01/29/17	573,353	22.5	847,757	0.676	42.5	1806	0	0	0	0
01/30/17	464,178	39.3	847,757	0.548	25.7	660	0	0	0	0
01/31/17	500,459	30.8	847,757	0.590	34.2	1170	0	0	0	0
02/01/17	721,484	12.8	848,156	0.851	52.2	2725	0	0	1	0
02/02/17	763,633	11.8	848,156	0.900	53.2	2830	0	0	1	0
02/03/17	669,512	18.3	848,156	0.789	46.7	2181	0	0	1	0
02/04/17	539,682	29.4	848,156	0.636	35.6	1267	0	0	1	0
02/05/17	585,082	21.7	848,156	0.690	43.3	1875	0	0	1	0
02/06/17	517,520	30.1	848,156	0.610	34.9	1218	0	0	1	0
02/07/17	709,623	15.3	848,156	0.837	49.7	2470	0	0	1	0
02/08/17	800,394	7.8	848,156	0.944	57.2	3272	0	0	1	0
02/09/17	666,781	18.3	848,156	0.786	46.7	2181	0	0	1	0
02/10/17	388,428	39.8	848,156	0.458	25.2	635	0	0	1	0
02/11/17	383,661	38.1	848,156	0.452	26.9	724	0	0	1	0
02/12/17	459,626	33.1	848,156	0.542	31.9	1018	0	0	1	0
02/13/17	391,508	38.6	848,156	0.462	26.4	697	0	0	1	0
02/14/17	470,763	31.3	848,156	0.555	33.7	1136	0	0	1	0
02/15/17	467,021	29.8	848,156	0.551	35.2	1239	0	0	1	0
02/16/17	408,128	34.6	848,156	0.481	30.4	924	0	0	1	0
02/17/17	261,625	47.3	848,156	0.308	17.7	313	0	0	1	0
02/18/17	276,214	45.1	848,156	0.326	19.9	396	0	0	1	0
02/19/17	227,708	51.6	848,156	0.268	13.4	180	0	0	1	0
02/20/17	299,232	45.5	848,156	0.353	19.5	380	0	0	1	0
02/21/17	250,226	48.5	848,156	0.295	16.5	272	0	0	1	0
02/22/17	301,454	43.5	848,156	0.355	21.5	462	0	0	1	0
02/23/17	480,627	30.7	848,156	0.567	34.3	1176	0	0	1	0
02/24/17	613,891	21.8	848,156	0.724	43.2	1866	0	0	1	0
02/25/17	527,019	26.7	848,156	0.621	38.3	1467	0	0	1	0
02/26/17	475,227	30.2	848,156	0.560	34.8	1211	0	0	1	0
02/27/17	391,714	38.6	848,156	0.462	26.4	697	0	0	1	0
02/28/17	415,565	35.7	848,156	0.490	29.3	858	0	0	1	0
03/01/17	528,905	26.7	848,186	0.624	38.3	1467	0	0	0	1
03/02/17	579,630	21.5	848,186	0.683	43.5	1892	0	0	0	1
03/03/17	532,781	26.0	848,186	0.628	39.0	1521	0	0	0	1
03/04/17	400,293	37.4	848,186	0.472	27.6	762	0	0	0	1
03/05/17	231,790	51.9	848,186	0.273	13.1	172	0	0	0	1
03/06/17	289,177	46.9	848,186	0.341	18.1	328	0	0	0	1
03/07/17	453,048	37.4	848,186	0.534	27.6	762	0	0	0	1
03/08/17	510,527	28.2	848,186	0.602	36.8	1354	0	0	0	1
03/09/17	621,781	20.0	848,186	0.733	45.0	2025	0	0	0	1
03/10/17	698,863	12.6	848,186	0.824	52.4	2746	0	0	0	1
03/11/17	645,225	16.0	848,186	0.761	49.0	2401	0	0	0	1
03/12/17	677,887	18.6	848,186	0.799	46.4	2153	0	0	0	1
03/13/17	620,723	18.4	848,186	0.732	46.6	2172	0	0	0	1
03/14/17	588,964	20.1	848,186	0.694	44.9	2016	0	0	0	1
03/15/17	516,813	24.5	848,186	0.609	40.5	1640	0	0	0	1
03/16/17	434,102	34.7	848,186	0.512	30.3	918	0	0	0	1
03/17/17	440,230	36.2	848,186	0.519	28.8	829	0	0	0	1
03/18/17	404,495	34.1	848,186	0.477	30.9	955	0	0	0	1
03/19/17	325,915	44.3	848,186	0.384	20.7	428	0	0	0	1
03/20/17	314,100	43.7	848,186	0.370	21.3	454	0	0	0	1

<u>Date</u>	<u>Firm Throughput</u>	<u>Temperature</u>	<u>Firm Customer</u>	<u>UPC</u>	<u>HDD</u>	<u>HDDs^2</u>	<u>Nov</u>	<u>Dec</u>	<u>Feb</u>	<u>Mar</u>
03/21/17	460,981	28.7	848,186	0.543	36.3	1318	0	0	0	1
03/22/17	422,350	35.8	848,186	0.498	29.2	853	0	0	0	1
03/23/17	398,493	38.7	848,186	0.470	26.3	692	0	0	0	1
03/24/17	363,408	40.1	848,186	0.428	24.9	620	0	0	0	1
03/25/17	363,149	39.3	848,186	0.428	25.7	660	0	0	0	1
03/26/17	354,274	39.9	848,186	0.418	25.1	630	0	0	0	1
03/27/17	245,869	46.4	848,186	0.290	18.6	346	0	0	0	1
03/28/17	204,341	52.4	848,186	0.241	12.6	159	0	0	0	1
03/29/17	291,204	44.6	848,186	0.343	20.4	416	0	0	0	1
03/30/17	324,258	42.1	848,186	0.382	22.9	524	0	0	0	1
03/31/17	256,847	45.9	848,186	0.303	19.1	365	0	0	0	1



Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
11/01/11	1,030	496	2,227	8,350	1,526	3,753	49.1	15.9	253
11/02/11	1,324	585	2,749	9,601	1,909	4,658	42.0	23.0	529
11/03/11	1,387	604	2,898	9,570	1,991	4,889	40.2	24.8	615
11/04/11	1,150	536	2,508	7,732	1,686	4,194	45.1	19.9	396
11/05/11	930	481	2,142	6,068	1,411	3,553	50.4	14.6	213
11/06/11	1,171	569	2,446	7,394	1,740	4,186	45.3	19.7	388
11/07/11	1,349	590	2,784	9,529	1,939	4,723	41.5	23.5	552
11/08/11	1,380	591	2,830	9,643	1,971	4,801	41.6	23.4	548
11/09/11	1,479	627	2,966	10,101	2,106	5,072	39.8	25.2	635
11/10/11	1,711	686	3,463	11,153	2,397	5,860	34.8	30.2	912
11/11/11	1,302	594	2,840	9,077	1,896	4,736	41.3	23.7	562
11/12/11	929	457	2,118	6,295	1,386	3,504	51.8	13.2	174
11/13/11	1,312	599	2,789	8,393	1,911	4,700	42.4	22.6	511
11/14/11	1,355	641	2,960	9,920	1,996	4,956	41.8	23.2	538
11/15/11	1,612	711	3,443	11,291	2,323	5,766	36.1	28.9	835
11/16/11	2,077	822	4,350	13,626	2,899	7,249	26.3	38.7	1498
11/17/11	1,944	794	4,238	12,541	2,738	6,976	31.8	33.2	1102
11/18/11	1,512	610	3,221	9,622	2,122	5,343	39.9	25.1	630
11/19/11	2,031	819	4,157	11,431	2,850	7,007	24.6	40.4	1632
11/20/11	2,174	848	4,687	13,116	3,022	7,709	22.1	42.9	1840
11/21/11	1,944	691	4,197	12,595	2,635	6,832	33.8	31.2	973
11/22/11	1,758	663	3,815	11,808	2,421	6,236	36.8	28.2	795
11/23/11	1,314	590	2,936	8,619	1,904	4,840	43.3	21.7	471
11/24/11	917	471	2,174	5,607	1,388	3,562	51.8	13.2	174
11/25/11	978	459	2,286	6,486	1,437	3,723	49.4	15.6	243
11/26/11	1,469	680	3,157	8,402	2,149	5,306	37.9	27.1	734
11/27/11	1,865	803	3,995	11,355	2,668	6,663	30.7	34.3	1176
11/28/11	1,904	772	4,109	12,440	2,676	6,785	32.8	32.2	1037
11/29/11	1,970	808	4,343	13,417	2,778	7,121	30.3	34.7	1204
11/30/11	1,856	774	4,092	12,558	2,630	6,722	34.4	30.6	936
12/01/11	2,375	888	5,044	14,842	3,263	8,307	22.6	42.4	1798
12/02/11	2,107	788	4,389	12,587	2,895	7,284	30.8	34.2	1170
12/03/11	1,924	757	4,109	11,280	2,681	6,790	29.2	35.8	1282
12/04/11	2,295	859	4,861	13,402	3,154	8,015	22.9	42.1	1772
12/05/11	2,781	968	5,647	16,628	3,749	9,396	17.8	47.2	2228
12/06/11	2,921	1,058	6,142	17,537	3,979	10,121	14.7	50.3	2530
12/07/11	2,458	871	5,327	15,419	3,329	8,656	24.4	40.6	1648
12/08/11	2,821	1,027	6,009	16,732	3,848	9,857	15.1	49.9	2490
12/09/11	2,947	1,092	6,253	16,915	4,039	10,292	11.1	53.9	2905
12/10/11	2,344	902	4,995	13,092	3,246	8,241	23.9	41.1	1689
12/11/11	1,917	697	4,122	11,238	2,614	6,736	37.3	27.7	767
12/12/11	1,752	672	3,785	11,940	2,424	6,209	37.1	27.9	778
12/13/11	1,811	684	3,874	12,085	2,495	6,369	36.4	28.6	818
12/14/11	1,858	698	3,900	12,642	2,556	6,456	35.9	29.1	847
12/15/11	2,479	922	5,010	14,867	3,401	8,411	24.0	41.0	1681
12/16/11	2,377	913	5,001	13,656	3,290	8,291	23.4	41.6	1731
12/17/11	2,031	847	4,341	11,599	2,878	7,219	28.0	37.0	1369
12/18/11	1,710	661	3,769	10,426	2,371	6,140	39.3	25.7	660
12/19/11	2,340	856	4,955	14,398	3,196	8,151	27.4	37.6	1414
12/20/11	2,371	874	5,067	14,800	3,245	8,312	25.2	39.8	1584
12/21/11	2,338	854	4,948	14,565	3,192	8,140	27.7	37.3	1391
12/22/11	2,420	918	5,125	14,641	3,338	8,463	23.7	41.3	1706
12/23/11	2,166	848	4,552	12,882	3,014	7,566	26.4	38.6	1490
12/24/11	1,595	639	3,483	9,154	2,234	5,717	36.8	28.2	795
12/25/11	1,648	690	3,442	9,233	2,338	5,780	34.0	31.0	961
12/26/11	1,595	649	3,651	10,168	2,244	5,895	41.7	23.3	543
12/27/11	2,130	843	4,612	13,971	2,973	7,585	26.8	38.2	1459
12/28/11	1,829	769	4,133	12,463	2,598	6,731	34.3	30.7	942
12/29/11	1,936	753	4,110	12,484	2,689	6,799	31.0	34.0	1156
12/30/11	1,888	752	4,014	11,850	2,640	6,654	31.3	33.7	1136
12/31/11	1,674	710	3,623	9,683	2,384	6,007	34.8	30.2	912
01/01/12	2,355	954	4,979	12,831	3,309	8,288	21.5	43.5	1892
01/02/12	2,786	1,093	5,933	15,840	3,879	9,812	14.5	50.5	2550
01/03/12	2,547	870	5,422	15,120	3,417	8,839	25.8	39.2	1537
01/04/12	2,140	758	4,570	13,605	2,898	7,468	30.8	34.2	1170
01/05/12	1,691	584	3,743	11,368	2,275	6,018	41.1	23.9	571
01/06/12	1,730	706	3,593	10,479	2,436	6,029	37.1	27.9	778
01/07/12	1,906	784	3,948	10,459	2,690	6,638	29.0	36.0	1296
01/08/12	1,830	688	3,883	10,521	2,518	6,401	35.8	29.2	853
01/09/12	1,763	622	3,724	11,485	2,385	6,109	37.8	27.2	740
01/10/12	1,588	517	3,448	10,903	2,105	5,553	40.8	24.2	586
01/11/12	2,693	909	5,605	16,042	3,602	9,207	18.4	46.6	2172

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
01/12/12	3,217	1,063	6,701	18,261	4,280	10,981	12.5	52.5	2756
01/13/12	3,094	1,137	6,379	17,141	4,231	10,610	9.7	55.3	3058
01/14/12	2,502	955	5,244	13,491	3,457	8,701	18.9	46.1	2125
01/15/12	2,047	745	4,330	11,603	2,792	7,122	32.1	32.9	1082
01/16/12	2,629	916	5,465	15,755	3,545	9,010	21.9	43.1	1858
01/17/12	3,344	1,135	6,790	19,004	4,479	11,269	8.5	56.5	3192
01/18/12	3,497	1,204	7,135	19,669	4,701	11,836	6.5	58.5	3422
01/19/12	3,743	1,289	7,843	20,698	5,032	12,875	0.8	64.2	4122
01/20/12	3,299	1,228	6,957	18,360	4,527	11,484	5.4	59.6	3552
01/21/12	2,793	1,081	5,863	14,639	3,874	9,737	18.4	46.6	2172
01/22/12	2,511	914	5,245	14,007	3,425	8,670	24.0	41.0	1681
01/23/12	2,761	973	5,851	15,877	3,734	9,585	20.4	44.6	1989
01/24/12	2,585	947	5,567	15,823	3,532	9,099	22.2	42.8	1832
01/25/12	2,244	798	4,832	14,105	3,042	7,874	29.3	35.7	1274
01/26/12	2,144	801	4,499	13,646	2,945	7,444	29.3	35.7	1274
01/27/12	2,304	869	4,766	13,566	3,173	7,939	26.8	38.2	1459
01/28/12	2,271	959	4,879	12,770	3,230	8,109	21.5	43.5	1892
01/29/12	2,441	1,002	5,327	14,065	3,443	8,770	19.8	45.2	2043
01/30/12	1,895	717	4,158	12,182	2,612	6,770	35.1	29.9	894
01/31/12	1,858	714	4,080	12,296	2,572	6,652	33.6	31.4	986
02/01/12	1,924	737	4,185	12,497	2,661	6,846	30.8	34.2	1170
02/02/12	1,947	776	4,118	12,371	2,723	6,841	32.1	32.9	1082
02/03/12	2,019	838	4,262	12,148	2,857	7,119	28.8	36.2	1310
02/04/12	1,844	837	3,919	10,891	2,681	6,600	29.4	35.6	1267
02/05/12	2,076	850	4,431	11,995	2,926	7,357	28.3	36.7	1347
02/06/12	1,901	740	4,228	12,217	2,641	6,869	34.3	30.7	942
02/07/12	2,580	960	5,572	15,658	3,540	9,112	19.8	45.2	2043
02/08/12	2,478	909	5,423	15,116	3,387	8,810	24.0	41.0	1681
02/09/12	2,378	842	4,981	14,237	3,220	8,201	26.5	38.5	1482
02/10/12	3,128	1,186	6,589	17,752	4,314	10,903	8.1	56.9	3238
02/11/12	2,793	1,083	6,000	15,656	3,876	9,876	12.6	52.4	2746
02/12/12	2,408	954	5,287	13,812	3,362	8,649	23.0	42.0	1764
02/13/12	2,364	856	5,125	14,771	3,220	8,345	26.6	38.4	1475
02/14/12	2,208	797	4,739	14,291	3,005	7,744	29.0	36.0	1296
02/15/12	2,001	758	4,391	13,647	2,759	7,150	31.9	33.1	1096
02/16/12	1,998	750	4,269	13,157	2,748	7,017	32.4	32.6	1063
02/17/12	1,995	785	4,257	12,389	2,780	7,037	29.9	35.1	1232
02/18/12	1,936	798	4,083	11,231	2,734	6,817	28.0	37.0	1369
02/19/12	1,802	705	3,809	10,976	2,507	6,316	34.2	30.8	949
02/20/12	1,931	711	4,049	12,642	2,642	6,691	35.6	29.4	864
02/21/12	2,185	790	4,534	13,964	2,975	7,509	29.5	35.5	1260
02/22/12	2,041	805	4,301	13,452	2,846	7,147	30.7	34.3	1176
02/23/12	1,987	770	4,188	12,998	2,757	6,945	32.0	33.0	1089
02/24/12	2,524	982	5,311	14,893	3,506	8,817	18.8	46.2	2134
02/25/12	2,087	840	4,646	12,252	2,927	7,573	25.5	39.5	1560
02/26/12	2,177	825	4,675	12,983	3,002	7,677	29.0	36.0	1296
02/27/12	2,252	836	4,921	14,487	3,088	8,009	27.2	37.8	1429
02/28/12	2,201	751	4,694	14,009	2,952	7,646	32.1	32.9	1082
02/29/12	2,045	744	4,469	13,648	2,789	7,258	32.0	33.0	1089
03/01/12	1,916	764	4,048	12,767	2,680	6,728	32.4	32.6	1063
03/02/12	2,017	847	4,325	12,756	2,864	7,189	26.7	38.3	1467
03/03/12	2,316	980	4,963	13,836	3,296	8,259	17.6	47.4	2247
03/04/12	2,274	923	5,106	13,735	3,197	8,303	21.6	43.4	1884
03/05/12	2,143	810	4,693	13,805	2,953	7,646	31.0	34.0	1156
03/06/12	1,266	563	2,911	9,365	1,829	4,740	51.7	13.3	177
03/07/12	1,984	787	4,332	13,207	2,771	7,103	30.5	34.5	1190
03/08/12	2,216	909	4,970	14,414	3,125	8,095	26.5	38.5	1482
03/09/12	1,885	742	4,079	11,860	2,627	6,706	34.6	30.4	924
03/10/12	949	455	2,175	6,403	1,404	3,579	55.6	9.4	88
03/11/12	953	441	2,240	6,875	1,394	3,634	54.5	10.5	110
03/12/12	1,260	509	2,874	9,345	1,769	4,643	45.0	20.0	400
03/13/12	939	455	2,223	7,843	1,394	3,617	55.5	9.5	90
03/14/12	823	474	1,987	7,341	1,297	3,284	58.4	6.6	44
03/15/12	915	524	2,021	7,744	1,439	3,460	53.5	11.5	132
03/16/12	563	437	1,325	5,484	1,000	2,325	67.1	0.0	0
03/17/12	418	401	1,083	4,002	819	1,902	70.5	0.0	0
03/18/12	472	421	1,286	4,650	893	2,179	70.2	0.0	0
03/19/12	599	481	1,443	5,980	1,080	2,523	65.8	0.0	0
03/20/12	643	420	1,596	6,346	1,063	2,659	60.1	4.9	24
03/21/12	651	473	1,601	6,314	1,124	2,725	60.0	5.0	25
03/22/12	617	549	1,458	6,276	1,166	2,624	61.9	3.1	10
03/23/12	567	401	1,305	5,158	968	2,273	62.2	2.8	8

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
03/24/12	610	522	1,431	4,525	1,132	2,563	54.9	10.1	102
03/25/12	900	430	2,067	6,229	1,330	3,397	47.6	17.4	303
03/26/12	1,440	431	3,102	10,003	1,871	4,973	42.1	22.9	524
03/27/12	984	363	2,231	7,770	1,347	3,578	53.5	11.5	132
03/28/12	1,136	489	2,542	8,581	1,625	4,167	46.3	18.7	350
03/29/12	970	487	2,204	7,857	1,457	3,661	49.3	15.7	246
03/30/12	1,003	552	2,262	7,434	1,555	3,817	44.2	20.8	433
03/31/12	852	557	2,027	6,072	1,409	3,436	47.5	17.5	306
11/01/12	1,594	704	3,263	10,775	2,298	5,561	35.9	29.1	847
11/02/12	1,500	686	3,227	9,715	2,186	5,413	37.5	27.5	756
11/03/12	1,383	671	3,058	8,495	2,054	5,112	37.5	27.5	756
11/04/12	1,366	597	2,923	8,621	1,963	4,886	41.4	23.6	557
11/05/12	1,479	664	3,147	10,226	2,143	5,290	41.3	23.7	562
11/06/12	1,541	655	3,230	10,453	2,196	5,426	39.8	25.2	635
11/07/12	1,503	673	3,184	10,357	2,176	5,360	39.9	25.1	630
11/08/12	1,344	633	2,772	9,520	1,977	4,749	43.3	21.7	471
11/09/12	1,196	493	2,480	7,934	1,689	4,169	47.3	17.7	313
11/10/12	906	455	1,959	5,991	1,361	3,320	53.8	11.2	125
11/11/12	1,981	833	4,101	11,528	2,814	6,915	24.9	40.1	1608
11/12/12	2,356	936	5,109	14,869	3,292	8,401	22.4	42.6	1815
11/13/12	1,756	632	3,782	11,880	2,388	6,170	36.9	28.1	790
11/14/12	1,388	524	2,986	9,864	1,912	4,898	43.6	21.4	458
11/15/12	1,699	681	3,370	11,252	2,380	5,750	35.9	29.1	847
11/16/12	1,592	616	3,218	9,946	2,208	5,426	36.8	28.2	795
11/17/12	1,083	472	2,394	6,699	1,555	3,949	49.0	16.0	256
11/18/12	1,060	463	2,321	6,994	1,523	3,844	50.4	14.6	213
11/19/12	1,245	528	2,625	8,845	1,773	4,398	46.3	18.7	350
11/20/12	1,399	519	2,748	9,118	1,918	4,666	45.0	20.0	400
11/21/12	931	351	1,793	5,964	1,282	3,075	56.5	8.5	72
11/22/12	1,661	616	3,148	8,727	2,277	5,425	31.7	33.3	1109
11/23/12	2,386	829	4,792	12,880	3,215	8,007	18.5	46.5	2162
11/24/12	2,099	811	4,257	11,245	2,910	7,167	17.7	37.7	1421
11/25/12	2,323	894	4,697	12,986	3,217	7,914	23.1	41.9	1756
11/26/12	2,693	1,004	5,685	15,734	3,697	9,382	18.1	46.9	2200
11/27/12	2,269	817	4,805	13,891	3,086	7,891	29.3	35.7	1274
11/28/12	2,125	766	4,352	13,123	2,891	7,243	30.7	34.3	1176
11/29/12	1,959	713	3,966	12,198	2,672	6,638	34.5	30.5	930
11/30/12	1,864	672	3,687	11,087	2,536	6,223	35.3	29.7	882
12/01/12	1,520	548	3,086	8,927	2,068	5,154	39.3	25.7	660
12/02/12	1,583	599	3,292	9,380	2,182	5,474	40.9	24.1	581
12/03/12	1,480	584	3,285	10,419	2,064	5,349	44.3	20.7	428
12/04/12	2,207	845	4,709	14,016	3,052	7,761	25.3	39.7	1576
12/05/12	1,967	684	4,161	12,297	2,651	6,812	37.8	27.2	740
12/06/12	1,914	583	3,886	12,105	2,497	6,383	33.4	31.6	999
12/07/12	2,089	742	4,281	12,349	2,831	7,112	28.0	37.0	1369
12/08/12	1,860	673	3,857	10,543	2,533	6,390	30.8	34.2	1170
12/09/12	2,280	812	4,809	12,916	3,092	7,901	22.9	42.1	1772
12/10/12	2,981	1,085	6,357	17,455	4,066	10,423	9.3	55.7	3102
12/11/12	2,803	1,001	6,073	16,883	3,804	9,877	17.0	48.0	2304
12/12/12	2,090	752	4,403	13,461	2,842	7,245	37.4	27.6	762
12/13/12	2,304	858	4,637	13,941	3,162	7,799	27.5	37.5	1406
12/14/12	1,971	727	4,013	11,482	2,698	6,711	33.5	31.5	992
12/15/12	1,841	726	3,712	10,327	2,567	6,279	34.7	30.3	918
12/16/12	2,418	986	4,929	13,599	3,404	8,333	21.7	43.3	1875
12/17/12	2,502	898	5,264	14,902	3,400	8,664	23.8	41.2	1697
12/18/12	2,373	808	4,887	14,045	3,181	8,068	27.8	37.2	1384
12/19/12	2,299	820	4,805	13,679	3,119	7,924	27.0	38.0	1444
12/20/12	2,958	1,038	5,988	16,570	3,996	9,984	16.8	48.2	2323
12/21/12	2,848	1,024	5,898	15,854	3,872	9,770	13.7	51.3	2632
12/22/12	2,433	924	5,123	13,372	3,357	8,480	19.1	45.9	2107
12/23/12	2,619	923	5,444	14,111	3,542	8,986	16.4	48.6	2362
12/24/12	2,859	996	6,037	15,204	3,855	9,892	9.0	56.0	3136
12/25/12	3,051	1,086	6,484	16,077	4,137	10,621	7.2	57.8	3341
12/26/12	3,152	1,070	6,664	17,645	4,222	10,886	12.5	52.5	2756
12/27/12	2,860	970	6,139	16,505	3,830	9,969	18.8	46.2	2134
12/28/12	2,577	941	5,613	14,985	3,518	9,131	19.4	45.6	2079
12/29/12	2,809	1,129	6,021	15,623	3,938	9,959	8.6	56.4	3181
12/30/12	2,710	977	5,713	14,745	3,687	9,400	16.9	48.1	2314
12/31/12	3,142	1,075	6,810	16,946	4,217	11,027	4.0	61.0	3721
01/01/13	3,044	965	6,287	15,929	4,009	10,296	13.7	51.3	2632
01/02/13	2,917	1,011	6,223	16,912	3,928	10,151	16.8	48.2	2323
01/03/13	3,052	1,063	6,335	17,102	4,115	10,450	15.3	49.7	2470

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
01/04/13	2,542	922	5,435	14,515	3,464	8,899	20.3	44.7	1998
01/05/13	2,467	969	5,355	13,704	3,436	8,791	18.3	46.7	2181
01/06/13	2,527	955	5,426	14,179	3,482	8,908	21.5	43.5	1892
01/07/13	2,324	841	5,024	14,242	3,165	8,189	27.2	37.8	1429
01/08/13	2,205	748	4,761	13,763	2,953	7,714	31.3	33.7	1136
01/09/13	2,232	783	4,645	13,603	3,015	7,660	29.5	35.5	1260
01/10/13	2,046	727	4,112	12,394	2,773	6,885	35.5	29.5	870
01/11/13	2,000	729	4,028	11,728	2,729	6,757	32.4	32.6	1063
01/12/13	2,985	1,137	6,062	15,744	4,122	10,184	7.4	57.6	3318
01/13/13	3,372	1,238	6,940	17,639	4,610	11,550	6.0	59.0	3481
01/14/13	3,357	1,174	7,027	18,362	4,531	11,558	11.7	53.3	2841
01/15/13	2,711	915	5,565	15,399	3,626	9,191	26.3	38.7	1498
01/16/13	2,886	995	5,834	16,538	3,881	9,715	19.8	45.2	2043
01/17/13	2,968	965	6,106	16,702	3,933	10,039	17.4	47.6	2266
01/18/13	2,030	740	4,315	12,193	2,770	7,085	33.7	31.3	980
01/19/13	2,845	1,142	5,939	15,645	3,987	9,926	12.8	52.2	2725
01/20/13	3,655	1,318	7,637	19,474	4,973	12,610	(0.1)	65.1	4238
01/21/13	4,314	1,466	8,986	23,355	5,780	14,766	(6.9)	71.9	5170
01/22/13	3,894	1,334	8,211	21,298	5,228	13,439	3.0	62.0	3844
01/23/13	3,901	1,352	8,168	21,176	5,253	13,421	1.9	63.1	3982
01/24/13	3,676	1,296	7,582	19,804	4,972	12,554	10.1	54.9	3014
01/25/13	3,384	1,233	6,958	17,771	4,617	11,575	10.2	54.8	3003
01/26/13	2,642	990	5,707	13,953	3,632	9,339	22.2	42.8	1832
01/27/13	2,257	803	4,826	12,394	3,060	7,886	31.2	33.8	1142
01/28/13	2,169	807	4,586	13,198	2,976	7,562	31.0	34.0	1156
01/29/13	2,424	908	5,015	14,386	3,332	8,347	27.1	37.9	1436
01/30/13	3,422	1,214	6,906	18,707	4,636	11,542	9.1	55.9	3125
01/31/13	4,153	1,521	8,427	22,340	5,674	14,101	(5.9)	70.9	5027
02/01/13	3,722	1,390	7,673	20,179	5,112	12,785	0.3	64.7	4186
02/02/13	3,072	1,194	6,536	17,159	4,266	10,802	7.2	57.8	3341
02/03/13	3,112	1,205	6,605	16,850	4,317	10,922	9.7	55.3	3058
02/04/13	3,015	1,086	6,480	17,389	4,101	10,581	15.3	49.7	2470
02/05/13	2,904	1,058	6,088	16,875	3,962	10,050	15.3	49.7	2470
02/06/13	2,772	974	5,724	15,828	3,746	9,470	21.1	43.9	1927
02/07/13	2,658	942	5,340	15,601	3,600	8,940	22.0	43.0	1849
02/08/13	2,496	871	5,024	14,008	3,367	8,391	21.3	43.7	1910
02/09/13	2,163	815	4,551	11,993	2,978	7,529	26.0	39.0	1521
02/10/13	2,274	834	4,800	12,742	3,108	7,908	30.8	34.2	1170
02/11/13	2,764	1,018	5,758	16,006	3,782	9,540	21.8	43.2	1866
02/12/13	2,436	886	5,160	14,619	3,322	8,482	26.5	38.5	1482
02/13/13	2,157	795	4,540	13,348	2,952	7,492	32.5	32.5	1056
02/14/13	2,763	1,050	5,553	16,136	3,813	9,366	19.2	45.8	2098
02/15/13	3,095	1,096	6,345	17,180	4,191	10,536	9.9	55.1	3036
02/16/13	2,735	1,075	5,840	15,224	3,810	9,650	12.5	52.5	2756
02/17/13	2,346	883	4,925	13,267	3,229	8,154	27.9	37.1	1376
02/18/13	3,166	1,104	6,540	18,095	4,270	10,810	14.9	50.1	2510
02/19/13	3,812	1,283	7,800	21,005	5,095	12,895	2.8	62.2	3869
02/20/13	3,284	1,136	6,900	18,754	4,420	11,320	12.0	53.0	2809
02/21/13	2,847	978	5,869	16,670	3,825	9,694	20.6	44.4	1971
02/22/13	2,453	828	5,124	14,416	3,281	8,405	24.0	41.0	1681
02/23/13	2,240	840	4,862	13,057	3,080	7,942	21.6	43.4	1884
02/24/13	2,122	727	4,584	12,540	2,849	7,433	28.3	36.7	1347
02/25/13	2,267	798	4,904	14,256	3,065	7,969	27.5	37.5	1406
02/26/13	2,157	806	4,616	13,819	2,963	7,579	32.3	32.7	1069
02/27/13	2,108	763	4,487	13,529	2,871	7,358	32.2	32.8	1076
02/28/13	2,386	906	4,900	14,806	3,292	8,192	26.9	38.1	1452
03/01/13	2,402	937	5,073	14,507	3,339	8,412	22.0	43.0	1849
03/02/13	2,057	877	4,541	12,451	2,934	7,475	23.6	41.4	1714
03/03/13	2,137	850	4,620	12,720	2,987	7,607	28.2	36.8	1354
03/04/13	2,491	879	5,381	15,326	3,370	8,751	25.5	39.5	1560
03/05/13	2,388	905	5,202	15,454	3,293	8,495	25.4	39.6	1568
03/06/13	2,559	931	5,555	15,930	3,490	9,045	20.0	45.0	2025
03/07/13	2,405	865	4,952	14,814	3,270	8,222	24.7	40.3	1624
03/08/13	1,921	715	3,962	11,639	2,636	6,598	35.0	30.0	900
03/09/13	1,710	670	3,618	10,126	2,380	5,998	36.1	28.9	835
03/10/13	2,143	829	4,550	12,401	2,972	7,522	31.7	33.3	1109
03/11/13	2,416	957	5,216	15,080	3,373	8,589	26.6	38.4	1475
03/12/13	2,582	991	5,511	15,742	3,573	9,084	23.2	41.8	1747
03/13/13	2,323	930	4,955	14,574	3,253	8,208	26.8	38.2	1459
03/14/13	1,928	810	3,976	12,879	2,738	6,714	33.8	31.2	973
03/15/13	2,156	907	4,567	13,179	3,063	7,630	28.1	36.9	1362
03/16/13	2,345	1,003	5,103	13,520	3,348	8,451	18.0	47.0	2209

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
03/17/13	2,298	933	4,993	13,163	3,231	8,224	25.8	39.2	1537
03/18/13	2,963	1,086	6,420	17,787	4,049	10,469	15.3	49.7	2470
03/19/13	3,041	954	6,515	18,156	3,995	10,510	13.4	51.6	2663
03/20/13	3,021	953	6,471	17,889	3,974	10,445	14.0	51.0	2601
03/21/13	2,614	974	5,665	15,841	3,588	9,253	21.0	44.0	1936
03/22/13	2,194	853	4,584	12,934	3,047	7,631	27.9	37.1	1376
03/23/13	1,804	732	3,972	10,728	2,536	6,508	32.1	32.9	1082
03/24/13	2,083	787	4,538	12,341	2,870	7,408	29.6	35.4	1253
03/25/13	2,022	651	4,448	13,431	2,673	7,121	32.2	32.8	1076
03/26/13	1,939	664	4,337	13,173	2,603	6,940	31.6	33.4	1116
03/27/13	1,806	677	4,015	12,193	2,483	6,498	34.3	30.7	942
03/28/13	1,582	636	3,497	10,896	2,218	5,715	37.1	27.9	778
03/29/13	1,344	444	2,918	8,903	1,788	4,706	42.8	22.2	493
03/30/13	1,223	539	2,819	8,076	1,762	4,581	42.6	22.4	502
03/31/13	1,872	752	4,006	11,392	2,624	6,630	29.8	35.2	1239
11/01/13	1,350	532	2,833	8,577	1,882	4,715	42.3	22.7	515
11/02/13	1,278	515	2,833	7,959	1,793	4,626	42.3	22.7	515
11/03/13	1,134	450	2,507	7,687	1,584	4,091	49.2	15.8	250
11/04/13	1,536	573	3,164	10,369	2,109	5,273	39.9	25.1	630
11/05/13	1,795	621	3,529	11,536	2,416	5,945	36.6	28.4	807
11/06/13	1,898	713	3,818	11,799	2,611	6,429	32.9	32.1	1030
11/07/13	1,992	760	4,085	12,564	2,752	6,837	29.7	35.3	1246
11/08/13	1,628	595	3,229	9,708	2,223	5,452	42.8	22.2	493
11/09/13	1,497	658	3,242	9,026	2,155	5,397	38.6	26.4	697
11/10/13	1,664	713	3,517	10,073	2,377	5,894	35.8	29.2	853
11/11/13	2,596	904	5,351	15,153	3,500	8,851	19.0	46.0	2116
11/12/13	2,401	858	5,001	14,612	3,259	8,260	24.8	40.2	1616
11/13/13	1,700	596	3,611	10,909	2,296	5,907	42.1	22.9	524
11/14/13	1,570	611	3,742	10,693	2,181	5,923	40.3	24.7	610
11/15/13	1,240	526	2,808	8,469	1,766	4,574	47.0	18.0	324
11/16/13	1,203	542	2,662	7,812	1,745	4,407	45.3	19.7	388
11/17/13	1,704	675	3,751	10,388	2,379	6,130	36.0	29.0	841
11/18/13	2,189	810	4,533	13,295	2,999	7,532	28.9	36.1	1303
11/19/13	1,716	589	3,592	11,017	2,305	5,897	43.2	21.8	475
11/20/13	1,710	552	3,692	11,068	2,262	5,954	38.8	26.2	686
11/21/13	2,359	815	4,898	14,224	3,174	8,072	25.3	39.7	1576
11/22/13	2,610	962	5,204	14,343	3,572	8,776	19.3	45.7	2088
11/23/13	2,745	1,021	5,739	14,650	3,766	9,505	12.7	52.3	2735
11/24/13	2,377	797	5,056	13,169	3,174	8,230	28.3	36.7	1347
11/25/13	2,252	803	4,770	13,473	3,055	7,825	31.8	33.2	1102
11/26/13	2,971	1,082	6,177	16,665	4,053	10,230	16.5	48.5	2352
11/27/13	2,561	901	5,304	14,011	3,462	8,766	22.4	42.6	1815
11/28/13	2,428	775	5,096	12,795	3,203	8,299	20.2	44.8	2007
11/29/13	2,263	686	4,697	12,474	2,949	7,646	28.4	36.6	1340
11/30/13	1,904	739	4,052	10,838	2,643	6,695	31.7	33.3	1109
12/01/13	2,066	745	4,394	12,491	2,811	7,205	30.5	34.5	1190
12/02/13	2,039	755	4,307	12,996	2,794	7,101	35.1	29.9	894
12/03/13	2,052	744	4,544	13,448	2,796	7,340	32.9	32.1	1030
12/04/13	2,693	972	5,751	16,302	3,665	9,416	19.6	45.4	2061
12/05/13	3,548	1,326	7,706	20,437	4,874	12,580	2.0	63.0	3969
12/06/13	3,758	1,330	7,937	20,919	5,088	13,025	(3.7)	68.7	4720
12/07/13	3,470	1,245	7,393	19,506	4,715	12,108	(0.4)	65.4	4277
12/08/13	3,298	1,181	7,040	18,508	4,479	11,519	8.3	56.7	3215
12/09/13	3,848	1,244	8,103	21,615	5,092	13,195	1.8	63.2	3994
12/10/13	3,832	1,164	7,957	21,430	4,996	12,953	3.2	61.8	3819
12/11/13	3,945	1,194	8,246	22,189	5,139	13,385	1.3	63.7	4058
12/12/13	3,181	964	6,630	18,112	4,145	10,775	16.3	48.7	2372
12/13/13	3,179	1,028	6,683	17,795	4,207	10,890	12.8	52.2	2725
12/14/13	3,123	1,154	6,625	17,643	4,277	10,902	5.8	59.2	3505
12/15/13	3,434	1,209	7,356	19,411	4,643	11,999	2.4	62.6	3919
12/16/13	3,086	911	6,531	17,953	3,997	10,528	20.2	44.8	2007
12/17/13	3,022	938	6,304	17,507	3,960	10,264	17.4	47.6	2266
12/18/13	2,550	827	5,438	15,215	3,377	8,815	27.1	37.9	1436
12/19/13	3,057	1,001	6,416	17,459	4,058	10,474	17.3	47.7	2275
12/20/13	2,839	935	5,927	15,976	3,774	9,701	18.4	46.6	2172
12/21/13	2,596	970	5,534	14,532	3,566	9,100	19.0	46.0	2116
12/22/13	3,071	1,148	6,578	17,467	4,219	10,797	9.0	56.0	3136
12/23/13	3,846	1,280	8,035	21,087	5,126	13,161	(4.4)	69.4	4816
12/24/13	3,144	972	6,779	16,892	4,116	10,895	9.3	55.7	3102
12/25/13	2,674	889	5,926	14,799	3,563	9,489	16.8	48.2	2323
12/26/13	2,695	940	5,812	15,840	3,635	9,447	21.7	43.3	1875
12/27/13	2,263	742	4,645	12,891	3,005	7,650	31.3	33.7	1136

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
12/28/13	2,324	863	4,887	13,310	3,187	8,074	24.5	40.5	1640
12/29/13	3,651	1,326	7,846	20,417	4,977	12,823	(7.0)	72.0	5184
12/30/13	3,814	1,312	8,283	21,104	5,126	13,409	(2.7)	67.7	4583
12/31/13	3,768	1,250	8,129	20,466	5,018	13,147	(5.0)	70.0	4900
01/01/14	3,715	1,259	8,001	20,672	4,974	12,975	(1.9)	66.9	4476
01/02/14	3,875	1,371	8,405	22,652	5,246	13,651	(2.7)	67.7	4583
01/03/14	3,052	1,035	6,465	17,286	4,087	10,552	22.5	42.5	1806
01/04/14	3,290	1,217	6,931	18,497	4,507	11,438	2.8	62.2	3869
01/05/14	4,063	1,456	8,944	22,750	5,519	14,463	(14.5)	79.5	6320
01/06/14	4,449	1,431	9,768	24,161	5,880	15,648	(13.8)	78.8	6209
01/07/14	4,137	1,330	8,573	22,332	5,467	14,040	(2.6)	67.6	4570
01/08/14	4,001	1,355	8,570	22,425	5,356	13,926	(1.4)	66.4	4409
01/09/14	3,257	1,062	6,841	18,584	4,319	11,160	17.4	47.6	2266
01/10/14	2,483	824	5,209	14,702	3,307	8,516	28.3	36.7	1347
01/11/14	2,236	796	4,874	13,325	3,032	7,906	27.3	37.7	1421
01/12/14	2,062	684	4,571	12,563	2,746	7,317	34.8	30.2	912
01/13/14	2,476	800	5,178	15,083	3,276	8,454	26.9	38.1	1452
01/14/14	3,189	1,046	6,702	18,450	4,235	10,937	10.8	54.2	2938
01/15/14	2,933	916	6,314	17,452	3,849	10,163	21.8	43.2	1866
01/16/14	3,436	1,191	7,228	20,136	4,627	11,855	9.0	56.0	3136
01/17/14	3,188	1,108	6,817	18,003	4,296	11,113	9.9	55.1	3036
01/18/14	2,531	924	5,506	14,594	3,455	8,961	20.3	44.7	1998
01/19/14	2,181	780	4,787	13,192	2,961	7,748	31.6	33.4	1116
01/20/14	3,628	1,289	7,766	21,327	4,917	12,683	0.9	64.1	4109
01/21/14	3,878	1,247	8,260	21,662	5,125	13,385	1.5	63.5	4032
01/22/14	4,166	1,387	8,800	23,061	5,553	14,353	(5.8)	70.8	5013
01/23/14	4,036	1,288	8,505	22,148	5,324	13,829	1.7	63.3	4007
01/24/14	2,898	960	6,174	16,884	3,858	10,032	21.9	43.1	1858
01/25/14	3,251	1,066	6,833	17,927	4,317	11,150	6.3	58.7	3446
01/26/14	3,905	1,227	8,150	20,771	5,132	13,282	(1.8)	66.8	4462
01/27/14	4,264	1,382	9,377	22,906	5,646	15,023	(11.3)	76.3	5822
01/28/14	4,070	1,321	8,894	22,307	5,391	14,285	(3.5)	68.5	4692
01/29/14	3,013	952	6,442	17,829	3,965	10,407	23.8	41.2	1697
01/30/14	3,534	1,237	7,372	20,748	4,771	12,143	3.2	61.8	3819
01/31/14	3,423	1,146	7,259	19,693	4,569	11,828	4.3	60.7	3684
02/01/14	3,133	1,111	6,742	18,199	4,244	10,986	6.2	58.8	3457
02/02/14	3,348	1,071	7,149	18,847	4,419	11,568	4.6	60.4	3648
02/03/14	3,438	1,068	7,444	19,715	4,506	11,950	7.8	57.2	3272
02/04/14	3,685	1,176	7,960	20,995	4,861	12,821	3.5	61.5	3782
02/05/14	3,975	1,267	8,587	22,763	5,242	13,829	(2.6)	67.6	4570
02/06/14	4,015	1,298	8,414	22,530	5,313	13,727	(0.8)	65.8	4330
02/07/14	3,603	1,148	7,531	19,958	4,751	12,282	5.0	60.0	3600
02/08/14	3,177	1,082	6,783	17,981	4,259	11,042	7.4	57.6	3318
02/09/14	3,742	1,277	7,840	20,509	5,019	12,859	(2.7)	67.7	4583
02/10/14	3,972	1,282	8,380	22,135	5,254	13,634	(2.0)	67.0	4489
02/11/14	3,436	1,099	7,338	19,558	4,535	11,873	11.3	53.7	2884
02/12/14	2,874	960	6,126	17,268	3,834	9,960	20.4	44.6	1989
02/13/14	3,337	1,116	7,111	19,293	4,453	11,564	10.6	54.4	2959
02/14/14	3,317	1,157	7,152	18,969	4,474	11,626	7.5	57.5	3306
02/15/14	2,880	997	6,246	16,518	3,877	10,123	14.8	50.2	2520
02/16/14	2,824	929	6,088	16,115	3,753	9,841	19.0	46.0	2116
02/17/14	2,622	859	5,718	16,462	3,481	9,199	22.9	42.1	1772
02/18/14	2,174	740	4,873	14,556	2,914	7,787	31.5	33.5	1122
02/19/14	2,067	709	4,481	13,658	2,776	7,257	34.4	30.6	936
02/20/14	2,555	863	5,336	15,905	3,418	8,754	21.8	43.2	1866
02/21/14	3,030	987	6,429	17,458	4,017	10,446	11.0	54.0	2916
02/22/14	2,884	1,019	6,394	16,625	3,903	10,297	8.6	56.4	3181
02/23/14	3,092	1,100	6,914	17,701	4,192	11,106	8.3	56.7	3215
02/24/14	3,521	1,173	7,631	20,257	4,694	12,325	5.0	60.0	3600
02/25/14	3,888	1,266	8,313	22,371	5,154	13,467	(2.4)	67.4	4543
02/26/14	3,833	1,187	8,223	22,120	5,020	13,243	(3.2)	68.2	4651
02/27/14	4,034	1,322	8,562	22,620	5,356	13,918	(5.0)	70.0	4900
02/28/14	3,576	1,196	7,541	19,492	4,772	12,313	6.5	58.5	3422
03/01/14	3,718	1,300	8,134	20,546	5,018	13,152	(6.3)	71.3	5084
03/02/14	3,739	1,229	8,262	20,983	4,968	13,230	(3.8)	68.8	4733
03/03/14	3,543	1,182	7,927	20,679	4,725	12,652	6.7	58.3	3399
03/04/14	3,038	1,032	6,891	18,611	4,070	10,961	16.0	49.0	2401
03/05/14	2,878	980	6,341	17,552	3,858	10,199	18.0	47.0	2209
03/06/14	2,618	971	5,560	15,991	3,589	9,149	24.3	40.7	1656
03/07/14	2,415	923	5,266	14,510	3,338	8,604	25.2	39.8	1584
03/08/14	2,160	827	4,818	13,186	2,987	7,805	22.9	42.1	1772
03/09/14	1,826	626	4,115	11,686	2,452	6,567	38.0	27.0	729

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
03/10/14	1,560	570	3,631	11,087	2,130	5,761	44.0	21.0	441
03/11/14	2,067	735	4,548	13,507	2,802	7,350	32.3	32.7	1069
03/12/14	2,320	826	5,263	14,810	3,146	8,409	24.8	40.2	1616
03/13/14	1,670	531	3,683	11,145	2,201	5,884	42.7	22.3	497
03/14/14	1,981	719	4,232	12,561	2,700	6,932	31.3	33.7	1136
03/15/14	2,175	837	4,773	13,286	3,012	7,785	22.5	42.5	1806
03/16/14	2,311	857	5,134	13,941	3,168	8,302	22.6	42.4	1798
03/17/14	2,205	767	4,823	13,898	2,972	7,795	31.5	33.5	1122
03/18/14	2,216	721	4,768	14,161	2,937	7,705	30.7	34.3	1176
03/19/14	2,178	755	4,693	14,327	2,933	7,626	29.8	35.2	1239
03/20/14	1,825	641	3,874	12,343	2,466	6,340	35.7	29.3	858
03/21/14	2,212	797	4,459	13,809	3,009	7,468	27.0	38.0	1444
03/22/14	2,571	909	5,438	15,208	3,480	8,918	15.1	49.9	2490
03/23/14	2,461	835	5,400	14,741	3,296	8,696	21.0	44.0	1936
03/24/14	2,640	726	5,660	16,465	3,366	9,026	21.6	43.4	1884
03/25/14	2,718	845	5,890	17,216	3,563	9,453	18.6	46.4	2153
03/26/14	2,104	682	4,310	13,172	2,786	7,096	36.9	28.1	790
03/27/14	2,112	751	4,329	13,515	2,863	7,192	32.6	32.4	1050
03/28/14	1,990	764	4,187	12,893	2,754	6,941	30.5	34.5	1190
03/29/14	1,556	644	3,345	10,076	2,200	5,545	38.4	26.6	708
03/30/14	1,152	458	2,722	8,360	1,610	4,332	50.6	14.4	207
03/31/14	1,676	635	3,572	11,376	2,311	5,883	39.3	25.7	660
11/01/14	1,381	645	2,980	9,256	2,026	5,006	36.5	28.5	812
11/02/14	1,064	525	2,339	7,652	1,589	3,928	47.9	17.1	292
11/03/14	1,230	575	2,433	8,759	1,805	4,238	47.7	17.3	299
11/04/14	1,381	625	2,738	9,927	2,006	4,744	41.9	23.1	534
11/05/14	1,570	635	3,031	10,907	2,205	5,236	36.8	28.2	795
11/06/14	1,682	737	3,179	11,407	2,419	5,598	35.8	29.2	853
11/07/14	1,532	639	2,936	9,798	2,171	5,107	40.5	24.5	600
11/08/14	1,387	671	2,822	8,862	2,058	4,880	38.5	26.5	702
11/09/14	1,721	781	3,456	10,956	2,502	5,958	32.0	33.0	1089
11/10/14	2,343	901	4,593	15,159	3,244	7,837	26.0	39.0	1521
11/11/14	2,541	901	5,064	16,038	3,442	8,506	20.3	44.7	1998
11/12/14	2,609	946	5,178	16,210	3,555	8,733	21.0	44.0	1936
11/13/14	2,737	1,025	5,436	16,963	3,762	9,198	17.2	47.8	2285
11/14/14	2,833	1,060	5,502	16,388	3,893	9,395	13.3	51.7	2673
11/15/14	2,531	974	4,916	14,319	3,505	8,421	18.0	47.0	2209
11/16/14	2,883	1,071	5,817	16,715	3,954	9,771	10.8	54.2	2938
11/17/14	3,334	1,154	6,596	19,354	4,488	11,084	10.5	54.5	2970
11/18/14	3,095	1,077	6,155	17,908	4,172	10,327	16.5	48.5	2352
11/19/14	3,009	1,086	6,043	17,670	4,095	10,138	17.6	47.4	2247
11/20/14	3,224	1,177	6,289	18,765	4,401	10,690	10.6	54.4	2959
11/21/14	2,427	900	4,789	13,790	3,327	8,116	30.3	34.7	1204
11/22/14	1,732	644	3,308	9,915	2,376	5,684	40.0	25.0	625
11/23/14	1,818	709	3,728	11,366	2,527	6,255	35.6	29.4	864
11/24/14	3,070	1,137	5,978	17,592	4,207	10,185	15.9	49.1	2411
11/25/14	2,741	1,009	5,429	16,244	3,750	9,179	22.3	42.7	1823
11/26/14	2,831	984	5,587	16,492	3,815	9,402	14.1	50.9	2591
11/27/14	2,920	1,061	5,899	16,127	3,981	9,880	7.9	57.1	3260
11/28/14	2,560	880	5,145	14,588	3,440	8,585	21.9	43.1	1858
11/29/14	2,219	793	4,406	12,745	3,012	7,418	24.8	40.2	1616
11/30/14	3,260	1,120	6,465	18,184	4,380	10,845	6.8	58.2	3387
12/01/14	3,584	1,222	7,168	20,546	4,806	11,974	6.0	59.0	3481
12/02/14	3,105	1,021	6,246	18,304	4,126	10,372	17.8	47.2	2228
12/03/14	2,981	1,048	5,921	17,515	4,029	9,950	17.8	47.2	2228
12/04/14	2,466	845	4,840	15,056	3,311	8,151	29.0	36.0	1296
12/05/14	2,358	795	4,568	13,997	3,153	7,721	26.8	38.2	1459
12/06/14	2,209	803	4,353	12,734	3,012	7,365	26.3	38.7	1498
12/07/14	2,113	712	4,203	12,457	2,825	7,028	33.6	31.4	986
12/08/14	2,713	929	5,223	16,030	3,642	8,865	23.2	41.8	1747
12/09/14	2,766	978	5,481	16,328	3,744	9,225	21.3	43.7	1910
12/10/14	2,484	866	4,914	15,121	3,350	8,264	26.9	38.1	1452
12/11/14	2,243	819	4,362	14,026	3,062	7,424	31.1	33.9	1149
12/12/14	1,928	654	3,702	11,685	2,582	6,284	35.9	29.1	847
12/13/14	1,378	466	2,612	8,160	1,844	4,456	45.8	19.2	369
12/14/14	1,283	519	2,574	8,384	1,802	4,376	48.3	16.7	279
12/15/14	2,020	689	4,005	12,830	2,709	6,714	33.9	31.1	967
12/16/14	2,913	957	5,934	17,198	3,870	9,804	16.4	48.6	2362
12/17/14	2,971	1,004	6,073	17,429	3,975	10,048	15.5	49.5	2450
12/18/14	2,740	930	5,601	16,368	3,670	9,271	20.5	44.5	1980
12/19/14	2,353	821	4,645	13,862	3,174	7,819	28.4	36.6	1340
12/20/14	2,045	748	4,082	11,832	2,793	6,875	31.6	33.4	1116

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
12/21/14	1,903	656	3,972	11,748	2,559	6,531	36.5	28.5	812
12/22/14	2,036	701	4,154	13,054	2,737	6,891	35.3	29.7	882
12/23/14	2,010	688	3,969	12,687	2,698	6,667	34.9	30.1	906
12/24/14	1,857	602	3,813	10,991	2,459	6,272	32.5	32.5	1056
12/25/14	1,856	619	3,787	10,556	2,475	6,262	32.7	32.3	1043
12/26/14	2,203	738	4,481	12,916	2,941	7,422	28.3	36.7	1347
12/27/14	2,535	985	5,163	14,600	3,520	8,683	15.2	49.8	2480
12/28/14	2,846	1,064	5,941	16,302	3,910	9,851	12.7	52.3	2735
12/29/14	3,618	1,234	7,659	20,814	4,852	12,511	0.7	64.3	4134
12/30/14	3,897	1,341	8,170	21,948	5,238	13,408	(2.4)	67.4	4543
12/31/14	3,329	1,141	6,910	18,175	4,470	11,380	11.7	53.3	2841
01/01/15	2,755	1,011	5,738	15,395	3,766	9,504	18.6	46.4	2153
01/02/15	2,651	925	5,372	14,894	3,576	8,948	24.1	40.9	1673
01/03/15	2,780	1,027	5,645	15,629	3,807	9,452	15.6	49.4	2440
01/04/15	3,923	1,395	8,010	21,634	5,318	13,328	(5.9)	70.9	5027
01/05/15	4,182	1,383	8,696	23,286	5,565	14,261	(2.8)	67.8	4597
01/06/15	4,121	1,341	8,565	23,209	5,462	14,027	(0.4)	65.4	4277
01/07/15	4,188	1,362	8,750	23,589	5,550	14,300	(2.4)	67.4	4543
01/08/15	3,977	1,188	8,107	22,220	5,165	13,272	5.1	59.9	3588
01/09/15	3,885	1,219	7,931	21,575	5,104	13,035	0.7	64.3	4134
01/10/15	3,286	1,085	6,699	17,975	4,371	11,070	9.8	55.2	3047
01/11/15	3,438	1,160	6,975	18,899	4,598	11,573	6.7	58.3	3399
01/12/15	4,007	1,300	8,515	23,093	5,307	13,822	(2.5)	67.5	4556
01/13/15	3,431	1,145	7,280	19,915	4,576	11,856	13.4	51.6	2663
01/14/15	2,822	837	5,927	16,928	3,659	9,586	22.5	42.5	1806
01/15/15	2,425	861	5,127	14,806	3,286	8,413	29.2	35.8	1282
01/16/15	2,343	879	4,839	13,965	3,222	8,061	28.1	36.9	1362
01/17/15	1,976	739	4,149	12,067	2,715	6,864	32.9	32.1	1030
01/18/15	2,060	791	4,409	12,676	2,851	7,260	30.5	34.5	1190
01/19/15	2,163	807	4,488	13,625	2,970	7,458	32.4	32.6	1063
01/20/15	2,297	836	4,865	14,760	3,133	7,998	29.0	36.0	1296
01/21/15	2,430	870	5,108	15,514	3,300	8,408	26.6	38.4	1475
01/22/15	2,536	896	5,245	15,704	3,432	8,677	26.7	38.3	1467
01/23/15	2,034	779	4,312	12,804	2,813	7,125	32.6	32.4	1050
01/24/15	1,809	757	3,761	11,104	2,566	6,327	33.5	31.5	992
01/25/15	2,306	917	4,846	13,868	3,223	8,069	24.6	40.4	1632
01/26/15	1,933	732	4,060	12,767	2,665	6,725	37.1	27.9	778
01/27/15	2,206	814	4,532	13,995	3,020	7,552	30.9	34.1	1163
01/28/15	2,255	801	4,696	14,548	3,056	7,752	30.6	34.4	1183
01/29/15	2,755	1,043	5,685	16,979	3,798	9,483	19.9	45.1	2034
01/30/15	2,499	928	5,223	15,045	3,427	8,650	23.0	42.0	1764
01/31/15	2,458	990	5,068	14,168	3,448	8,516	22.4	42.6	1815
02/01/15	3,198	1,213	6,616	18,600	4,411	11,027	8.6	56.4	3181
02/02/15	3,339	1,166	7,107	20,212	4,505	11,612	9.5	55.5	3080
02/03/15	3,134	1,141	6,645	19,390	4,275	10,920	13.5	51.5	2652
02/04/15	3,533	1,261	7,418	21,355	4,794	12,212	3.7	61.3	3758
02/05/15	3,196	1,110	6,667	19,157	4,306	10,973	14.8	50.2	2520
02/06/15	2,508	940	5,151	15,169	3,448	8,599	23.8	41.2	1697
02/07/15	1,977	854	4,170	12,265	2,831	7,001	30.8	34.2	1170
02/08/15	2,370	939	5,103	14,420	3,309	8,412	25.2	39.8	1584
02/09/15	2,392	883	5,246	15,343	3,275	8,521	25.6	39.4	1552
02/10/15	2,676	901	5,588	16,564	3,577	9,165	24.5	40.5	1640
02/11/15	3,417	1,192	7,229	20,720	4,609	11,838	6.5	58.5	3422
02/12/15	3,418	1,150	7,183	20,379	4,568	11,751	8.4	56.6	3204
02/13/15	3,014	1,057	6,306	17,759	4,071	10,377	14.8	50.2	2520
02/14/15	3,436	1,246	7,125	19,625	4,682	11,807	1.3	63.7	4058
02/15/15	3,421	1,200	7,024	19,420	4,621	11,645	7.5	57.5	3306
02/16/15	3,379	1,196	6,993	20,469	4,575	11,568	11.0	54.0	2916
02/17/15	3,880	1,301	8,092	22,930	5,181	13,273	0.8	64.2	4122
02/18/15	4,200	1,391	8,691	24,632	5,591	14,282	(4.5)	69.5	4830
02/19/15	3,657	1,224	7,567	21,507	4,881	12,448	5.5	59.5	3540
02/20/15	2,873	983	5,878	16,761	3,856	9,734	20.8	44.2	1954
02/21/15	3,157	1,166	6,472	18,394	4,323	10,795	5.8	59.2	3505
02/22/15	3,962	1,397	8,025	22,313	5,359	13,384	(6.0)	71.0	5041
02/23/15	3,180	1,009	6,700	18,939	4,189	10,889	20.0	45.0	2025
02/24/15	2,929	1,029	6,202	18,259	3,958	10,160	18.7	46.3	2144
02/25/15	3,476	1,161	7,293	20,979	4,637	11,930	7.1	57.9	3352
02/26/15	3,664	1,227	7,734	21,913	4,891	12,625	2.8	62.2	3869
02/27/15	3,305	1,175	7,026	19,249	4,480	11,506	6.7	58.3	3399
02/28/15	2,882	1,055	5,943	16,367	3,937	9,880	15.5	49.5	2450
03/01/15	2,760	987	5,886	16,142	3,747	9,633	19.5	45.5	2070
03/02/15	2,657	948	5,709	16,627	3,605	9,314	22.1	42.9	1840



Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
03/03/15	3,083	978	6,653	19,096	4,061	10,714	12.7	52.3	2735
03/04/15	3,642	1,240	7,863	21,733	4,882	12,745	1.8	63.2	3994
03/05/15	3,231	1,113	6,935	19,641	4,344	11,279	10.7	54.3	2948
03/06/15	2,171	838	4,553	13,574	3,009	7,562	31.8	33.2	1102
03/07/15	1,692	716	3,505	10,762	2,408	5,913	35.9	29.1	847
03/08/15	1,678	679	3,508	10,917	2,357	5,865	39.5	25.5	650
03/09/15	1,479	573	3,121	10,790	2,052	5,173	46.8	18.2	331
03/10/15	1,312	591	2,759	9,976	1,903	4,662	46.4	18.6	346
03/11/15	1,284	563	2,683	9,581	1,847	4,530	46.0	19.0	361
03/12/15	1,130	496	2,313	8,904	1,626	3,939	53.5	11.5	132
03/13/15	1,182	588	2,380	8,665	1,770	4,150	46.7	18.3	335
03/14/15	974	486	2,066	7,036	1,460	3,526	50.3	14.7	216
03/15/15	822	451	1,844	6,377	1,273	3,117	58.2	6.8	46
03/16/15	1,309	681	2,842	10,459	1,990	4,832	42.7	22.3	497
03/17/15	1,661	732	3,400	11,900	2,393	5,793	37.0	28.0	784
03/18/15	1,587	702	3,171	11,368	2,289	5,460	40.0	25.0	625
03/19/15	1,511	692	2,969	10,908	2,203	5,172	42.3	22.7	515
03/20/15	1,409	664	2,790	9,593	2,073	4,863	41.1	23.9	571
03/21/15	1,631	743	3,181	9,855	2,374	5,555	33.2	31.8	1011
03/22/15	1,916	635	3,810	11,522	2,551	6,361	31.0	34.0	1156
03/23/15	2,076	615	4,129	13,527	2,691	6,820	28.5	36.5	1332
03/24/15	1,957	585	3,958	13,339	2,542	6,500	33.0	32.0	1024
03/25/15	2,064	669	4,221	13,752	2,733	6,954	33.5	31.5	992
03/26/15	2,245	714	4,501	14,411	2,959	7,460	28.1	36.9	1362
03/27/15	2,031	680	4,033	12,644	2,711	6,744	27.8	37.2	1384
03/28/15	1,633	610	3,129	9,598	2,243	5,372	36.7	28.3	801
03/29/15	1,462	617	2,947	9,219	2,079	5,026	44.0	21.0	441
03/30/15	1,330	570	2,875	10,274	1,900	4,775	44.5	20.5	420
03/31/15	999	489	2,197	8,468	1,488	3,685	54.0	11.0	121
11/01/15	991	500	1,826	6,516	1,491	3,317	50.7	14.3	204
11/02/15	853	525	1,728	7,182	1,378	3,106	56.5	8.5	72
11/03/15	765	473	1,499	6,797	1,238	2,737	57.6	7.4	55
11/04/15	775	499	1,421	6,632	1,274	2,695	60.4	4.6	21
11/05/15	1,067	610	1,906	8,320	1,677	3,583	48.6	16.4	269
11/06/15	1,310	669	2,359	8,592	1,979	4,338	40.7	24.3	590
11/07/15	1,129	597	2,086	7,265	1,726	3,812	44.8	20.2	408
11/08/15	1,023	521	1,940	7,126	1,544	3,484	51.0	14.0	196
11/09/15	1,101	546	1,988	8,391	1,647	3,635	49.3	15.7	246
11/10/15	1,088	527	1,933	8,260	1,615	3,548	50.5	14.5	210
11/11/15	1,315	543	2,303	9,361	1,858	4,161	46.1	18.9	357
11/12/15	1,750	716	3,065	11,125	2,466	5,531	37.4	27.6	762
11/13/15	1,617	713	2,873	9,679	2,330	5,203	37.6	27.4	751
11/14/15	1,124	544	2,089	6,820	1,668	3,757	47.4	17.6	310
11/15/15	936	467	1,933	6,488	1,403	3,336	53.7	11.3	128
11/16/15	1,271	499	2,345	9,134	1,770	4,115	48.8	16.2	262
11/17/15	1,078	465	2,090	8,310	1,543	3,633	53.7	11.3	128
11/18/15	1,578	677	2,936	10,449	2,255	5,191	40.3	24.7	610
11/19/15	2,269	857	4,107	13,685	3,126	7,233	30.3	34.7	1204
11/20/15	2,429	937	4,298	13,699	3,366	7,664	24.5	40.5	1640
11/21/15	2,244	938	4,276	12,676	3,182	7,458	22.3	42.7	1823
11/22/15	2,152	834	4,085	11,981	2,986	7,071	28.6	36.4	1325
11/23/15	1,965	726	3,633	11,981	2,691	6,324	35.5	29.5	870
11/24/15	1,835	674	3,341	11,271	2,509	5,850	39.3	25.7	660
11/25/15	1,542	672	2,873	9,293	2,214	5,087	41.6	23.4	548
11/26/15	2,115	935	3,967	11,122	3,050	7,017	25.6	39.4	1552
11/27/15	2,414	995	4,570	13,087	3,409	7,979	20.1	44.9	2016
11/28/15	2,137	898	4,141	12,177	3,035	7,176	24.0	41.0	1681
11/29/15	2,082	790	3,929	11,831	2,872	6,801	30.7	34.3	1176
11/30/15	2,268	721	4,256	13,498	2,989	7,245	33.0	32.0	1024
12/01/15	2,299	787	4,367	13,956	3,086	7,453	29.5	35.5	1260
12/02/15	2,275	779	4,289	13,552	3,054	7,343	30.4	34.6	1197
12/03/15	2,363	869	4,419	14,117	3,232	7,651	28.2	36.8	1354
12/04/15	1,806	720	3,322	10,772	2,526	5,848	39.1	25.9	671
12/05/15	1,514	680	2,842	9,108	2,194	5,036	41.1	23.9	571
12/06/15	1,950	791	3,605	11,343	2,741	6,346	33.8	31.2	973
12/07/15	1,973	714	3,609	12,230	2,687	6,296	37.3	27.7	767
12/08/15	1,966	712	3,602	12,369	2,678	6,280	36.8	28.2	795
12/09/15	1,722	641	3,141	11,132	2,363	5,504	42.7	22.3	497
12/10/15	1,731	643	3,166	11,468	2,374	5,540	41.0	24.0	576
12/11/15	1,781	721	3,334	10,908	2,502	5,836	36.8	28.2	795
12/12/15	1,566	663	2,914	9,174	2,229	5,143	39.6	25.4	645
12/13/15	1,787	674	3,334	10,475	2,461	5,795	38.5	26.5	702

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
12/14/15	2,286	689	4,138	13,593	2,975	7,113	33.2	31.8	1011
12/15/15	2,270	609	4,115	13,556	2,879	6,994	34.2	30.8	949
12/16/15	2,417	707	4,490	14,317	3,124	7,614	29.6	35.4	1253
12/17/15	2,875	890	5,378	16,501	3,765	9,143	20.8	44.2	1954
12/18/15	3,172	1,020	5,943	17,380	4,192	10,135	13.1	51.9	2694
12/19/15	2,432	881	4,685	13,658	3,313	7,998	25.3	39.7	1576
12/20/15	2,069	798	3,999	12,170	2,867	6,866	34.4	30.6	936
12/21/15	2,376	788	4,349	13,958	3,164	7,513	31.3	33.7	1136
12/22/15	2,302	821	4,242	13,466	3,123	7,365	33.7	31.3	980
12/23/15	2,312	830	4,355	13,242	3,142	7,497	29.4	35.6	1267
12/24/15	2,265	800	4,397	12,211	3,065	7,462	25.7	39.3	1544
12/25/15	2,035	768	4,022	11,104	2,803	6,825	28.4	36.6	1340
12/26/15	2,172	872	4,271	12,212	3,044	7,315	27.1	37.9	1436
12/27/15	2,816	1,082	5,453	15,801	3,898	9,351	15.6	49.4	2440
12/28/15	3,061	1,061	5,698	16,902	4,122	9,820	21.7	43.3	1875
12/29/15	2,754	993	5,268	15,999	3,747	9,015	22.7	42.3	1789
12/30/15	2,912	1,063	5,517	16,130	3,975	9,492	18.7	46.3	2144
12/31/15	2,955	1,124	5,656	15,327	4,079	9,735	16.6	48.4	2343
01/01/16	2,501	1,024	5,000	13,583	3,525	8,525	21.3	43.7	1910
01/02/16	2,277	885	4,498	12,960	3,162	7,660	26.5	38.5	1482
01/03/16	2,642	973	5,016	14,642	3,615	8,631	21.3	43.7	1910
01/04/16	2,960	913	5,410	16,920	3,873	9,283	20.9	44.1	1945
01/05/16	2,670	936	4,935	15,228	3,606	8,541	26.4	38.6	1490
01/06/16	2,411	863	4,389	14,122	3,274	7,663	30.8	34.2	1170
01/07/16	2,262	828	4,200	13,459	3,090	7,290	32.6	32.4	1050
01/08/16	2,636	959	4,917	14,449	3,595	8,512	22.8	42.2	1781
01/09/16	3,734	1,323	6,865	19,127	5,057	11,922	(2.3)	67.3	4529
01/10/16	4,058	1,375	7,621	20,980	5,433	13,054	(5.3)	70.3	4942
01/11/16	4,228	1,341	8,011	22,296	5,569	13,580	0.9	64.1	4109
01/12/16	4,236	1,347	8,282	22,804	5,583	13,865	(1.4)	66.4	4409
01/13/16	3,373	1,037	6,434	18,357	4,410	10,844	17.6	47.4	2247
01/14/16	2,964	968	5,705	16,679	3,932	9,637	23.5	41.5	1722
01/15/16	3,363	1,114	6,358	17,774	4,477	10,835	12.6	52.4	2746
01/16/16	4,106	1,368	7,765	21,203	5,474	13,239	(6.7)	71.7	5141
01/17/16	4,326	1,434	8,444	22,969	5,760	14,204	(8.2)	73.2	5358
01/18/16	4,404	1,437	8,624	24,149	5,841	14,465	(2.8)	67.8	4597
01/19/16	3,899	1,258	7,588	21,576	5,157	12,745	7.2	57.8	3341
01/20/16	3,137	1,044	6,101	18,008	4,181	10,282	20.3	44.7	1998
01/21/16	3,045	1,010	5,787	17,518	4,055	9,842	20.9	44.1	1945
01/22/16	2,814	1,042	5,506	16,243	3,856	9,362	20.6	44.4	1971
01/23/16	2,646	938	5,030	14,426	3,584	8,614	22.8	42.2	1781
01/24/16	2,450	885	4,617	13,583	3,335	7,952	28.5	36.5	1332
01/25/16	2,740	917	5,002	15,659	3,657	8,659	26.9	38.1	1452
01/26/16	2,895	999	5,461	16,724	3,894	9,355	22.1	42.9	1840
01/27/16	2,397	792	4,475	13,911	3,189	7,664	36.0	29.0	841
01/28/16	2,730	897	5,078	15,727	3,627	8,705	24.7	40.3	1624
01/29/16	2,380	813	4,386	13,507	3,193	7,579	31.0	34.0	1156
01/30/16	1,819	746	3,527	10,842	2,565	6,092	36.7	28.3	801
01/31/16	2,108	774	3,984	12,039	2,882	6,866	31.9	33.1	1096
02/01/16	2,502	876	4,571	14,466	3,378	7,949	29.7	35.3	1246
02/02/16	2,808	942	5,282	16,077	3,750	9,032	24.7	40.3	1624
02/03/16	3,066	1,056	5,898	17,975	4,122	10,020	15.3	49.7	2470
02/04/16	3,129	1,087	5,951	17,658	4,216	10,167	16.4	48.6	2362
02/05/16	2,703	942	5,115	14,900	3,645	8,760	24.8	40.2	1616
02/06/16	2,083	755	4,000	11,538	2,838	6,838	34.3	30.7	942
02/07/16	2,632	939	4,997	14,345	3,571	8,568	24.3	40.7	1656
02/08/16	3,572	1,170	6,807	19,710	4,742	11,549	11.9	53.1	2820
02/09/16	3,664	1,230	7,028	20,277	4,894	11,922	9.7	55.3	3058
02/10/16	3,656	1,248	7,129	20,374	4,904	12,033	8.5	56.5	3192
02/11/16	3,499	1,177	6,580	19,083	4,676	11,256	13.0	52.0	2704
02/12/16	3,929	1,331	7,270	20,330	5,260	12,530	2.5	62.5	3906
02/13/16	3,473	1,176	6,418	17,797	4,649	11,067	7.8	57.2	3272
02/14/16	3,186	1,024	5,870	16,672	4,210	10,080	18.0	47.0	2209
02/15/16	2,571	862	4,709	14,724	3,433	8,142	30.3	34.7	1204
02/16/16	2,702	931	5,056	15,670	3,633	8,689	24.4	40.6	1648
02/17/16	2,638	905	4,902	15,036	3,543	8,445	26.9	38.1	1452
02/18/16	2,193	746	3,983	12,910	2,939	6,922	37.4	27.6	762
02/19/16	1,893	728	3,474	11,041	2,621	6,095	40.3	24.7	610
02/20/16	1,896	802	3,670	10,686	2,698	6,368	33.4	31.6	999
02/21/16	2,113	860	4,143	11,857	2,973	7,116	31.7	33.3	1109
02/22/16	2,239	782	4,324	13,382	3,021	7,345	33.0	32.0	1024
02/23/16	2,136	718	4,113	13,130	2,854	6,967	35.7	29.3	858

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
02/24/16	2,283	799	4,345	13,627	3,082	7,427	32.7	32.3	1043
02/25/16	2,475	854	4,632	14,571	3,329	7,961	28.7	36.3	1318
02/26/16	1,892	674	3,575	11,331	2,566	6,141	36.2	28.8	829
02/27/16	1,238	533	2,558	7,875	1,771	4,329	47.0	18.0	324
02/28/16	2,066	787	4,073	11,893	2,853	6,926	32.8	32.2	1037
02/29/16	2,806	1,034	5,454	16,499	3,840	9,294	20.6	44.4	1971
03/01/16	2,933	1,041	5,746	17,308	3,974	9,720	18.7	46.3	2144
03/02/16	2,520	898	4,865	15,328	3,418	8,283	26.4	38.6	1490
03/03/16	2,288	832	4,318	14,112	3,120	7,438	30.9	34.1	1163
03/04/16	2,178	811	4,097	12,579	2,989	7,086	33.1	31.9	1018
03/05/16	1,877	717	3,663	10,732	2,594	6,257	33.2	31.8	1011
03/06/16	1,303	521	2,592	8,156	1,824	4,416	48.0	17.0	289
03/07/16	967	467	1,937	7,739	1,434	3,371	58.2	6.8	46
03/08/16	1,265	568	2,369	9,408	1,833	4,202	49.3	15.7	246
03/09/16	1,817	689	3,391	11,378	2,506	5,897	37.5	27.5	756
03/10/16	1,821	715	3,325	11,534	2,536	5,861	39.2	25.8	666
03/11/16	1,064	508	1,913	7,158	1,572	3,485	55.8	9.2	85
03/12/16	747	394	1,507	5,158	1,141	2,648	56.8	8.2	67
03/13/16	1,036	470	2,048	6,815	1,506	3,554	51.4	13.6	185
03/14/16	1,044	510	1,972	7,980	1,554	3,526	53.6	11.4	130
03/15/16	1,344	571	2,428	9,340	1,915	4,343	48.1	16.9	286
03/16/16	1,757	657	3,206	11,156	2,414	5,620	41.0	24.0	576
03/17/16	1,997	761	3,605	12,277	2,758	6,363	36.0	29.0	841
03/18/16	2,062	844	3,729	11,888	2,906	6,635	32.0	33.0	1089
03/19/16	1,771	756	3,465	10,284	2,527	5,992	33.7	31.3	980
03/20/16	1,793	626	3,557	10,434	2,419	5,976	35.3	29.7	882
03/21/16	1,638	428	2,983	10,610	2,066	5,049	44.3	20.7	428
03/22/16	1,648	514	3,121	11,032	2,162	5,283	41.8	23.2	538
03/23/16	2,256	747	4,217	13,973	3,003	7,220	30.7	34.3	1176
03/24/16	1,919	662	3,555	11,852	2,581	6,136	36.2	28.8	829
03/25/16	1,507	605	2,752	9,056	2,112	4,864	42.4	22.6	511
03/26/16	1,315	572	2,504	7,946	1,887	4,391	44.3	20.7	428
03/27/16	1,691	659	3,290	9,968	2,350	5,640	36.2	28.8	829
03/28/16	1,364	558	2,607	9,393	1,922	4,529	48.1	16.9	286
03/29/16	1,165	502	2,286	8,732	1,667	3,953	52.5	12.5	156
03/30/16	1,502	598	2,851	10,260	2,100	4,951	44.3	20.7	428
03/31/16	1,583	677	2,924	10,469	2,260	5,184	42.5	22.5	506
11/01/16	1,070	484	1,817	8,374	1,554	3,371	51.1	13.9	193
11/02/16	1,041	390	1,831	8,250	1,431	3,262	52.1	12.9	166
11/03/16	993	351	1,816	7,852	1,344	3,160	52.3	12.7	161
11/04/16	805	430	1,540	6,517	1,235	2,775	55.0	10.0	100
11/05/16	648	404	1,302	5,532	1,052	2,354	57.5	7.5	56
11/06/16	734	395	1,354	6,088	1,129	2,483	56.2	8.8	77
11/07/16	951	471	1,685	8,092	1,422	3,107	54.3	10.7	114
11/08/16	1,154	484	2,017	8,988	1,638	3,655	47.0	18.0	324
11/09/16	1,075	463	1,881	8,534	1,538	3,419	51.7	13.3	177
11/10/16	1,035	450	1,800	8,170	1,485	3,285	53.0	12.0	144
11/11/16	1,398	576	2,337	9,161	1,974	4,311	40.8	24.2	586
11/12/16	1,135	497	1,968	7,104	1,632	3,600	46.9	18.1	328
11/13/16	1,026	507	1,849	6,901	1,533	3,382	50.8	14.2	202
11/14/16	1,451	596	2,410	9,803	2,047	4,457	43.8	21.2	449
11/15/16	1,437	553	2,274	9,431	1,990	4,264	52.8	12.2	149
11/16/16	1,160	412	1,948	8,344	1,572	3,520	49.1	15.9	253
11/17/16	1,249	457	2,083	8,719	1,706	3,789	50.8	14.2	202
11/18/16	2,020	705	3,297	11,386	2,725	6,022	34.0	31.0	961
11/19/16	2,105	844	3,673	11,933	2,949	6,622	22.6	42.4	1798
11/20/16	2,333	823	3,940	12,882	3,156	7,096	23.2	41.8	1747
11/21/16	2,256	767	3,766	12,885	3,023	6,789	34.5	30.5	930
11/22/16	2,321	830	3,864	13,195	3,151	7,015	34.7	30.3	918
11/23/16	1,974	681	3,504	11,348	2,655	6,159	34.5	30.5	930
11/24/16	1,779	655	3,233	9,678	2,434	5,667	34.7	30.3	918
11/25/16	1,991	712	3,502	11,028	2,703	6,205	33.2	31.8	1011
11/26/16	1,670	605	3,045	9,758	2,275	5,320	36.7	28.3	801
11/27/16	1,747	573	2,967	9,799	2,320	5,287	42.6	22.4	502
11/28/16	1,826	559	3,196	10,900	2,385	5,581	43.1	21.9	480
11/29/16	2,134	626	3,590	12,402	2,760	6,350	36.5	28.5	812
11/30/16	2,116	704	3,549	12,104	2,820	6,369	36.8	28.2	795
12/01/16	2,174	727	3,734	12,448	2,901	6,635	34.3	30.7	942
12/02/16	2,174	794	4,004	12,348	2,968	6,972	31.0	34.0	1156
12/03/16	1,958	761	3,650	11,144	2,719	6,369	31.1	33.9	1149
12/04/16	2,082	764	3,819	11,914	2,846	6,665	33.7	31.3	980
12/05/16	2,285	778	4,127	13,468	3,063	7,190	34.7	30.3	918

Date	SMF16	LGF16	F17	T17	SMLG16	SMLGF17	Temperature	HDD	HDDs^2
12/06/16	3,170	935	5,645	17,327	4,105	9,750	19.8	45.2	2043
12/07/16	3,290	985	6,140	18,018	4,275	10,415	17.7	47.3	2237
12/08/16	3,295	976	5,934	17,551	4,271	10,205	19.2	45.8	2098
12/09/16	3,349	1,089	6,221	17,739	4,438	10,659	11.5	53.5	2862
12/10/16	3,212	1,037	5,827	16,367	4,249	10,076	12.7	52.3	2735
12/11/16	3,160	1,083	5,889	16,698	4,243	10,132	14.0	51.0	2601
12/12/16	3,906	1,200	7,536	20,933	5,106	12,642	0.8	64.2	4122
12/13/16	3,912	1,076	7,523	21,051	4,988	12,511	6.7	58.3	3399
12/14/16	4,346	1,209	8,118	22,950	5,555	13,673	(0.7)	65.7	4316
12/15/16	4,106	1,206	7,935	22,229	5,312	13,247	2.4	62.6	3919
12/16/16	3,775	1,157	6,786	19,260	4,932	11,718	10.3	54.7	2992
12/17/16	4,235	1,296	7,528	20,881	5,531	13,059	(5.5)	70.5	4970
12/18/16	4,209	1,269	7,919	21,505	5,478	13,397	(3.5)	68.5	4692
12/19/16	3,351	927	6,239	17,677	4,278	10,517	22.9	42.1	1772
12/20/16	2,607	821	4,978	15,021	3,428	8,406	30.2	34.8	1211
12/21/16	2,506	769	4,678	14,584	3,275	7,953	32.1	32.9	1082
12/22/16	2,365	744	4,457	13,528	3,109	7,566	33.0	32.0	1024
12/23/16	2,246	727	4,022	12,029	2,973	6,995	34.0	31.0	961
12/24/16	2,026	677	3,717	10,702	2,703	6,420	33.5	31.5	992
12/25/16	2,272	659	4,071	11,280	2,931	7,002	34.0	31.0	961
12/26/16	3,195	982	5,925	15,900	4,177	10,102	19.3	45.7	2088
12/27/16	2,945	937	5,701	16,571	3,882	9,583	21.7	43.3	1875
12/28/16	2,513	788	4,777	14,424	3,301	8,078	31.6	33.4	1116
12/29/16	2,765	822	5,187	15,589	3,587	8,774	25.6	39.4	1552
12/30/16	2,656	911	4,803	14,411	3,567	8,370	27.7	37.3	1391
12/31/16	2,524	818	4,767	13,450	3,342	8,109	24.0	41.0	1681
01/01/17	2,329	752	4,341	12,309	3,081	7,422	28.5	36.5	1332
01/02/17	2,519	781	4,731	13,597	3,300	8,031	30.8	34.2	1170
01/03/17	3,903	1,100	7,436	21,232	5,003	12,439	5.0	60.0	3600
01/04/17	4,349	1,233	8,322	23,409	5,582	13,904	(1.0)	66.0	4356
01/05/17	4,502	1,305	8,672	24,149	5,807	14,479	(4.5)	69.5	4830
01/06/17	4,233	1,264	7,903	21,705	5,497	13,400	0.7	64.3	4134
01/07/17	3,968	1,182	7,385	19,659	5,150	12,535	2.0	63.0	3969
01/08/17	3,630	1,070	6,576	17,909	4,700	11,276	13.8	51.2	2621
01/09/17	3,134	965	5,843	17,478	4,099	9,942	24.7	40.3	1624
01/10/17	3,665	1,147	6,848	20,141	4,812	11,660	11.4	53.6	2873
01/11/17	3,899	1,216	7,240	21,174	5,115	12,355	6.4	58.6	3434
01/12/17	4,170	1,294	7,975	22,369	5,464	13,439	1.2	63.8	4070
01/13/17	3,986	1,255	7,457	20,076	5,241	12,698	5.0	60.0	3600
01/14/17	3,291	1,045	6,168	16,617	4,336	10,504	12.5	52.5	2756
01/15/17	2,923	910	5,444	15,316	3,833	9,277	21.5	43.5	1892
01/16/17	2,737	883	5,193	15,325	3,620	8,813	21.5	43.5	1892
01/17/17	2,646	790	4,771	14,780	3,436	8,207	31.0	34.0	1156
01/18/17	2,246	694	4,149	13,498	2,940	7,089	34.4	30.6	936
01/19/17	2,151	712	4,013	12,582	2,863	6,876	35.5	29.5	870
01/20/17	2,089	733	3,824	11,850	2,822	6,646	35.3	29.7	882
01/21/17	1,907	690	3,382	10,733	2,597	5,979	36.3	28.7	824
01/22/17	2,029	699	3,687	11,654	2,728	6,415	36.1	28.9	835
01/23/17	2,299	753	4,378	13,313	3,052	7,430	33.4	31.6	999
01/24/17	2,417	749	4,535	13,926	3,166	7,701	31.8	33.2	1102
01/25/17	2,598	872	4,907	14,776	3,470	8,377	29.2	35.8	1282
01/26/17	2,859	860	5,218	15,494	3,719	8,937	24.6	40.4	1632
01/27/17	2,592	825	4,873	14,467	3,417	8,290	25.6	39.4	1552
01/28/17	2,576	849	4,707	13,828	3,425	8,132	25.8	39.2	1537
01/29/17	2,719	883	5,133	14,865	3,602	8,735	22.5	42.5	1806
01/30/17	2,333	693	4,484	14,038	3,026	7,510	39.3	25.7	660
01/31/17	2,516	740	4,771	15,076	3,256	8,027	30.8	34.2	1170
02/01/17	3,447	962	6,509	19,050	4,409	10,918	12.8	52.2	2725
02/02/17	3,659	1,055	6,741	19,703	4,714	11,455	11.8	53.2	2830
02/03/17	3,172	971	5,909	16,761	4,143	10,052	18.3	46.7	2181
02/04/17	2,553	780	4,614	13,086	3,333	7,947	29.4	35.6	1267
02/05/17	2,840	848	5,172	14,894	3,688	8,860	21.7	43.3	1875
02/06/17	2,614	791	4,937	15,183	3,405	8,342	30.1	34.9	1218
02/07/17	3,451	1,013	6,407	19,193	4,464	10,871	15.3	49.7	2470
02/08/17	3,825	1,127	7,143	20,793	4,952	12,095	7.8	57.2	3272
02/09/17	3,250	922	6,126	18,042	4,172	10,298	18.3	46.7	2181
02/10/17	2,010	647	3,684	11,570	2,657	6,341	39.8	25.2	635
02/11/17	1,836	668	3,428	10,365	2,504	5,932	38.1	26.9	724
02/12/17	2,237	723	4,244	12,496	2,960	7,204	33.1	31.9	1018
02/13/17	2,061	704	3,918	12,645	2,765	6,683	38.6	26.4	697
02/14/17	2,431	772	4,518	14,391	3,203	7,721	31.3	33.7	1136
02/15/17	2,385	734	4,483	14,235	3,119	7,602	29.8	35.2	1239

<u>Date</u>	<u>SMF16</u>	<u>LGF16</u>	<u>F17</u>	<u>T17</u>	<u>SMLG16</u>	<u>SMLGF17</u>	<u>Temperature</u>	<u>HDD</u>	<u>HDDs^2</u>
02/16/17	2,116	713	3,882	12,851	2,829	6,711	34.6	30.4	924
02/17/17	1,496	565	2,706	9,071	2,061	4,767	47.3	17.7	313
02/18/17	1,390	576	2,534	7,999	1,966	4,500	45.1	19.9	396
02/19/17	1,237	540	2,332	7,391	1,777	4,109	51.6	13.4	180
02/20/17	1,543	661	3,002	10,535	2,204	5,206	45.5	19.5	380
02/21/17	1,382	592	2,620	9,422	1,974	4,594	48.5	16.5	272
02/22/17	1,635	640	2,995	10,689	2,275	5,270	43.5	21.5	462
02/23/17	2,390	804	4,265	14,071	3,194	7,459	30.7	34.3	1176
02/24/17	2,828	995	5,207	15,598	3,823	9,030	21.8	43.2	1866
02/25/17	2,417	802	4,461	12,974	3,219	7,680	26.7	38.3	1467
02/26/17	2,263	811	4,234	12,660	3,074	7,308	30.2	34.8	1211
02/27/17	2,009	642	3,685	12,690	2,651	6,336	38.6	26.4	697
02/28/17	2,115	745	3,824	13,053	2,860	6,684	35.7	29.3	858
03/01/17	2,545	833	4,872	15,359	3,378	8,250	26.7	38.3	1467
03/02/17	2,791	1,005	5,368	16,624	3,796	9,164	21.5	43.5	1892
03/03/17	2,471	908	4,686	14,281	3,379	8,065	26.0	39.0	1521
03/04/17	1,852	712	3,568	10,471	2,564	6,132	37.4	27.6	762
03/05/17	1,311	500	2,460	7,710	1,811	4,271	51.9	13.1	172
03/06/17	1,560	584	3,067	10,752	2,144	5,211	46.9	18.1	328
03/07/17	2,140	658	4,066	13,456	2,798	6,864	37.4	27.6	762
03/08/17	2,484	789	4,742	15,110	3,273	8,015	28.2	36.8	1354
03/09/17	2,924	951	5,517	17,191	3,875	9,392	20.0	45.0	2025
03/10/17	3,109	1,022	6,074	17,515	4,131	10,205	12.6	52.4	2746
03/11/17	2,677	938	5,327	14,908	3,615	8,942	16.0	49.0	2401
03/12/17	2,937	956	5,791	16,195	3,893	9,684	18.6	46.4	2153
03/13/17	3,040	969	5,872	17,453	4,009	9,881	18.4	46.6	2172
03/14/17	2,826	828	5,629	16,881	3,654	9,283	20.1	44.9	2016
03/15/17	2,613	896	5,136	15,599	3,509	8,645	24.5	40.5	1640
03/16/17	2,252	722	4,230	13,547	2,974	7,204	34.7	30.3	918
03/17/17	2,065	757	3,963	12,575	2,822	6,785	36.2	28.8	829
03/18/17	1,868	663	3,638	11,331	2,531	6,169	34.1	30.9	955
03/19/17	1,585	411	3,082	9,652	1,996	5,078	44.3	20.7	428
03/20/17	1,758	438	3,337	11,285	2,196	5,533	43.7	21.3	454
03/21/17	2,340	620	4,454	14,541	2,960	7,414	28.7	36.3	1318
03/22/17	2,171	593	4,017	13,085	2,764	6,781	35.8	29.2	853
03/23/17	2,059	547	3,735	12,673	2,606	6,341	38.7	26.3	692
03/24/17	1,817	623	3,279	10,930	2,440	5,719	40.1	24.9	620
03/25/17	1,662	594	3,155	9,645	2,256	5,411	39.3	25.7	660
03/26/17	1,788	657	3,220	10,043	2,445	5,665	39.9	25.1	630
03/27/17	1,527	584	2,826	10,123	2,111	4,937	46.4	18.6	346
03/28/17	1,257	553	2,395	8,960	1,810	4,205	52.4	12.6	159
03/29/17	1,613	589	2,899	10,495	2,202	5,101	44.6	20.4	416
03/30/17	1,743	694	3,123	11,319	2,437	5,560	42.1	22.9	524
03/31/17	1,407	545	2,625	9,187	1,952	4,577	45.9	19.1	365

**EXHIBIT D**

July 1, 2017

Re: CenterPoint Energy's Request for Change in Demand Units

PLEASE TAKE NOTICE that on July 1, 2017, CenterPoint Energy filed its request for Change in Demand Units to be effective November 1, 2017 with the Minnesota Public Utilities Commission (MPUC). True and correct copies will be on file at the Commission offices (Metro Square, Suite 350, 121 7<sup>th</sup> Place East, St. Paul, Minnesota, 55101-2147) during regular business hours or from CenterPoint Energy by contacting Marie Doyle.

This Notice is required per Minn. Rule 7825.2910, Subp. 3. Service list consists of interveners in the Company's previous two general rate cases.

If you have any questions, please contact Marie Doyle at (612) 321-5078.

CenterPoint Energy contact information:

Mail:

Marie Doyle  
CenterPoint Energy  
505 Nicollet Mall  
PO Box 59038  
Minneapolis, MN 55459-0038

Email:

[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

Phone:

612-321-5078



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Aafedt	daafedt@winthrop.com	Winthrop & Weinstine, P.A.	Suite 3500, 225 South Sixth Street  Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_15-424_PUC Official
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street  Bismarck, ND 585014092	Electronic Service	No	OFF_SL_15-424_PUC Official
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_15-424_PUC Official
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Angie	Beehler	N/A	Wal-Mart	Energy Dept. 0550 2001 SE 10th St Bentonville, AR 72716	Paper Service	No	OFF_SL_15-424_PUC Official
James J.	Bertrand	james.bertrand@stinson.com	Stinson Leonard Street LLP	150 South Fifth Street, Suite 2300  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
Brenda A.	Bjorklund	brenda.bjorklund@centerpointenergy.com	CenterPoint Energy	800 LaSalle Ave FL 14  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street North St. Paul, MN 55101	Electronic Service	No	OFF_SL_15-424_PUC Official
C. Ian	Brown	office@gasworkerslocal340.com	United Association	Gas Workers Local 340 312 Central Ave SW Minneapolis, MN 55414	Electronic Service	No	OFF_SL_15-424_PUC Official
James	Canaday	james.canaday@ag.state.mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_15-424_PUC Official



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Leigh	Currie	lcurrie@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206  St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_15-424_PUC Official
Jeffrey A.	Daugherty	jeffrey.daugherty@centerpointenergy.com	CenterPoint Energy	800 LaSalle Ave  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
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Marie	Doyle	marie.doyle@centerpointenergy.com	CenterPoint Energy	800 LaSalle Avenue P O Box 59038 Minneapolis, MN 554590038	Electronic Service	No	OFF_SL_15-424_PUC Official
Ronald B.	Edelstein	ron.edelstein@gastechnology.org	GTI	1700 S Mount Prospect Rd  Des Plains, IL 60018	Electronic Service	No	OFF_SL_15-424_PUC Official
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Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_15-424_PUC Official
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St  Saint Paul, MN 55102	Electronic Service	No	OFF_SL_15-424_PUC Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_15-424_PUC Official
Bruce L.	Hoffarber	bhoffarber@usenergyservices.com	U.S. Energy Services, Inc.	605 Highway 169 N Ste 1200  Plymouth, MN 55441	Electronic Service	No	OFF_SL_15-424_PUC Official
Mary	Holly	mholly@winthrop.com	Winthrop & Weinstine, P.A.	225 S Sixth St Ste 3500  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_15-424_PUC Official
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street  St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_15-424_PUC Official
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Roger	Leider	roger@mnpropane.org	Minnesota Propane Association	PO Box 220 209 N Run River Dr Princeton, MN 55371	Electronic Service	No	OFF_SL_15-424_PUC Official
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Greg	Palmer	gpalmer@greatermngas.com	Greater Minnesota Gas, Inc.	PO Box 68 202 South Main Street Le Sueur, MN 56058	Electronic Service	No	OFF_SL_15-424_PUC Official
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_15-424_PUC Official
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_15-424_PUC Official
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_15-424_PUC Official
Jonathan	Wolfgram	Jonathan.Wolfgram@state.mn.us	Department of Public Safety	445 Minnesota Street Suite 147  St. Paul, MN 55101-1547	Electronic Service	No	OFF_SL_15-424_PUC Official
Scott	Zemke	szemke@capsh.org	Community Action Partnership	of Suburban Hennepin 8800 Highway 7, Ste. 401 St. Louis Park, MN 55426	Electronic Service	No	OFF_SL_15-424_PUC Official

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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E  St. Paul, MN 55106	Electronic Service	No	OFF_SL_13-316_Official CC Service List
LauraSue	Schlatter	LauraSue.Schlatter@state.mn.us	Office of Administrative Hearings	PO Box 64620  St. Paul, MN 55164-0620	Paper Service	Yes	OFF_SL_13-316_Official CC Service List
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	Ste 122 9100 W Bloomington Frwy Bloomington, MN 55431	Electronic Service	Yes	OFF_SL_13-316_Official CC Service List
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James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-316_Official CC Service List
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