#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS	)	
	)	
Complainant,	)	
	)	PCB 04-16
	)	(Enforcement - Air)
V.	j	*
PACKAGING PERSONIFIED, INC., an	)	
Illinois Corporation	)	
Respondent.	)	

#### NOTICE OF ELECTRONIC FILING

John Therriault State of Illinois Illinois Pollution Control Board 100 W. Randolph Street – Suite 11-500 Chicago, Illinois 60601

Christopher Grant
Assistant Attorney General
Environmental Bureau
69 West Washington Street, 18<sup>th</sup> Floor
Chicago, Illinois 60602

L. Nichole Sangha Assistant Attorney General Environmental Bureau 69 West Washington Street, 18<sup>th</sup> Floor Chicago, Illinois 60602

Brad Halloran Hearing Officer State of Illinois Pollution Control Board 100 W. Randolph Street, Ste. 11-500 Chicago, IL 60601

PLEASE TAKE NOTICE that on Monday, May 13, 2013, we filed the attached Respondent's Pre-Hearing Memorandum. A copy of the document so filed is attached hereto.

Respectfully submitted,

PACKAGING PERSONIFIED, INC.

Kon Marsch

BY:

One of Its Attorneys

Roy M. Harsch, Esq.
John A. Simon, Esq.
Drinker Biddle & Reath LLP
191 N. Wacker Drive - Suite 3700
Chicago, Illinois 60606-1698
(312) 569-1000

THIS FILING IS SUBMITTED ON RECYCLED PAPER

#### CERTIFICATE OF SERVICE

I, Roy M. Harsch, an attorney, do certify that I caused to be served this 13th day of May, 2013, the foregoing **Respondent's Pre-Hearing Memorandum** upon the persons listed below, by electronic transmission and by placing same in an envelope bearing sufficient postage with the U.S. First Class Mail on **Monday**, **May 13, 2013**.

John Therriault
State of Illinois
Illinois Pollution Control Board
100 W. Randolph Street – Suite 11-500
Chicago, Illinois 60601
(electronically)

Christopher Grant
Assistant Attorney General
Environmental Bureau
69 West Washington Street, 18<sup>th</sup> Floor
Chicago, Illinois 60602
(by e-mail and first class mail)

L. Nichole Sangha Assistant Attorney General Environmental Bureau 69 West Washington Street, 18<sup>th</sup> Floor Chicago, Illinois 60602 (by e-mail and first class mail)

Brad Halloran
Hearing Officer
State of Illinois
Pollution Control Board
100 W. Randolph Street, Ste. 11-500
Chicago, IL 60601
(by e-mail and first class mail)

Roy M. Harsch

#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF	)
ILLINOIS,	)
Complainant,	)
	) PCB 04-16
	) (Enforcement – Air)
V.	)
PACKAGING PERSONIFIED, INC., an	)
Illinois Corporation	)
Respondent.	)

#### RESPONDENT'S PRE-HEARING MEMORANDUM

Packaging Personified, Inc. ("Respondent") by and through its attorneys, Drinker Biddle & Reath LLP, and files its Prehearing Memorandum as required by the Hearing Officer Order dated April 10, 2013.

1. Packaging will repond to the four questions presented by the Illinois Pollution

Control Board ("PCB") in its March 1, 2012 Order at pages 17 to 18 granting Packaging's

Motion to Reconsider. Packaging will present its rationale to show that it did not have a large
economic benefit from the operation of Press 4. Packaging will present testimony and exhibits
that will establish that it could have shutdown Press 4 as of March 15, 1995, the effective date of
the rules in question, and transferred all of its production to Press 5 which had substantial
capacity to accommodate this production in same manner as it did in 2003 following the
shutdown of Press 4. Packaging will present testimony and exhibits that will show that operating
in this manner using only Press 5 would in fact have resulted in no additional costs and possible
economic savings to Packaging and the reasons for this. Packaging will present testimony and
exhibits to show that therefore the lowest cost alternative for achieving compliance, or economic
savings that should be assessed for Press 4 is zero dollars.

- 2. Packaging will present testimony to explain how Press 5 was designed and operated as a recirculating press. Packaging will present its rationale to show that it could have shown that Press 5 could have complied with the rules in question by having a formal stack test preformed on Press 5. Packaging will present testimony and exhibits that will show that Press 5 would have complied based upon the engineering stack test performed by Mr. Richard Trzupek. Packaging will present what would have been necessary to conduct a formal stack test and the cost of such improvements including the cost of a formal stack test in terms of the construction of a temporary total enclosure ("TTE") or permanent total enclosure ("PTE").
- 3. Packaging will present its rationale to show that the lowest cost alternative for achieving compliance that should be assessed for Press 5 based upon the foregoing would be approximately \$3,662 based upon the cost of a formal stack test including necessary capture improvements and that the interest on such a sum would be minimal.
- 4. Packaging will present an alternative that in the event that the Pollution Control Board does not accept that Press 5 could have been shown to comply by conducting a formal stack test, that the proper low cost economic savings should be the previously presented economic savings associated with the purchase and installation of a used control device and cost of a stack test.
  - Packaging will present three witnesses.
- 6. Mr. Joseph Imburgia will testify regarding the general business of Packaging and how the printing operations relate to this as a part of the business. He will testify as to the shutdown of Press 4 at the end of 2002 and the transfer of all of the production from Press 4 to Press 5. He will explain what was required to transfer this production, the ability of Press 5 to accommodate this production and the impacts upon Packaging from such transfer. He will

testify as to the production efficiencies and savings that occurred with such transfer in 2003. He will testify as to Packaging's historical annual production starting in March of 1995. He will testify concerning the historical production and ink purchased records maintained by Packaging. He will testify about Packaging's ability to have shut down Press 4 as of March 15, 1995, the effective date of the regulations, and to have transferred all of the production from Press 4 to Press 5. He will testify as to the lack of costs to Packaging to accomplish such transfer. He will testify as to the production efficiencies and savings that would have occurred with such transfer. He will testify that Packaging would have been able to have accomplished such transfer based upon the excess production capacity that existed in Press 5 due to its greater line speed and other factors as compared to Press 4. He will testify as to the reasons for and motivation that lead to the decision by Packaging to order new Press 6 and the decision to duct Press 5 to the control system sized to for Press 6 and two additional presses. He will testify as to the general energy cost to operate Presses 4, 5 and 6. He will testify as to the recirculating dryer on Press 5 as to its energy savings in general due to the combustion of solvent from drying the ink and that the press was always operated in this mode. He will testify as to Packaging's understanding of the results of the engineering stack test performed by Mr. Trzupek on Press 5 and the reasons why a formal stack test was never performed on Press 5 until it was tested after it was modified and ducted to the new control device installed with Press 6. He will testify to the costs associated with conducting the stack test on Press 5 and 6 and the costs associated with constructing a PTE for Press 5 and Press 6.

The following Exhibits will be introduced with Mr. Imburgia's testimony:

EPA Capacity Estimate
Gas Electric Invoices
Gas Usage
VOM vs Production 1995-2003

Average Monthly Gas Purchase Records-June-August Cost of 2004 ARI Stack Test

7. Mr. Richard Trzupek will testify regarding his preparation of his Supplemental-Expert Report dated August 8, 2012 and the facts, conclusions and opinions set forth therein along with his original Expert Report. He will testify regarding his experience as a stack tester and air pollution control consultant including overseeing stack testing. He will testify as to his conducting of an engineering stack test on Press 5, how this test was preformed, the results of the this engineering stack test and how this test was relied upon by Packaging and the Illinois Environmental Protection Agency. Mr. Trzupek will testify as to the similarities and differences between his engineering stack test and a formal stack test necessary to formally demonstrate compliance. He will explain the manner in which Press 5 with its recirculating oven operated and that because its inherent design it in effect functioned as its own control device. He will explain his opinion on what TTE or PTE would be necessary to install to provide the required capture so that a formal stack test could be conducted. He will present his opinion as to the ability of the recirculating oven on Press 5 and the existing ducting on such to combust sufficient solvents so that Press 5 when formally stack tested using either a TTE or PTE it would have passed such as test and the reasons for such opinion. He will also present his opinion regarding the ability of Press 5 to accommodate the production from Press 4 based upon what was done in 2003 and the historical production and ink purchase records maintained by Packaging.

The following Exhibits will be introduced with Mr. Trzupek's testimony:

Supplemental-Expert Report dated August 9, 2012

Mr. Christopher McClure will testify regarding his preparation of his Expert
 Report dated August 9, 2012 and the facts, conclusions and opinions set forth therein along with

his original Expert Report and the October 19, 2011 letter and attachments to Mr. Simon which was submitted as Exhibit A to Packaging's Motion to Reconsider filed on November 15, 2011. He will testify regarding his experience providing financial advice and opinion including economic impact and economic benefit analysis. He will testify as to his previous opinions presented in this case and to his preparation of his Expert Report dated August 9, 2012 including the facts upon which it is based and his conclusions and opinion as to the lowest cost alternative for achieving compliance for Press 4 and Press 5. He will also summarize his previous testimony concerning the economic benefit for Press 5 based upon the installation of a used control device as an alternative to that imposed by the Board.

The following Exhibits will be introduced with Mr. McClure's testimony: Supplemental-Expert Report dated August 9, 2012

9. Packaging reserves the ability to supplement this testimony and exhibit lists.

Respectfully submitted,

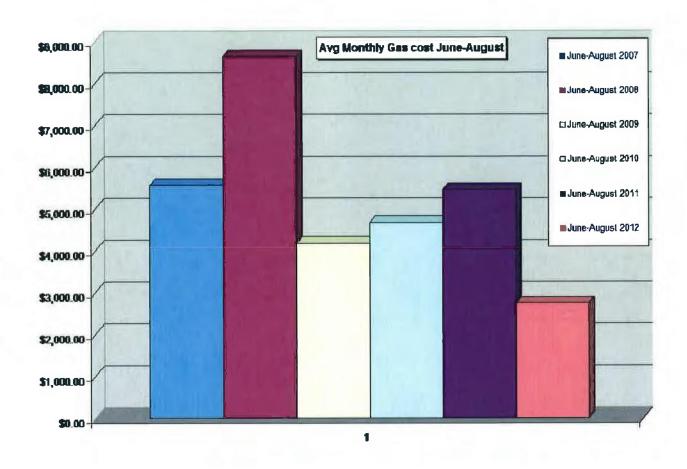
PACKAGING PERSONIFIED, INC.

Roy Marsch

BY:

One of Its Attorneys

Roy M. Harsch Drinker Biddle & Reath LLP 191 North Wacker Drive, Suite 3700 Chicago, Illinois 60606-1698 (312) 569-1441



#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,	)	
Complainant,	)	
v.	,	CB 04-16 Inforcement – Air)
PACKAGING PERSONIFIED, INC., an Illinois Corporation,	)	,
Respondent.	)	

#### **NOTICE OF FILING**

TO: L. Nichole Cunningham Christopher Grant

Assistant Attorney General
Environmental Bureau

Assistant Attorney General
Environmental Bureau

Environmental Bureau

69 West Washington Street, 18<sup>th</sup> Floor 69 West Washington Street, 18<sup>th</sup> Floor

Chicago, Illinois 60602 Chicago, Illinois 60602

**PLEASE TAKE NOTICE** that on August 9, 2012, we filed the attached **RESPONDENT'S EXPERT WITNESS DISCLOSURE** with the Illinois Pollution Control Board, a copy of which is herewith served upon you.

Respectfully submitted,

PACKAGING PERSONIFIED, INC.

One of Its Attorneys

Roy M. Harsch, Esq.
John A. Simon, Esq.
Drinker Biddle & Reath LLP
191 N. Wacker Drive, Suite 3700
Chicago, Illinois 60606-1698
(312) 569-1000

#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,	)
Complainant,	) ) )
v.	) PCB 04-16 ) (Enforcement – Air)
PACKAGING PERSONIFIED, INC., an	) )
Illinois Corporation,	)
Respondent.	, )

#### RESPONDENT'S EXPERT WITNESS DISCLOSURE

Packaging Personified, Inc. ("Respondent") by and through its attorneys, Drinker Biddle & Reath LLP, submits the following expert witness disclosure in accordance with the Hearing Officer Order entered July 3, 2012.

#### Respondent's Expert Witness List

- 1. Christopher McClure, Midwest Practice Leader Forensics, Crowe Horwath LLP, will testify in accordance with his attached Supplement dated August 9, 2012, his October 19, 2011 Supplement, and his original Report dated February 3, 2009.
- 2. Richard Trzupek, Principal Consultant of Trinity Consultants, will testify in accordance with his attached Supplemental Expert Report dated August 9, 2012 and his original Expert Report dated February 3, 2009.

Dated: August 9, 2012 Respectfully submitted,

PACKAGING PERSONIFIED, INC.

One of Its Attorneys

Roy M. Harsch, Esq. John A. Simon, Esq. Drinker Biddle & Reath LLP 191 N. Wacker Drive, Suite 3700 Chicago, Illinois 60606-1698 (312) 569-1000

Christopher T. McClure CPA, CFE

August 9, 2012

John A. Simon Drinker Biddle & Reath LLP 191 N. Wacker Dr. Suite 3700 Chicago IL 60606-1698

Re: PEOPLE OF THE STATE OF ILLINOIS V. PACKAGING PERSONIFIED, INC. PCB 04-16

#### Dear John:

Pursuant to your request, I have enclosed a supplemental calculation of the economic benefit of \$3,662 enjoyed by Packaging Personified under the following assumptions you provided:

- 1. There was no cost to Packaging as a result of shutting down press 4 and shifting production to press 5 in December 2002, and there would have been no cost to Packaging had it shut down press 4 and shifted production to press 5 in March of 1995.
- 2. The cost of constructing a permanent total enclosure around press 5 in order to perform a stack test along the lines of what is frequently required by IEPA construction permits would have been less than \$5,000 in 2004 dollars. I have used \$5,000 for a conservative calculation. This represents both the lowest cost of compliance as well as the course of action that Packaging actually performed in February 2004.
- 3. That there were no monthly costs to maintain the permanent total enclosure and, therefore, no permanently avoided costs to be considered in this analysis.
- 4. That the relevant regulation became effective on March 15, 1995--and thus the date of noncompliance-- and that actual demonstration of compliance to IEPA for press 5 was February 2004 at which time ARI performed a formal stack test at a cost of \$6,180.1
- 5. That the economic benefit calculation be prepared in accordance with the US EPA guidance on calculating economic benefit and the Illinois Statute's lowest cost alternative requirement.

In addition to your assumptions, I have assumed that the total cost of compliance of \$11,180 is an expense and not a capital asset, therefore no depreciation expense is included.

This calculation is limited to analyzing the potential <u>economic benefit penalty component only</u> to possibly be imposed by the Board pursuant to Section 42 (h)(3) of the Illinois Environmental Protection Act and does not address any potential gravity component.

ARI invoice attached to this letter

John A. Simon August 9, 2012 Page 2

This analysis is based on currently available documents and information and is subject to change based on the review of additional information that may be provided. I reserve the right to revise this report.

Very truly yours,

Christopher T. McClure

Packaging Personified, Inc. Economic Benefit Calculation

Delay of cost of constructing a permanent total enclosure around press 5

Scenario Description

		4	a	,					
100					After Tax				Time
Month Near	Paritod	Amuel	Total Annual	Tax Adjustment	Cost	- Arctivit Consociation	Deferred	Interest	of Deferred
15-Mar-95	1	10,594	10,594	(3,920)	6,674	-	6,674	5.94%	\$314
1996	2	0	0	0		0	886'9	5.52%	\$386
1997	က	D	0	0	3	0	7,374	5.63%	\$415
1998	4	0	0	0	9	0	7,789	5.05%	\$393
1999	ß	0	0	0	3	0 (	8,182	5.08%	\$416
2000	9	D	0	0	9	0 0	8,598	6.11%	\$525
2001	7	0	0	0	3	0	9,123	3.49%	\$318
2002	œ	0	0	0	9	0	9,441	2.00%	\$189
2003	6	0	0	0	9	0	069'6	1.24%	\$119
2004	10	0	0	0	J	11,180	3,076	1.89%	\$58
2005	11	0	0	0	9	0	3,134	3.62%	\$113
2006	12	0	0	0	9	0	3,247	4.94%	\$160
2007	13	0	0	0	9	0	3,408	4.53%	\$154
2008	14	0	0	0	3	0	3,562	1.83%	\$65
2009	15	0	0	0	9	0	3,627	0.47%	21\$
2010	16	0	0	0	J	0 (	3,644	0.32%	\$12
2011	17	0	0	0	43	0	3,656	0.18%	27
2012	18	0	0	0	3	0	3,662	0.18%	22
		10,594	10,594	(3,920)	6,674	11,180			3,662

Amount earned on the cumulative deferred spending Total economic benefit of delayed costs **H** H

F Annual deferred spending + time value G Risk-free T-Bill rate to inflate dollars to the date of compliance

A Annual delayed costs deflated to 1995 using PCI B Total Annual delayed costs

KEY

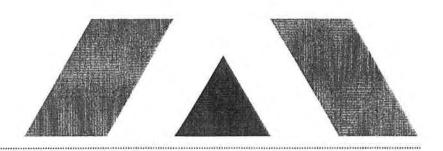
D After-tax amual delayed cost

E Actual expenditures

Privileged and Confidential- Prepared at the Request of Counsel

6180.00 6180.00 AMOUNT YOUR ORDER, NUMBER 4/29/04 DATE OF INVOICE 1UN 0 & 2054 2002 N. 6180.00 TINI PRESE 65101 MATTER STATIS TOTAL CONTROL THIS SOUPCOUNTY 30 - Selection VOC EMISSION TEST PROGRAM ON THE REGENERATIVE MAL OXIDIZER DESTRUCTION EFFICIENCY AT THE NET Y SALESPERSON ATTA SHIP TO FO.B. POINT PACKAGING PERSONFIED FACILITY 2/26/04 Thank goin 1 2004 COUPP DESCRIPTION ANI ENVINCAMENIAL, INC. · · 951 OLD RAND RD. #106 PECNE # 847-487-1580 WAUCONDA, R. 60084 INC. SERVICES RENDERED # 425-01 A SHIEBED MA PACKAGING PERSONIFIED, CAROL STREAM, IL 60188 ACCT PAYABLE ARI PROJECT 246 KEHOE BLVD DATE SHIPPED. THERMAL THE FOR ATTA ACCOUNT NO. CLIANTITY d ë





# EXPERT REPORT - SUPPLEMENTAL Packaging Personified, Inc.

Submitted to: Drinker Biddle & Reath LLP

Prepared By:

Richard Trzupek - Principal Consultant

TRINITY CONSULTANTS
1S660 Midwest Road
Suite 250
Oakbrook Terrace, IL 60181
(630)495-1570

August 9, 2012

Project 121401.0087



Environmental solutions delivered uncommonly well

### **Expert Report - Supplemental**

Flexographic Presses VOM Emissions

#### 1. Introduction

Trinity Consultants, Inc. ("Trinity") was retained to evaluate compliance options related to VOM control from flexographic presses operated by Packaging Personified, Inc. ("PPI") at the company's Carol Stream, Illinois plant.

My qualifications for performing this type of review and evaluation are described in the curriculum vitae attached to this report. My hourly billing rate for this project is \$210 per hour. This supplemental report presents additional information and opinions in order to augment my previously submitted Expert Report dated June 23, 2009, which I have reviewed and which continues to reflect my opinions.

#### 2. VOM Control Efficiency

As noted in my original Expert Report, Press #5, prior to its ducting to the new control system, was equipped with a recirculating drying oven that acted as a control device by oxidizing VOM contained in the inks. It is my understanding that Press #5 was originally installed in 1995 with this recirculating drying oven and operated with said oven. I am familiar with both flexographic presses in general, and presses that are equipped with recirculating ovens in particular, and have been at several printing facilities equipped with one or the other or both. When a press is equipped with a recirculating oven, the amount of natural gas used in the oven is significantly reduced as recirculation rates increase. Thus, there is an economic incentive to operate a recirculating oven at high recirculation rates and, in my experience, this is how these ovens are operated in practice. High recirculation rates will also provide for efficient destruction of the VOM contained in the inks.

A formal compliance test to determine capture and destruction efficiency of the Press #5 control system was not conducted. Had a formal compliance test been conducted after Press #5 was installed, the Illinois Environmental Protection Agency would likely have required PPI to test the system using USEPA Methods 1 – 4 (to determine gas flow rate, molecular weight and moisture content) and one of the following: USEPA Method 18, 25, or 25A (to determine VOM concentration in the gas stream). Method 25A is and was most commonly used to test VOM control devices and, for purposes of this report, it assumed that is the Method that would have been used to determine VOM concentrations. The Methods referenced may be found at 40 CFR, Part 60, Appendix A. Three one hour tests, conducted at the inlet and outlet of the oven, would have been conducted and would have demonstrated compliance with applicable destruction efficiency requirements.

Capture efficiency compliance would have been demonstrated following USEPA Method 204, using the Temporary Total Enclosure (TTE) option. This Method consists of three eight hour tests, following initial, brief "baseline" and "balancing" runs.

Nothing precluded PPI from doing a formal compliance test in 1995. Had PPI chosen to do so, the company could have constructed a Permanent Total Enclosure (PTE) and demonstrated compliance by certifying the construction of the PTE and performing a formal destruction test on the Press #5 recirculating oven.

I have participated in numerous tests involving: the determination of VOM destruction efficiency using Methods 18, 2S and 25A, the determination of capture efficiency using TTEs, and the certification of PTEs, both as a stack tester and a consultant overseeing stack tests. These tests have routinely been accepted by state and federal authorities, including the Illinois Environmental Protection Agency.

#### 3. <u>Emissions Test Costs</u>

I have been involved in emissions testing programs since 1985, both directly as a stack tester (1985 – 1994) and indirectly in developing stack test programs, overseeing stack test programs and writing proposals for stack test programs (1994 – present). Based on my experience, a test program involving the determination of VOM destruction efficiency using Methods 1 – 4 and 25A, and the determination of VOM capture efficiency using a TTE, as described above, would have cost \$15,000 to \$30,000 in 1995, depending on the vendor chosen.

Based on my experience, a test program involving the determination of VOM destruction efficiency using Methods 1 – 4 and 25A, and the certification of a PTE to establish VOM capture efficiency would have cost approximately \$6,000 in 1995. This is the type of test program that was in fact performed in 2004 at PPI and my understanding is that the cost of the test program was slightly more than \$6,000.

#### 4. Press #5 Utilization

The following table details annual VOM usage and annual gross sales at PPI from 1995 through 2004. VOM usage data is based on historical ink and solvent use records maintained by PPI that were used to retroactively create historical Annual Emissions Reports when the failure to submit these reports was identified in 2002. Gross sales data was based on financial records maintained by PPI.

Historical material use data and surrogate parameters such as sales data is commonly used in situations like this when attempting to recreate an emissions history after the fact. I have used this method to recreate an emissions history on several occasions during my career as a consultant and these analyses have

routinely been accepted by state and federal authorities, including the Illinois Environmental Protection Agency.

Year	VOM Usage (lbs)	Gross Sales (millions)	Press(es) in Operation
1995	133,000	\$8.98	4,5
1996	98,500	\$9.75	4,5
1997	109,000	\$12.0	4,5
1998	120,000	\$13.0	4,5
1999	187,000	\$14.4	4,5
2000	200,000	\$15.4	4,5
2001	261,000	\$16.2	4,5
2002	285,000	\$15.8	4,5
2003	373,000	\$18.1	<b>多</b> 分/框 <b>5</b> / 8 / 8
2004	375,000	\$17.4	5,6

It can be seen that PPI used more VOM and generated more sales in 2003 than in any of the previous eight years, even though Press #5 was the only press in operation in 2003. This demonstrates that Press #5 could have accommodated all of the production during the period 1995 through 2002 if PPI had shut down Press #4 in early 1995 and permanently removed it from production.

The above report represents my professional opinions to a reasonable degree of scientific certainty, based on the facts known to me, my training and my experience.

Richard Trzupek, Principal Consultant

Trinity Consultants, Inc.

# Appendix A

Richard Trzupek Curriculum Vitae

### Rich Trzupek

Principal Consultant - Chicago Office



#### 1. AREAS OF SPECIALIZATION

Nonattainment NSR, PSD, and Title V
Expert Testimony and Legal Deposition
Emissions Testing
Technical Communications
Innovative Permitting Strategy
Development
Regulatory Applicability Analysis
Environmental Training
Risk Analysis

#### 2. EDUCATION

B.S., Chemistry, Loyola University of Chicago, 1989

#### 3. AFFILIATIONS

Air & Waste Management Society Graphic Arts Technical Foundation Phillips Foundation (Fellow)

#### 4. TECHNICAL EXPERTISE

Regulatory Development - Participated in development of new state and federal rulemakings designed to limit emissions of nitrogen oxides (NOx) in order to reduce ozone ("smog") in the ambient air.

#### SUMMARY OF EXPERIENCE

Mr. Trzupek has twenty-eight (28) years of experience in the field of air pollution measurement, consulting, and permitting. He has designed and managed a variety of air pollution measurement projects at facilities across the United States. He has lectured on behalf of the USEPA Emission Measurement Technical Information Center (EMTIC) on measurement-related issues and has also developed several new measurement techniques. Mr. Trzupek has served as lead consultant representing a variety of industries in litigation-based programs and frequently serves as the facilitator for effective action between the facility and regulators.

His permitting experience has involved not only the preparation of the permit document, but includes the collection of data, management, and organization of data, development of compliance strategies, negotiation with regulatory and enforcement personnel and effective implementation of emissions management programs designed to maintain facility compliance with permit terms. As a published author, Mr. Trzupek's communication skills and ability to simplify complex technical issues in terms that the general public can easily understand has also been the focus of many successful projects.

Mr. Trzupek's experience includes exposure and familiarity with a wide variety of industries including the petrochemical, cement, steel, utility, non-ferrous metals, graphic arts, synthetic organic chemical, general manufacturing and food processing industries.

Participation involved interaction with regulatory, public interest and industrial groups. Successfully developed and demonstrated the effectiveness of strategies which would reduce NOx emissions from large coal burning sources, but would allow for continued economic growth using cleaner, gas fired power generation.

Successfully argued for a rules change that allowed coating operation to claim credit for a process emissions enclosure even though the enclosure did not meet the applicable federal definition. Technical arguments and demonstrations were utilized to show that the rule in question could not be fairly applied to this process. Effective compliance that both protected the environment and allowed the company to continue operations was achieved.

**Expert Witness Testimony** – Submitted written and oral testimony on behalf of a petrochemical company that had acquired a facility that was not meeting performance guarantees and that contained a number of unpermitted sources of air pollution. Testimony involved analysis of control device performance, emission tests and permitting and compliance review.

**Litigation Support** - Provided regulatory and technical assistance to a metal products manufacturing company operating out of compliance with permitted emissions limits and that was not adhering to an applicable National Emissions Standards for Hazardous Air Pollutants regulation. Successfully returned the facility to compliance and avoided the imposition of any penalties.

**Environmental Communications** - Developed communications strategy for a new biomass-powered power plant to be located in a Environmental Justice area. Designed and authored brochures and other supporting documents; participated in meetings with environmental groups, community groups and elected officials; participated in production of a video that explained the project. As a result of these communications efforts, the project received wide support and was successfully permitted.

**Emissions Measurement** - Developed a technique to determine the emissions of Hazardous Air Pollutants (HAPs) from coke oven emissions as part of a research project for a major steel manufacturer. This project required specially developed techniques due to the broad spectrum of compounds present in this type of emission stream; ranging from very light fixed gases to heavy, tarlike hydrocarbons.

Project manager for research program of new measurement technique for the determination of Volatile Organic Compounds (VOCs). The two-week project involved comparison of USEPA's Temporary Total Enclosure protocol for VOC capture vs. the less costly industry liquid/gas balance method. Refinements to the liquid/gas technique demonstrated the required level of accuracy and have been adopted by USEPA Method 204F.

Designed and managed a testing project for a thermal soil desorption site. This project involved measurement of total Volatile Organic Compounds (VOCs) as well as the determination of individual organic compounds using SW-846 methods.

Designed and validated a technique to utilize chemiluminescence nitrogen oxide (NOx) analyzers for the measurement of ammonia and cyanide. This project involved the experimentation with several types of conditioning packages and converter types. Previously undocumented conversion ratios of chemically bound nitrogen compounds were documented.

Designed a test program to characterize particulate, carbon monoxide and volatile organic compound emissions from an electric arc furnace melt shop and led the project team in execution of the program. This program involved measurement of emissions at a number of different points within the emissions control system exhibiting severe sampling conditions.

**Compliance Assistance** - Manager of a compliance program for a manufacturer which had been out of compliance with air pollution standards for over fifteen (15) years. The program resulted in changes to the control system and strategy at the plant that resulted in the necessary improvement in emissions. Technical research and models were used to determine the degree of environmental harm and toxic risk as a result of the non-compliant status.

Participated in compliance program at a secondary aluminum smelter that was in violation of state and local ordinances. Researched the technical issues involved in the alleged violation, expert testimony, and comparison to similar facilities in the country. The project also focused on a comparison of actual particulate emissions rates, the opacity of emissions, and the effect of particle size distribution on opacity.

Consulted with major oil refinery to demonstrate compliance with particulate limits. Research proved that the measurement methods used were inappropriate to the source and non-biased methods were developed that demonstrated compliance with applicable rules. USEPA and the local

air quality district accepted these research efforts and adopted process specific rules that more accurately characterize particulate emissions from these types of sources.

**Project Management -** Managed project to complete permitting for a 1,000,000 square-foot manufacturing facility. This project involved inventorying over 50 previously unpermitted sources at the facility and developing emission factors for several sources for which no data in the USEPA database existed.

Project manager for consulting project involving a foundry that was subject to odor complaints from the state agency and the local community. The project successfully determined the causes of the nuisance odors, evaluated the risk from the odor-causing compounds, and developed solutions that satisfied regulatory and community concerns.

Developed and managed a Title V permit program for a major Midwestern utility. The project involved the inventorying of over one hundred separate sources, many of which could not be effectively addressed by emissions factors. Extensive research into operational modes was undertaken in order to determine what restrictions were practical for each facility and to develop ways of packaging emissions to create artificial minor sources and avoid Title V restrictions whenever possible. Monitoring and recordkeeping strategies were also being developed as part of this program.

Developed permitting program for waste gasification facility in south suburban Chicago, successfully implementing a strategy to site the facility while avoiding waste transfer/disposal facility regulations that would have significantly delayed the project. Developed emission factors for the process and successfully created a new classification for waste gasification that avoided pyrolisis rules that could have inhibited development.

Modified the permit of a large printing facility in the southeastern United States. Permit restrictions and assumptions that were built into the original permit put the facility in apparent non-compliance and would have resulted in the facility becoming a Title V source in 1995. A combination of technical development, regulatory research, more representative measurements, and a more realistic appraisal of the facility's operation were utilized to develop a basis for changing the permit conditions. The modified permit allows the plant to operate in compliance and to avoid Title V emissions levels.

Managed environmental permitting for a large coal gasification facility located in southern Illinois. This project involved consideration of new, previously unpermitted, processes, dispersion modeling, Best Available Control Technology (BACT) review and management of public relations related to environmental issues.

Project manager for initial performance demonstration of a large cogeneration project. Project involved quantification of all criteria pollutants and sensitive measurement of trace quantities of state regulated pollutants. Project activities involved coordination of measurement crews, facility personnel and regulators for round-the-clock activity over a six-week period.

#### 5. PUBLICATIONS AND PRESENTATIONS

Author, "Air Quality Compliance and Permitting Manual," McGraw-Hill, 2002.

Editorial contributor, Chicago Tribune, 1996 - 20012 (various environmental topics)

Columnist, Examiner Publications, 2000 - Present

Lecturer, "Air Quality Regulation," Loyola University of Chicago Law School, 1998 - Present

Lecturer, "Dispersion Modeling and Environmental Regulation," Furman University, 2002- Present

Contributing author to "Odor and VOC Control," McGraw Hill, 1998, Harold J. Rafson Editor in Chief. "Emissions Estimations Methods," presented for Executive Enterprises conference on Clean Air Act Basics (June 1997), Chicago, IL.

"Developments in Capture Test Methods," presented at the Graphic Arts Technical Foundation environmental conference, (April 1997), St. Louis, MO.

"Preparing Smart Operating and Construction Permits Applications: Avoiding the 7 Basic Mistakes," published in Air & Waste Management Association's EM Magazine (September 1996), Pittsburgh, PA.

"New Ozone Regulations on the Horizon," published in ABA Section of Natural Resources, Energy, and Environmental Law Newsletter (May/June 1996), Chicago, IL.

"Determination of VOC Capture Efficiency by Carbon Mass Balance," co-author: Cheryl A. Smith, presented at the A&WMA Annual Meeting, June, 1995.

"Permitting Issues Under the Clean Air Act Amendments of 1990," conference co-chair for the Lake Michigan chapter of the A&WMA, September, 1994.

"Enhanced Monitoring, A New World of Demonstrating Compliance," presented at the Midwest Cogeneration Association conference, August 1994.

"Illinois Directors Meeting – New EPA Air Regulations. Impacting Camus Physical Plants," Wheaton College, Illinois. March 10, 2011

"The Title V Permit Program under the Clean Air Act Amendments of 1990", seminar co-chaired with Nancy Rich of Katten, Muchin and Zavis, April 1994.

"Emissions Inventories and the Clean Air Act Amendments of 1990", presented at Executive Enterprises Seminar, January 1994.

"Understanding Air Permitting and Environmental Regulation", presented at Purdue Fuel Conference Seminar, September 1993.

"Developments in VOC Capture Technology", co-author: David A. Ozawa, presented to the Gravure Arts Association, May 1993.

"Measurement of Volatile Organic Compounds in Air", presented to the Emissions Measurement Technical Information Center, October 1992.

"Achieving Compliance Under MACT", co-author: Cheryl A. Smith, presented to the A&WMA, January 1992.

### 6. EMPLOYMENT HISTORY

2012 - Present	<b>Trinity Consultants</b>
2006 - 2012	Mostardi Platt
2000 - 2006	Huff & Huff, Inc.
1994 - 2000	Air Solutions, Inc.
1992 - 1994	Mostardi Platt
1985 - 1992	Almega, Inc.

CH01/25998355.1

#### **CERTIFICATE OF SERVICE**

The undersigned certifies that a copy of the foregoing **RESPONDENT'S EXPERT WITNESS DISCLOSURE** was filed with the Illinois Pollution Control Board and served upon the parties below by U.S. First Class Mail and Electronic Mail on August 9, 2012:

Christopher J. Grant L. Nichole Cunningham Assistant Attorneys General Environmental Bureau 69 West Washington Street, 18<sup>th</sup> Floor Chicago, Illinois 60602

John A. Simon

	VOC Rep	ortingto Edw pplication re	vin C. Bakov quest for ac	wski IEPA p Iditional infc	rovided thro	VOC Reportingto Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID No:043020ACJ	i Platt May	13th 2009		i i
Press #	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67	3.37	0.49	1 22	
Press 4	6.22	4.59	5.09	5.57	8 71	25	12.18	2 6	62.1	o page
Press 5	14.50	10.72	11.89	13.04	75 00	27 70	25.45	27.7	00:00	orodule on
				200	40.04	21.70	78.97	86.72	59.84	
Total without 1&2	20.72	15.31	16.98	18.58	29.05	31.12	40.60	35.30	59 PA	press
Grand Total	24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.07	

														7000
2003	549,190	551,534	636,383	548,821	457,928	401,362	423,349	616,558	538,688	470,097	432.764	398,009	6,024,683	E0 24
2002	500,856	400,054	506,322	438,780	995'009	425,326	490,796	569,986	334,589	314,275	279,970	478,546	5,340,066	75.64
2001	224,200	279,999	371,488	463,077	454,040	470,136	464,074	397,472	329,620	388,883	296,024	361,312	4,500,325	55.42
2000	297,224	272,002	329,448	393,663	341,927	302,430	323,143	284,432	378,747	411,493	293,974	219,297	3,847,780	61.82
	2001 2002	2000         2001         2002         2003           287,224         224,200         500,856         549,190	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821	2000         2001         2002         2003           297,224         224,200         50,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928	2000         2001         2002         2003           297,224         224,200         50,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,488         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           323,143         464,074         490,796         423,349	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,48         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           323,143         464,074         490,796         423,349           284,32         397,472         569,986         616,558	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           284,432         397,472         569,986         616,558           378,747         329,620         334,589         538,688	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           284,432         397,472         569,986         616,558           378,77         329,620         334,589         538,688           411,493         388,883         314,275         470,097	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,21           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           284,432         397,472         569,986         616,558           378,77         329,620         334,589         538,688           411,493         388,883         314,275         470,097           293,974         296,024         279,970         432,764	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           284,432         397,472         569,986         616,558           378,77         329,620         334,589         538,688           411,493         388,883         314,275         470,097           293,974         296,024         279,970         478,764           219,297         361,312         478,546         398,009	2000         2001         2002         2003           297,224         224,200         500,856         549,190           272,002         279,999         400,054         551,534           329,448         371,488         506,322         636,383           393,663         463,077         438,780         548,821           341,927         454,040         600,566         457,928           302,430         470,136         425,326         401,362           284,432         397,472         569,986         616,558           378,747         329,620         334,589         538,688           411,493         388,883         314,275         470,097           293,974         279,970         432,764           293,974         279,970         432,764           293,974         279,970         432,764           219,297         361,312         478,546         398,009           3,847,780         4,500,325         5,340,066         6,024,683

Production Pounds for Carol Stream Press Dept Offline presses only

Calender Year 1995

1995 estimated pounds of substrate produced	209,963	209,963	209,963	209,963	209,963	209,963	209,963	209,963	209,963	209,963	209,963	209,963	2,519,552
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Pounds above are calculated based upon the VOM data for the years with known pounds produced and known VOM volumes

All Presses		Pre	Press 4		Press 6	9
Total Estimated Footage	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data	Estimated footage	Estimated	Total VOM in Pou originally calcufrom previous available do
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	162	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
10,498,133	3,674,347	136	1,037	6,823,787	162	2,417
10,498,133	3,674,347	136	1,037	6,823,787	152	2,417
125,977,600	44,092,160	1,633	12,440.00	81 885 440	1 820	00 000 00

upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions

60.80

Average pounds of substrate per pound of VOM based

The assumptions that were made to recreate this data are as follows

1 : Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions is 60.8

2 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available

3 : Press 4 produced approximately 36% of the produced footage at an average of 3 colors run per Job consuming 40% less ink per 1000 feet produced

4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours

are calciated based upon that

6 : Press 6 produced approximately 65% of the produced footage at an average of 6 colors run per Job consuming 60% more ink per 1000 feet produced

6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calciated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID Nordandad

	2	בססו להשונים ומושיולים וסו שממו	בלחבטו וחו שח		ormation ID Not04302	No:043020ACJ		
Press #	1995	1996	1887	1998	1889	2000	2004	2003
Press 1&2	3.98	4 06	3.49	0 58	07.0	107	100	7007
	1			3	6.70	/0.1	3.3/	0.49
F7888 4	6.22	4.59	5.09	5.57	871	0 34	42.40	2 7.0
Dreee K	47.50	40.30	200			5	12.10	71.1
riese o	5.00	10.72	11.89	13.01	20.34	21.78	28.42	27.50
ofal without 12.2	30.70		00 41			21:12	20.76	00.12
Stal Million Int	77.07	15.31	16.98	18.58	29.05	31.12	40.60	76 20
Grand Total	24 70						10.00	00.50
The same of	24.70	13.3/	20.47	19.16	31.75	32.79	43 97	25 70

Production Pounds for Carol Stream Press Dept Offline presses only

1996 estimated pounds of substrate produced
155,141
155,141
155,141
155,141
155,141
155,141
155,141
155,141
155,141
155,141
155,141
155,141
1.861.696

Pounds above are calculated based upon the VOM data for the years with known pounds produced and known VOM volumes

			Calender Yea	r 1996				
All Presses  Total Estimated Footage		Pr	ress 4	Press 5				
	Estimated 1ootage	Estimated hours	Total VOM in Pounds as originally calculated from proviously available data	Estimated 100tage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	785	5,042,093	112	1,787		
7,757,067	2,714,973	101	785	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,083	112	1,787		
7,757,067	2,714,973	101	785	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,087	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
7,757,067	2,714,973	101	765	5,042,093	112	1,787		
93,084,800	32,579,680	1.207	9,180.00	60,505,120	1,345	21,440.00		

Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2009-2003 compared to previously calculated VOM emissions 60.80

The assumptions that were made to recreate this data are as follows

- Average pounds of aubstrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions ta 60.8
- 2 : Footage produced was converted based upon an aversge value of 20# per 1000 feet of material (this value was compared to years where both 1ootage and pound information was available
- 3 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calcilated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more link per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calciated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009

Press #	1995	1996	1997	1998	nation ID No:04302	2000			
Press 182	3.98	4.06	3,48				2001	2002	2003
Pross 4				0.58	2.70	1.67	3.37	0.46	1.23
	6.22	4.59	5.09	5.57	8,71	9.34	12.18	7.72	0.00
Press 5	14 50	10 72	11.89	13,01	20,34	21.78	26.42		
otal without 182	20.72	15.31	16.98	18.58				27.58	59.84
Grand Total					29.05	31.12	40.60	35.30	59.84
Grand Total	24.70	19.37	20,47	19.16	31.75	32.79	43.97	35.79	61.07

Production Pounds for Carol Stream Press Dept

Offline presses only
1997 estimated pounds of substrate produced
172,064
172,064
172,064
172,064
172,064
172,064
172,064
172,064
172,064
172,064
172,064
172,064
2,064,768

Pounds above are calculated based upon the VOM data for the years with known pounds produced and known VOM volumes

		Calender Year 1997											
Total Estimated Footage		Pro	oss 4	Press 5									
	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
8,603,200	3,011,120	112	848	5,592,080	124	1,982							
103,238,400	36,133,440	1,338	10,180.00	67,104,960	1,491	23,780.00							

Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions

The assumptions that were made to recreate this data are as follows

- 1 : Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions is 60.8
- 2 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 3 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated
- hours are calclated based upon that
- 5 : Press 5 produced approximately 85% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calciated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID No.043020AC I

Press #	1995	1996	1997	1998	1999	2000	2001	2002	2003
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67	3,37	0.49	
Press 4	6.22	4.59	5.09	5.57	8.7t	9.34	12.18	7.72	1,23
Press 5	14.50	10.72	11.89	13.01	20.34	21.78	28.42	27.58	0.00 59.84
Total without 182	20.72	15.31	16.98	18.58	29 05	31.12	40.60	35.30	59.84
Grand Total	24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.07

Production Pounds for Carol Stream Press Dept Offline presses only

1998 estimated pounds of substrate produced
188,277
188,277
188,277
188,277
188,277
188,277
188,277
188,277
188,277
188,277
188,277
188,277
2,259,328

	Salar Salar		Calender	Year 1998					
All Presses  Total Estimated Footage		P	rass 4	Pross 5					
	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
9,413,867	3,294,853	122	928	6,119,013	136	2,168			
112,966,400	39,538,240	1,464	11,140.00	73,428,160	1,632	26,020.00			

Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculate VOM emissions

The assumptions that were made to recreate this data are as follows

- 1 : Average pounds of substrate per pound of VOM based upon comparison of known pounds produced from 2000-2003 compared to previously calculated VOM emissions is 60.8
- 2 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 3 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
  4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calculated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calclated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009

Press #	1995	1996	1997	4000					
				1998	1999	2000	2001	2002	2003
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67	3.37		
Press 4	6.22	4.59	5.09	5.57				0.49	1.23
				3.57	8.71	9.34	12.18	7.72	0.00
Press 5	14.50	10.72	11.89	13.01	20,34	21.78	28.42		
otal without 182	20.72	15.31	16.98				20.42	27.58	59.84
0			10.30	18.58	29.05	31,12	40.60	35.30	59.84
Grand Total	24.70	19.37	20.47	19.16	31.75	20.70			39.84
				13,10	31.73	32.79	43.97	35.79	61.07

Production Pounds for Carol Stream Press Dept

Offine presses only
1999 ostimated pounds of substrato produced
294,373
294,373
294,373
294,373
294,373
294,373
294,373
294,373
294,373
294,373
294,373
294,373

Pounds above are calculated based upon the VOM data for the years with known pounds produced and known VOM volumes

			Calender Yea	ar 1999				
Total Estimated Footage	79/03	Pr	ess 4	Press 5				
	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data	Estimated footage	Estimated hours	Total VOM in Pounds as originally calculated from previously available data		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	19t	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
14,718,667	5,151,533	191	1,452	9,567,133	213	3,390		
176,624,000	61,818,400	2,290	17,420.00	114,805,600	2,551	40,680.00		

Average pounds of substrate per pound of VOM based upon comparison of known pounds producad from 2000-2003.

compared to previously calculated VOM emissions

The assumptions that were made to recreate this data are as follows

- Average pounds of substrate per pound of VOM based upon comparison of known pounds produced frem 2000-2003 compared to previously calculated VOM emissions is 60.8
- 2 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 3 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
- 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calciated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calclated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009

Press #	1995	1996	1997	1998	1999	2000	9004		
Press 182	3.98	4.06	3.49	0.58			2001	2002	200
Press 4	6.22				2,70	1.67	3.37	0.49	1.2
		4.59	5.09	5.57	8.71	9.34	12.18	7.72	0.0
Press 5	14.50	10,72	11.89	13,01	20.34	21.78	28.42	27,58	
Total without 1&2	20,72	15.31	16.98	18.58	29.05	31.12			59.8
Grand Total	24.70	19.37				_	40.60	35.30	59.8
	24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.0

#### Production Pounds for Carol Stream Press Dept Offline presses only

2000, pounds of substrate
produced
297,224
272,002
329,448
393,663
341,927
302,430
323,143
284,432
378,747
411,493
293,974
219,297
3,847,780
3,847,780

Pounds above are based upon summary data still available in our data history and accepted as

	Calender Year 2000												
All Presses Total Estimated Footage		Press 4			Press 5								
	Estimated footage	Estimated hours	Estimated Total VOM in Pounds	Estimated footage	Estimated hours	Estimated Total VOM in Pounds							
14,861,200	5,201,420	192.65	1,443	9,659,780	214.66								
13,600,100	4,760,035	176.30	1,321	8,840,065	196.45	3,365							
16,472,400	5,765,340	213.53	1,599	10,707,060	237.93	3,079							
19,683,150	6,889,103	255.15	1,911	12,794,048	284.31								
17,096,350	5,983,723	221.62	1,660	11,112,628	246.95	4,457 3,871							
15,121,500	5,292,525	196.02	1,468	9,828,975	218.42	3,424							
16,157,150	5,655,003	209.44	1,569	10,502,148	233.38	3,658							
14,221,600	4,977,560	184.35	1,381	9,244,040	205.42	3,220							
18,937,350	6,628,073	245.48	1,839	12,309,278	273.54	4,288							
20,574,650	7,201,128	266.71	1,998	13,373,523	297.19	4,658							
14,698,700	5,144,545	190.54	1,427	9,554,155	212.31	3,328							
10.964,850	3,837,698	142.14	1,065	7,127,153	158.38	2,483							
192,389,000	67,336,150	2,494	18,680	125,052,850	2,779	43,560							

The assumptions that were made to recreate this data are as follows

- 1 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 2 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
- 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calclated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calclated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID No:043020ACJ

THE RESIDENCE AND ADDRESS OF THE PARTY OF TH					THOUSAND IN	7 140.043020/	CJ		
Press #	1995	1996	1997	1998	1999	2000	2001	2002	2003
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67			
Press 4	6.22	4.59	5.09	5.57	8.71		3.37	0.49	1.23
Press 5	14.50	10.72	11.89			9.34	12.18	7.72	0.00
Total without 1&2	20.72			13.01	20.34	21.78	28.42	27.58	59.84
Grand Total		15.31	16.98	18.58	29.05	31.12	40.60	35.30	59.84
Grand Total	24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.07

#### Production Pounds for Carol Stream Press Dept Offline presses only

2001, pounds of substrate
produced
224,200
279,999
371,488
463,077
454,040
470,136
464,074
397,472
329,620
388,883
296,024
361,312
4,500,325

Pounds above are based upon summary data still available in our data history and accepted as accurate

Calender Year 2001												
All Presses Total Estimated Footage		Press 4		Press 5								
	Estimated footage	Estimated hours	Estimated Total VOM In Pounds	Estimated footage	Estimated hours	Estimated Total VOM in Pounds						
11,210,000	3,923,500	145.31	1,214	7,286,500	161.92	2,832						
13,999,950	4,899,983	181.48	1,516	9,099,968	202.22	3,536						
18,574,400	6,501,040	240.78	2,011	12,073,360	268.30	4,692						
23,153,850	8,103,848	300.14	2,507	15,050,003	334.44	5,849						
22,702,000	7,945,700	294.29	2,458	14,756,300	327.92	5,735						
23,506,800	8,227,380	304.72	2,545	15,279,420	339.54	5,938						
23,203,700	8,121,295	300.79	2,512	15,082,405	335.16	5,861						
19,873,600	6,955,760	257.62	2,151	12,917,840	287.06	5,020						
16,481,000	5,768,350	213.64	1,784	10,712,650	238.06	4,163						
19,444,150	6,805,453	252.05	2,105	12,638,698	280.86	4,912						
14,801,200	5,180,420	191.87	1,602	9,620,780	213.80	3,739						
18,065,600	6,322,960	234.18	1,956	11,742,640	260.95	4,563						
225,016,250	78,755,688	2,917	24,360.00	146,260,563	3,250	56,840						

The assumptions that were made to recreate this data are as follows

- 1 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 2 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
- 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calclated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more lnk per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calciated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID No:043020ACJ

1995	1996	1997	1998	1999	2000	2001	2002	2003
3.98	4.06	3.49	0.58	2.70	1.67			1.23
6.22	4.59	5.09	5.57					0.00
14.50	10.72	11.89	13.01	20,34				59.84
20.72	15.31	16.98	18.58	29.05				59.84
24.70	19.37	20.47	19.16	31.75				61.07
	3.98 6.22 14.50 20.72	3.98 4.06 6.22 4.59 14.50 10.72 20.72 15.31	3.98 4.06 3.49 6.22 4.59 5.09 14.50 10.72 11.89 20.72 15.31 16.98	3.98 4.06 3.49 0.58 6.22 4.59 5.09 5.57 14.50 10.72 11.89 13.01 20.72 15.31 16.98 18.58	3.98         4.06         3.49         0.58         2.70           6.22         4.59         5.09         5.57         8.71           14.50         10.72         11.89         13.01         20.34           20.72         15.31         16.98         18.58         29.05	3.98     4.06     3.49     0.58     2.70     1.67       6.22     4.59     5.09     5.57     8.71     9.34       14.50     10.72     11.89     13.01     20.34     21.78       20.72     15.31     16.98     18.58     29.05     31.12	3.98     4.06     3.49     0.58     2.70     1.67     3.37       6.22     4.59     5.09     5.57     8.71     9.34     12.18       14.50     10.72     11.89     13.01     20.34     21.78     28.42       20.72     15.31     16.98     18.58     29.05     31.12     40.60	3.98     4.06     3.49     0.58     2.70     1.67     3.37     0.49       6.22     4.59     5.09     5.57     8.71     9.34     12.18     7.72       14.50     10.72     11.89     13.01     20.34     21.78     28.42     27.58       20.72     15.31     16.98     18.58     29.05     31.12     40.60     35.30

Production Pounds for Carol Stream Press Dept Offline presses only

2002, pounds of
substrate produced
500,856
400,054
506,322
438,780
600,566
425,326
490,796
569,986
334,589
314,275
279,970
478,546
5,340,066

Pounds above are based upon summary data still available in our data history and accepted as accurate

		Ca	lender Ye	ar 2002		
All Presses Total Estimated Footage		Press 4				
	Estimated footage	Estimated hours	Estimated Total VOM In Pounds	Estimated footage	Estimated hours	Estimated Total VOM In Pounds
25,042,800	8,764,980	292.17	1,448,15	16,277,820	361.73	
20,002,700	7,000,945	233.36	1,156.70	13,001,755	288.93	4,935 3,942
25,316,100	8,860,635	295.35	1,463,95	16,455,465	365.68	4,989
21,939,000	7,678,650	255.96	1,268,67	14,260,350	316.90	4,324
30,028,300	10,509,905	350.33	1,736.45	19,518,395	433.74	5,918
21,266,300	7,443,205	248.11	1,229,77	13,823,095	307.18	4,191
24,539,800	8,588,930	286.30	1,419.06	15,950,870	354.46	4,836
28,499,300	9,974,755	332.49	1,648.03	18,524,545	411.66	5,617
16,729,450	5,855,308	195.18	967.41	10,874,143	241.65	3,297
15,713,750	5,499,813	183.33	908.68	10,213,938	226.98	3,097
13,998,500	4,899,475	163.32	809,49	9,099,025	202.20	2,759
23,927,300	0	0.00	0.00	23,927,300	531,72	7,255
267,003,300	93,451,155	2,836	15,440.00	181,926,700	4,043	55,160.00

The assumptions that were made to recreate this data are as follows

- 1 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 2 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
- 4 : Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calclated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calclated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009 FESOP Application request for additional information ID No:043020ACJ

THE RESIDENCE OF THE PARTY OF T									
Press #	1995	1996	1997	1998	1999	2000	2001	2002	2003
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67	3.37		
Press 4	6.22	4.59	5.09	5.57	8.71	9.34		0.49	1.23
Press 5	14.50	10.72	11.89	13.01	20.34	21.78	12.18	7.72	0.00
Total without 1&2	20.72	15.31	16.98	18.58			28.42	27.58	59.84
Grand Total	24.70				29.05	31.12	40.60	35.30	59.84
	24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.07

Production Pounds for Carol Stream Press Dept Offline presses only

Charles and the same
2003, pounds of
substrate produced
549,190
551,534
636,383
548,821
457,928
401,362
423,349
616,558
538,688
470,097
432,764
398,009
6,024,683

Pounds above are based upon summary data still available in our data history and accepted as accurate

		Ca	lender Ye	ar 2003		
All Presses	Press 4 Sh	out Down an	d moved out		Press 5	
Total Estimated Footage	Estimated footage	Estimated hours	Estimated Total VOM In Pounds	Estimated footage	Estimated hours	Estimated Total VOM In Pounds
27,459,500	0	0.00	0.00	27,459,500	610.21	10,910
27,576,700	0	0.00	0.00	27,576,700	612.82	10,956
31,819,150	0	0.00	0.00	31,819,150	707.09	
27,441,050	0	0.00	0.00	27,441,050	609.80	12,642
22,896,400	0	0.00	0.00	22,896,400	508.81	9,097
20,068,100	0	0.00	0.00	20,068,100	445.96	7,973
21,167,450	0	0.00	0.00	21,167,450	470.39	8,410
30,827,900	0	0.00	0.00	30,827,900	685.06	12,248
26,934,400	0	0.00	0.00	26,934,400	598.54	10,701
23,504,850	0	0.00	0.00	23,504,850	522.33	9,338
21,638,200	0	0.00	0.00	21,638,200	480.85	8,597
19,900,450	0	0.00	0.00	19,900,450	442.23	7,906
301,234,150	0	0	0.00	301,234,150	6,694	119,680.00

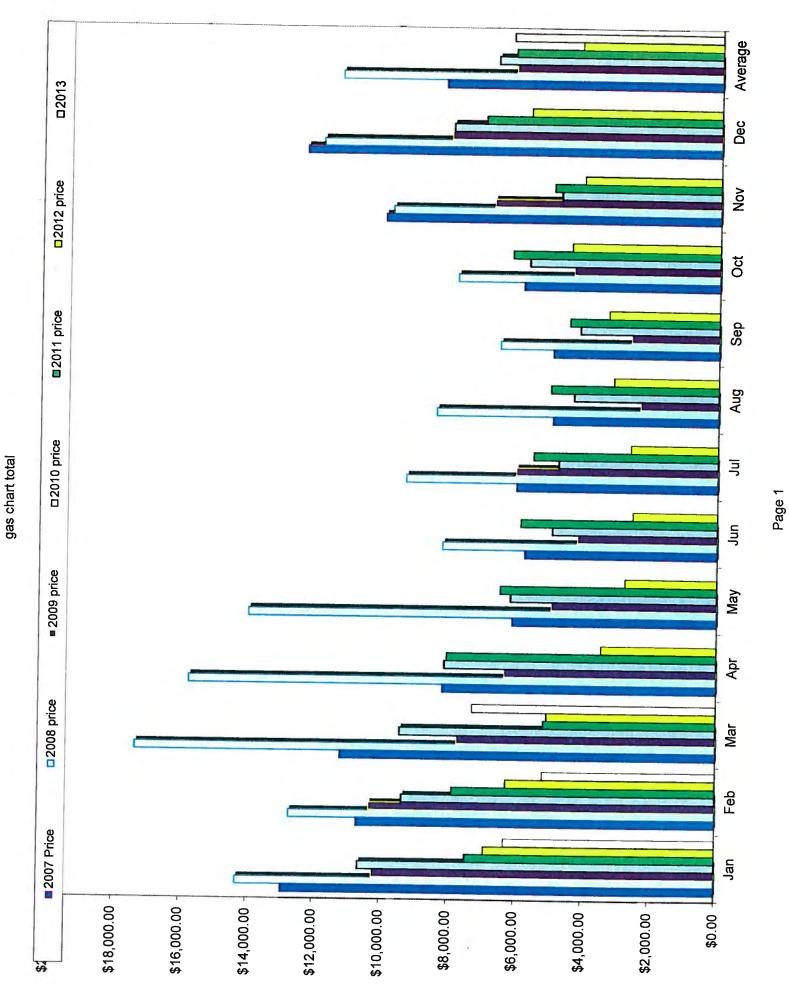
The assumptions that were made to recreate this data are as follows

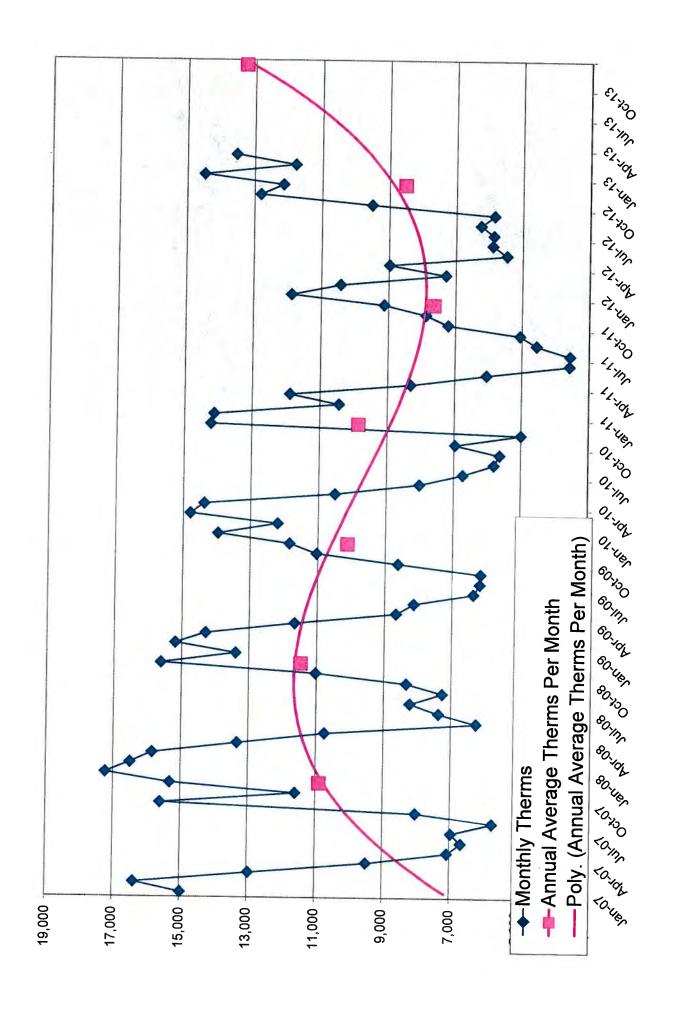
- 1 : Footage produced was converted based upon an average value of 20# per 1000 feet of material (this value was compared to years where both footage and pound information was available
- 2 : Press 4 produced approximately 35% of the produced footage at an average of 3 colors run per job consuming 40% less ink per 1000 feet produced
- 4: Press 4 produced at a run rate of approximately 450 FPM and estimated hours are calclated based upon that
- 5 : Press 5 produced approximately 65% of the produced footage at an average of 5 colors run per job consuming 60% more ink per 1000 feet produced
- 6 : Press 5 produced at a run rate of approximately 750 FPM and estimated hours are calclated based upon that

VOC Reporting to Edwin C. Bakowski IEPA provided through Mostardi Platt May 13th 2009

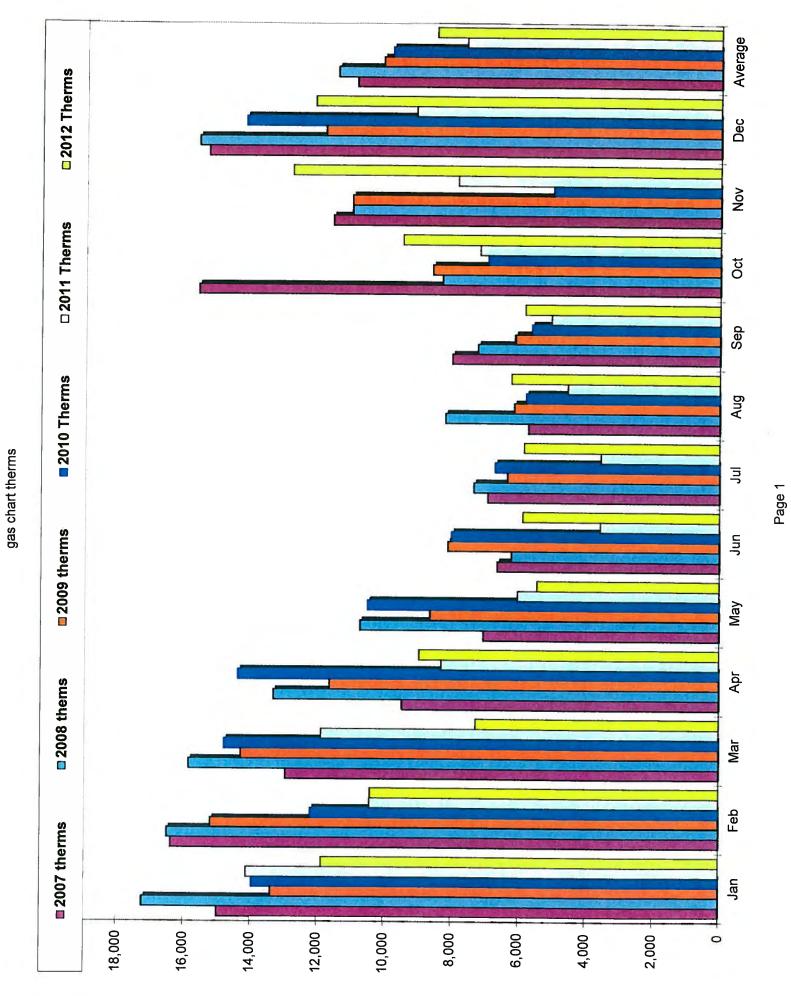
FESOP Application request for additional information ID No:043020ACJ

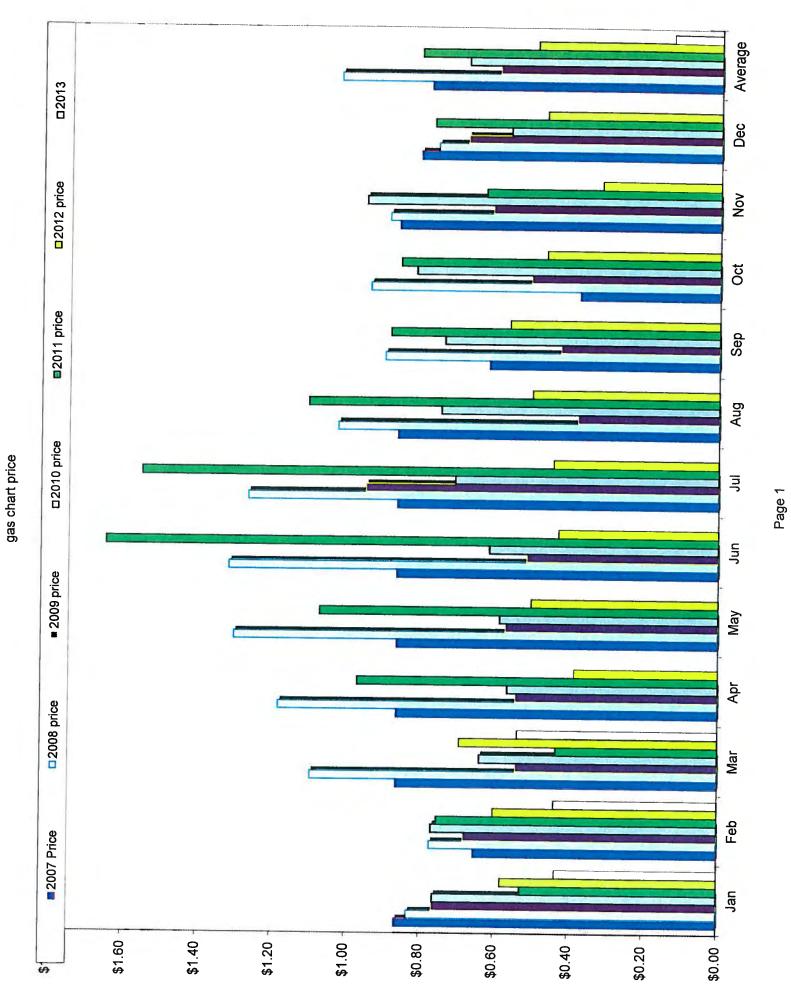
Press #	1995	1996	4007			110.0-10020/10	70		
	1999	1990	1997	1998	1999	2000	2001	2002	2003
Press 1&2	3.98	4.06	3.49	0.58	2.70	1.67	3.37	0.49	
Press 4	6.22	4.59	5.09	5.57	8.71	9.34	12.18		1.23
Press 5	14.50	10.72	11.89	13.01	20.34	21.78		7.72	0.00
Total without 1&2	20.72	15.31	16.98	18.58			28.42	27.58	59.84
Grand Total	24.70				29.05	31.12	40.60	35.30	59.84
Crand Total 24.70	19.37	20.47	19.16	31.75	32.79	43.97	35.79	61.07	





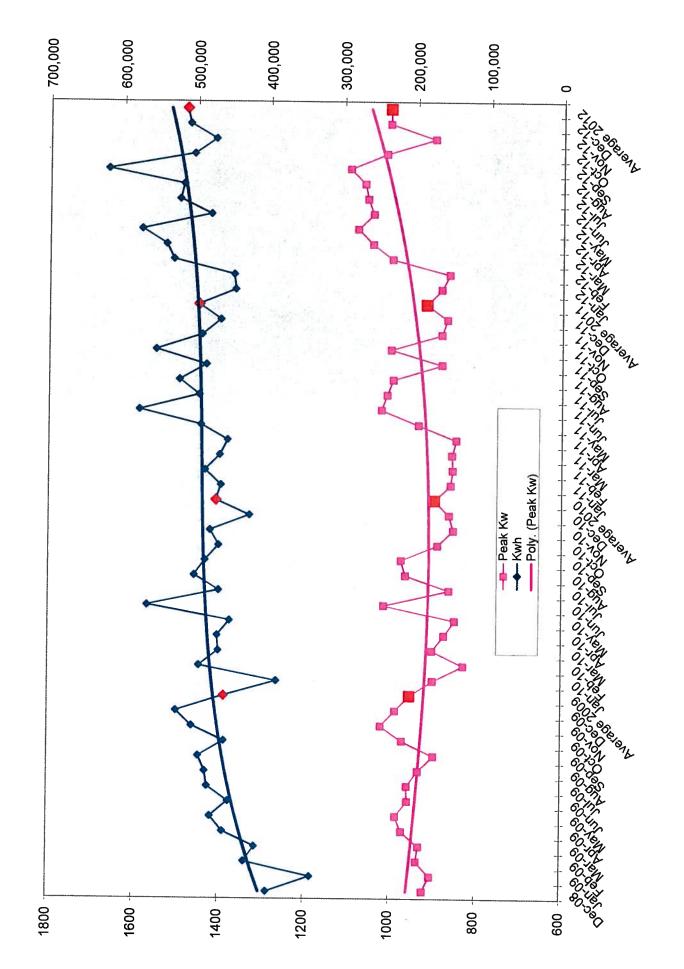
	Supplier	Therms		Total invoice	Effective cost per therm	
Jan-07	Direct Energy	14,983		\$12,960.51	\$0.86	Jar
Feb-07	Direct Energy Direct Energy	16,372		\$10,704.98	\$0.65	Fet
Apr-07	Direct Energy	12,962 9,476		\$11,212.48 \$8,196.44	\$0.87	Ma
May-07	Direct Energy	7,068		\$6,113.96	\$0.86 \$0.87	Apr
	Direct Energy	6,662		\$5,762.42	\$0.86	May Jun
	Direct Energy Direct Energy	6,960 5,736		\$6,020.22	\$0.87	Jul
	Direct Energy	8,025		\$4,961.92 \$4,975.20	\$0.87 \$0.62	Aug
Oct-07	Direct Energy	15,600		\$5,866.94	\$0.38	Sep
	Integrys	11,600		\$10,028.87	\$0.86	Oct Nov
verage 07	integrys	15,320	10,897	\$12,383.64	\$0.81	Dec
Jan-08	Integrys	17,230		\$8,265 63 \$14,325.63	\$0 78 \$0 83	130 764 \$99,187 58 \$0 76 Ave
Feb-08	Integrys	16,500		\$12,732.53	\$0 77	
	Integrys	15,848		\$17,346.04	\$1 09	
	Integrys Integrys	13,332		\$15,756.76	\$1.18	
Jun-08	Integrys	6,240		\$13,990.78 \$8,212.47	\$1 30 \$1 32	
Jul-08	Integrys	7,368		\$9,324.16	\$1 27	
Aug-08	Integrys	8,221		\$8,428.97	\$1 03	
Oct-08	Integrys Nicor	7,260 8,332		\$6,531.30	\$0 90	
Nov-08		11,022		\$7,827.57 \$9,796.89	\$0 94 \$0.89	
Dec-08		15,612	11,476	\$11,882.23	\$0.76	
/erage 08 Jan-09	Nicor	12 200		\$11,346.28	\$1 02	137,708 \$136,155,33 \$0,99
Feb-09		13,392		\$10,229.17	\$0.76	
Mar-09	Nicor	14,292		\$10,339.22 \$7,750.38	\$0 68 \$0 54	
Apr-09	Nicor	11,658		\$6,331.26	\$0.54	
May-09	Nicor Const NE	8,656		\$4,946.05	\$0 57	
	Const NE	8,137 6,358		\$4,194.89 \$6,032.70	\$0.52	
	Const NE	6,169		\$2,336.53	\$0.95 \$0.38	
	Const NE	6,150		\$2,624.95	\$0.43	
	Const NE	8,615		\$4,377.35	\$0.51	
	Const NE	11,030	10,124	\$6,761.95	\$0.61	
erage 09		11,040	10,124	\$8,076.49 \$6,166.75	\$0.68 \$0.60	121,490 \$74,000.94 \$0.61
	Const NE	13,960		\$10,641.07	\$0.76	121,490 \$74,000 94 \$0 61
	Const NE	12,200		\$9,367.32	\$0.77	
	Const NE	14,790		\$9,455.45 \$8,133.77	\$0.64	
May-10 (	Const NE	10,510		\$6,166.53	\$0.57 \$0.59	
	Const NE	8,020		\$ 4,936.50	\$0.62	
Aug-10 (	Const NE	6,728		\$ 4,773.38	\$0.71	
Sep-10 (		5,799 5,630		\$ 4,337.57 4,163.64	\$0.75 \$0.74	
Oct-10	Const NE	6,963		5,695.86	\$0.74	
Nov-10 C		5,000		4,765.04	\$0.95	
Dec-10 C	Onst NE	14,213	9,849	8,031.07	\$0.57	
Jan-11 C	Const NE	14,120		6,705.60 \$7,452.42	\$0.68 \$0.53	118,193 \$80 467 20 \$0 68
Feb-11 C		10,429		\$7,863.77	\$0.75	
Mar-11 C		11,885		\$5,153.62	\$0.43	
Apr-11 C		8,310 6,043		\$8,057.91	\$0 97	
Jun-11 C		3,570		\$6,470.81 \$ 5,872.29	\$1.07	
Jul-11 C	onst NE	3,557		\$ 5,508.72	\$1.64 \$1.55	
Aug-11 C		4,552		5,021.98	\$1.10	
Sep-11 C		5,050 7,207	$\longrightarrow$	4,473.89	\$0.89	
Nov-11 C		7,877	+	6,199.04 4,976.50	\$0.86 \$0.63	
Dec-11 C		9,120	7.643	7,048.00	\$0 63 \$0 77	
rage 11	onet NIE	14 000		6,174.91	\$0.93	91,719 \$74,098 95 \$0.81
Jan-12 C Feb-12 C		10,413		\$6,895.16	\$0.58	
Mar-12 C	onst NE	7,288	-	\$6,259.37 \$5,059.28	\$0 60 \$0 69	
Apr-12 C	onst NE	8,965		\$3,447.24	\$0.38	
May-12 C	onst NE	5,460		\$2,741.91	\$0.50	
Jun-12 C		5,889 5,860			\$0.43	
Aug-12 C		6,248	_		\$0.44 \$0.50	
Sep-12 C	onst NE	5,845		3,299.07	\$0.50 \$0.56	
Oct-12 Co	onst NE	9,502		4,432.50	\$0.47	
Nov-12 Co		12,809	8.624	4,066.94	\$0.32	
age 12	THE PARTY OF THE P	12,142	8,524	5,690,63 4,179 79	\$0.47	102 200
Jan-13 Co	onst NE	14,484		\$6,290.49	\$0.50 \$0.43	102.290 \$50.157.46 \$0.49
Feb-13 Co	onst NE	11,786		\$5,162.26	\$0 44	
Mar-13 Co		13,535	$ \top$	\$7,279.77	\$0.54	
Apr-13 Co						
Jun-13 Co						
Jul-13 Co	onst NE					
Aug-13 Co	onst NE					
Sep-13 Co Oct-13 Co	onst NE					
Nev-13 Co	onst NE	_ +				
Dec-13 Co			13,268			
age 13	THE REAL PROPERTY.			6,244 17	\$0 13	

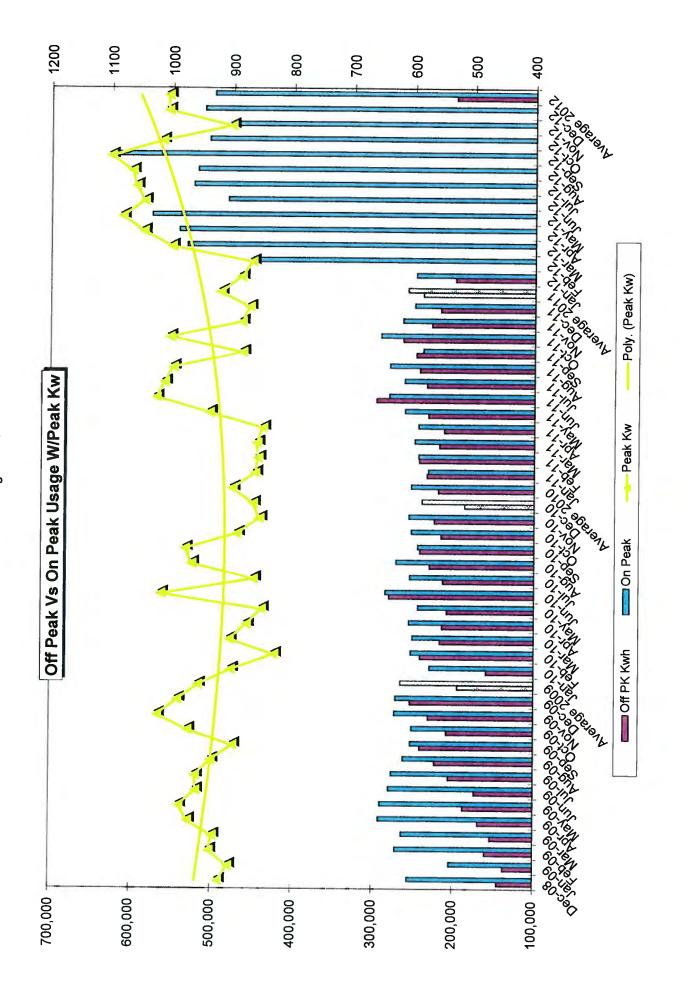




Dec 00	Start Date	End Day	Days	Kwh	Off PK Kwh	On Peak	Kwh per day	% Off peak	Peak Kw	1 **		_		_
Dec-08		12/19/2008	32	399,715	144,020	255,695	12,491	36%		- 55	\$\$/day	\$\$/Kw		61.6
Jan-09		1/22/2009	34	340,535	138,758	203,777	10.016	40%	921.67	\$35,144.38	\$1,098.26	\$0 088		\$64
Feb-09		2/20/2009	29	430,348	159,329	271.019	14.840		904.79	\$31,983,58	\$940 69	\$0.094	\$5.78	\$60
Mar-09		3/23/2009	31	416,108	152,795	263,313		37%	936,07	\$32,563.08	\$1,122.86	\$0.076	\$4 05	\$55.8
Apr-09	3/23/2009	4/21/2009	29	460,199	168,349		13,423	37%	931	\$29,839.12	\$962.55	\$0 072	\$4.41	\$52.5
May-09	4/21/2009	5/20/2009	29	477,278		291,850	15,869	37%	971.39	\$30,409.01	\$1,048.59	\$0.066		
Jun-09	5/20/2009	6/19/2009	30		187,226	290,052	16,458	39%	985.82	\$30,700.22	\$1,058.63	\$0.064	\$4.08	\$48.7
Jul-09	6/19/2009	7/21/2009		452,837	173,110	279,727	15,095	38%	958.36	\$28,040.31	\$934 68		\$3.96	\$47.4
Aug-09			32	481,722	205,508	276,214	15.054	43%	959.54			\$0.062	\$3.81	\$45.7
	7/21/2009	8/19/2009	- 29	484,925	223,008	261,917	16,722	46%	934.06	\$31,569,79	\$986 56	\$0 066	\$4.03	\$48.3
Sep-09	8/19/2009	9/21/2009	33	494,130	241,230	252,900	14,974			\$31,327.52	\$1,080.26	\$0.065	\$3.97	\$47 0
Oct-09	9/21/2009	10/19/2009	28	459,470	208,147	251.323	16 410	49%	898.27	\$29,740.78	\$901.24	\$0.060	\$3,70	\$44.4
Nov-09	10/19/2009	11/17/2009	29	503,684	230,814	272,870		45%	971.93	\$29,471.03	\$1,052.54	\$0.064	\$3.94	\$47.5
Dec-09	11/17/2009	12/21/2009	34	525,177	253,493	271,684	17,368	46%	1,022.00	\$32,804.50	\$1,124.29	\$0.065	\$7.96	\$47.7
Average 2009			31	460,534			15.446	48%	988.99	\$35,724,42	\$1,050.72	\$0.068	\$4.18	
Jan-10	12/21/2009	1/22/2010			194,981	265,554	15,139	\$0.421	955	31,164	\$1,021.97	\$0,068		\$50.2
Feb-10	1/22/2010		32	388,444	159,023	229,421	12,139	41%	901.58	\$31,047.19			\$4.207	\$50,4
		2/22/2010	31	494,274	241,398	252,876	15.944	49%	830,66		\$970.22	\$0.080	\$4 92	\$50.0
Mar-10	2/22/2010	3/23/2010	29	487,842	216,868	250,974	16.132	46%		\$36,700.74	\$1,183.89	\$0.074	\$4.57	\$54.8
Apr-10	3/23/2010	4/21/2010	29	469,534	214, 105	255,429	16 191		903.96	\$27,834.60	\$959.81	\$0.059	\$3.08	\$43.9
May-10	4/21/2010	5/19/2010	28	452,509	208,400	244,109		46%	878.1	\$30,423.26	1,049	\$0.065	\$3.98	\$47.8
Jun-10	5/19/2010	6/21/2010	33	565,340			16,161	46%	851.26	\$30,474.06	1,088	\$0.067	\$4,14	\$49.7
Jul-10	6/21/2010	7/21/2010	30		290,427	284,913	17,132	50%	1018.86	\$43,387.65	1,315	\$0 077		
Aug-10	7/21/2010	8/19/2010	29	467,922	213,431	254,491	15,597	46%	884.72	\$34,079.82	1,136	\$0.077	\$4.72	\$56 6
Sep-10	8/19/2010			501,552	229,897	271,655	17,295	46%	966.53	\$45,471.22	1,568		\$4.48	\$53.7
Oct-10	9/20/2010	9/20/2010	32	486,758	242,039	244,719	15,211	50%	976.97	\$36,943.16		\$0.091	\$5.58	\$64.a
Nov-10		10/19/2010	29	468,135	215,667	252,468	16,143	46%	892.15	\$30,043.16	1,154	\$0 076	\$4.67	\$56 0
	10/19/2010	11/17/2010	29	480,041	224,313	255,728	16,553	47%		\$27,223,63	939	\$0,058	\$3.58	340.9
Dec-10	11/17/2010	12/17/2010	30	426,086	186,435	239.651	14,203	44%	855.36	- \$32,234.77	1,112	\$0.067	\$4 13	\$40.5
verage 2010			30	472,370	219,334	253,036			865.51	\$28,117.86	937	\$0.066	\$4.06	\$48.71
Jan-11	12/18/2010	1/21/2011	34				15,725	\$0.463	900	33,661	\$1,117.68	\$0.071	\$4,373	\$52.4
Feb-11	1/21/2011	2/22/2011		485,538	233,649	231,889	13,692	50%	862.06	\$34,591.23	1,017	\$0.074		
Mar-11	2/22/2011		32	497,482	243,286	244,195	15,234	50%	857.52	\$37,329.42			\$4.57	\$54 8
		3/23/2011	29	467,237	218,177	249,060	16,112	47%	859.54	#31,329.42	1,167	\$0 077	34.71	\$56.5
Apr-11	3/23/2011	4/21/2011	29	456,856	212,343	244 313	15.747	46%		\$29,924.27	1,032	\$0.064	\$3.94	\$47.27
May-11	4/21/2011	5/20/2011	29	493,474	232,125	261,349	17.016		849.74	\$34,376,19	1,185	\$0 075	\$4 63	\$55.56
Jun-11	5/20/2011	6/21/2011	32	577,282	296,526	280 756		47%	938.23	\$38,050.88	1,312	\$0.077	3474	\$56.01
Jul-11	6/21/2011	7/21/2011	30	496,047			18,040	51%	1025.35	\$39,389.90	1,231	\$0.068	\$4 20	
Aug-11	7/21/2011	8/19/2011	29		234,122	261,925	16,535	47%	1012.25	\$38,735.55	1,291	\$0.078		\$50.36
Sep-11	8/19/2011	9/20/2011		523,100	242,970	280 130	18,038	46%	998.28	\$44,591.75	1,538	\$0.078	\$4.80	\$57 63
Oct-11	9/20/2011		32	486,610	247,488	239,122	15,207	51%	884.23	\$33,854.95			\$5.24	\$42.91
Nov-11		10/19/2011	29	555,265	263,864	291,401	19,147	48%	1003.9		1,058	\$0.070	\$4.28	351.34
	10/19/2011	11/17/2011	29	492,851	228,366	264,284	16,988	46%		\$35,592.73	1,227	\$0.064	\$3.94	\$47.31
Dec-11	11/17/2011	12/20/2011	33	467,049	217,374	249.675	14, 153	47%	885.24	\$27,359.00	943	\$0 056	\$3 42	\$40.90
verage 2011			31	497,366	239,191	258,175			872.42	\$36,106.19	1 094	\$0 077	\$4.75	\$57.05
Jan-12	12/20/2011	1/24/2012	35	447,014			16,326	48.05%	921	35,825	\$1,174.66	\$0.072	\$4,435	\$53.22
Feb-12	1/24/2012	2/22/2012			199,006	248,008	12,772	45%	886.25	\$31,423.01	898	\$0.070		
Mar-12	2/22/2012		29	449,309		449,309	15,493	0%	867.82	\$25,056.58	864		\$4.32	\$51.88
Apr-12		3/22/2012	29	532,222		532,222	18,352	0%	1001.45			\$0.056	\$3.43	541.16
	3/22/2012	4/20/2012	29	542,175		542,175	18,696	0%		\$34,999.58	1,207	\$0.066	\$4.04	\$48,53
May-12	4/20/2012	5/21/2012	31	575,507		575,507	18,565	0%	1047.96	\$35,792.78	1,234	\$0.066	\$4.08	\$46.72
Jun-12	5/21/2012	6/20/2012	30	481,581		481.581			1082.66	\$32,785.89	1,058	\$0.057	\$3.50	\$42.04
Jul-12	6/20/2012	7/20/2012	30	524,249			16,053	0%	1046.81	\$32,891.83	1,096	\$0.068	\$4.20	\$50.41
Aug-12	7/20/2012	8/17/2012	28	519,034		524,249	17,475	0%	1060.34	\$29,756.26	992	\$0.057		
Sep-12	8/17/2012	9/19/2012				519,034	18,537	0%	1067.04	\$34,504.56	1,232	\$0.066	\$3.49	341 80
Oct-12	9/19/2012		33	621,180		621,180	18,824	0%	1101.67	\$40,216.18	1,219		\$4.00	\$49.00
Nov-12		10/17/2012	28	504,875		504,875	18,031	0%	1017.36			\$0.065	\$3.96	\$47.70
	10/17/2012	11/15/2012	29	475,527		475 527	16 397	0%		\$33,440.47	1,194	\$0.066	\$4 07	\$48 88
Dec-12	11/15/2012	12/18/2012	33	510,923		510.923	15,483	0%	903,38	\$30,944.84	1,067	\$0.065	\$4.00	\$48.03
erage 2012			30	515,300	199,005	498,716			1008.22	\$33,384.11	1,012	\$0.065	\$4.02	348.22
Jan-13	12/18/2012	1/22/2013	35		199,000		17,056	3.71%	1.008	32,933	\$1,089.40	\$0.064	\$3.935	
Feb-13	1/22/2013	2/21/2013	30	454,267		454,267	12,979	0%	948.6	\$30,651.51	876	\$0.067		\$47.21
Mar-13	2/21/2013			506,966		506,966	16,899	0%	976				\$4.15	\$49 80
	2/2/1/2013	3/22/2013	29	524,143		524,143	18,074	0%	1052	\$33,685.52	1,123	\$0.066	\$4.00	\$49.04
Apr-13			0					#DIV/01	1052	\$35,028.18	1,208	\$0.067	\$6.11	\$49.32
May-13			0										<b>EVALUE</b> 1	SVALUE
Jun-13			0					#DIV/01					(VALUE)	SVALUE
Jul-13			0					#DIV/01						
Aug-13								#DIV/01					SVALUE!	SVALUE
			0					#DIV/01					EVALUE	SVALUE
Sep-13			0					#DIV/0					EVALUE	<b>SVALUE</b>
Oct-13		-	0										SVALUE!	EVALUE
Nov-13			0					#DIV/01					<b>EVALUE!</b>	OVALUE
Dec-13			0					#DIV/01					(VALUE)	
					#DIV/0!			#DIV/01						#VALUE!
erage 2013			8	495,125		495,125	15,984						#VALUE!	







Electric chart

Press 5 4 shifts Press 5 3 shifts Press 5 2 shifts Press 5 1 shift Press 4 3 shifts Press 4 2 shifts Press 4 1 shift Estimate Average Run Speed 8 900 900 8 8 8 600 Expected 85.00% 80.00% 85.00% 85.00% 85.00% 80.00% 80.00% Effective Run Rate 480 765 765 765 765 480 480 Set up time per color in minutes 15 5 45 45 5 5 3 Expected number colors to set up 5 15 6 G မှ თ ω Expected Average Daily Set up time 3.75 2.25 3.75 2.50 1.25 4.5 Total Hours Scheduled 24 24 6 24 6 00 8 Expected end of shift Start up and shut down cleaning time 0 N N 0 N N Net Run Hours 9.78 4.04 13.8 7.6 ω Number of Expected end of days
Scheduled Shut down PM and I cleaning time G G G G G G 0.00 8.00 8.00 8.00 8.00 8.00 Net weekly Run Hours 120.49 61.00 78.06 40.88 12.19 30.00 Daily Expected Output 929,475 527,850 218,025 496,800 273,600 108,000 929,475 28,172,387 11,427,953 20,123,134 10,755,720 5,923,440 4,720,241 2,338,200 Monthly Average Wieght per 1000 feet 20.5 20.5 20.5 20.5 20.5 20.5 Total expected Capacity in Pounds

Estimate Average Run Speed

Expected

Expected Effective Run Rate

Expected
Set up time
per color in
minutes

Expected number colors to set up

Expected
Average Daily
Set up time

Estimated Total Hours Scheduled

Expected end of shift Start up and shut down cleaning time

Expected Net Daily Run Hours

Expected Expected end of Number of Week Start up and days shut down PM and

Net weekly Run Hours

Expected Daily Output

Monthly Output

Average Wieght per 1000 feet

Total expected Capacity in Pounds

cleaning time

7.00

20.5

47,933

220,492

121,431

All of the above numbers are estimates based upon my recollection and my techical knowledge and understanding of the process These numbers will be effected up and down in any given month due to changes in product mix or fluctuations in efficiancy

577,534

412,524

234,273

96,765

#### **Workbook Contents**

Illinois Price of Natural Gas Sold to Commercial Consumers (Dollars per Thousand Cubic Feet)

Click worksheet name or tab at bottom for data

Worksheet Name

Description

Data 1

Illinois Price of # Of Series Frequency Latest Data for Illinois Price of Natural Gas Sold to Commercial Consumers (Dollars p 1/2013

Release Date: Next Release Date: Excel File Name:

3/29/2013 4/30/2013 n3020il3m.xls

Available from Web Page:

http://tonto.eia.gov/dnav/ng/hist/n3020il3m.htm

Source:

**Energy Information Administration** 

For Help, Contact:

infoctr@eia.doe.gov (202) 586-8800

#### Back to Contents Data 1: Illinois Price of Natural Gas Sold to Commercial Consumers (Do Sourcekey

N3020IL3 Illinois Price of **Natural Gas Sold to** Commercial

**Consumers (Dollars** 

	There are 10 is
Dete	per Thousand Cubic
Date	Feet)
Jan-1989	4.42
Feb-1989	4.66
Mar-1989	4.77
Apr-1989	4.61
May-1989	4.62
Jun-1989	4.84
Jul-1989	5.1
Aug-1989	5.19
Sep-1989	4.88
Oct-1989	4.39
Nov-1989	4.2
Dec-1989	4.38
Jan-1990	4.56
Feb-1990	4.97
Mar-1990	4.83
Apr-1990	4.5
May-1990	4.66
Jun-1990	5
Jul-1990	5.11
Aug-1990	4.92
Sep-1990	4.37
Oct-1990	4.37
Nov-1990	4.26
Dec-1990	4.56
Jan-1991	4.74
Feb-1991	4.55
Mar-1991	4.39
Apr-1991	4.56
May-1991	5.24
Jun-1991	6.41
Jul-1991	5.3
Aug-1991	5.36
Sep-1991	4.58
Oct-1991	
Nov-1991	4.31
Dec-1991	4.16
Jan-1992	4.23
Feb-1992	4.44
Mar-1992	4.52
Apr-1992	4.11
•	4.02
May-1992	4.8
Jun-1992	5.94
Jul-1992	5.48
Aug-1992	5.31

Sep-1992	5.28
Oct-1992	4.89
Nov-1992	4.93
Dec-1992	4.88
Jan-1993	4.89
Feb-1993	4.81
Mar-1993	4.63
Apr-1993	5.24
May-1993	5.99
Jun-1993	6.78
Jul-1993	5.99
Aug-1993	6.53
Sep-1993	5.8
Oct-1993	5.49
Nov-1993	5
Dec-1993	5.03
Jan-1994	5.01
Feb-1994	5.04
Mar-1994	5.28
Apr-1994	5.74
May-1994	6.07
Jun-1994	6.12
Jul-1994	6.44
Aug-1994	6.2
Sep-1994	5.77
Oct-1994	4.81
Nov-1994	4.33
Dec-1994	4.63
Jan-1995	4.39
Feb-1995	4.44
Mar-1995	4.53
Apr-1995	4.42
May-1995	5.16
Jun-1995	5.16
Jul-1995	5.35
Aug-1995	5.01
Sep-1995	5.23
Oct-1995	4.23
Nov-1995	4.11
Dec-1995	4
Jan-1996	4.07
Feb-1996	4.31
Mar-1996	4.75
Apr-1996	5
<i>I</i> lay-1996	6.19
Jun-1996	6.68
Jul-1996	7.09
\ug-1996	7.66
Sep-1996	6.25
Oct-1996	5.23
Nov-1996	4.83
Dec-1996	5.2

Jan-1997	5.87
Feb-1997	5.66
Mar-1997	4.95
Apr-1997	4.62
May-1997	4.91
Jun-1997	5.53
Jul-1997	5.66
Aug-1997	6.08
Sep-1997	6.22
Oct-1997	5.79
Nov-1997	5.26
Dec-1997	5.21
Jan-1998	4.76
Feb-1998	4.68
Mar-1998	4.72
Apr-1998	5.26
May-1998	6.84
Jun-1998	6.25
Jul-1998	8.18
Aug-1998	6.41
Sep-1998	6.1
Oct-1998	5.32
Nov-1998	4.88
Dec-1998	4.69
Jan-1999	4.43
Feb-1999	4.45
Mar-1999	4.4
Apr-1999	4.79
May-1999	6.5
Jun-1999	7.07
Jul-1999	7.87
Aug-1999	8.43
Sep-1999	7.15
Oct-1999	6.28
Nov-1999	6.12
Dec-1999	5.34
Jan-2000	4.92
Feb-2000	5.05
Mar-2000	5.38
Apr-2000	5.89
May-2000	7.59
Jun-2000	10.33
Jul-2000	9.92
Aug-2000	9.29
Sep-2000	9.06
Oct-2000	9.5
Nov-2000	8.42
Dec-2000	8.63
Jan-2001	11.13
Feb-2001	10.76
Mar-2001	9.02
Apr-2001	8.53

May-2001 Jun-2001	8.78 9.04
Jul-2001	7.41
Aug-2001	7.54
Sep-2001	6.3
Oct-2001	4.8
Nov-2001	5.49
Dec-2001	5.15
Jan-2002	6.21
Feb-2002	6.16
Mar-2002	6.4
Apr-2002	6.76
May-2002	8.87
Jun-2002	10.74
Jul-2002	10.38
Aug-2002	9.9
Sep-2002	9.33
Oct-2002	8.31
Nov-2002	8.35
Dec-2002	8.14
Jan-2003	7
Feb-2003	7.21
Mar-2003	9.5
Apr-2003	9.2
May-2003	9.77
Jun-2003	11.05
Jul-2003	10.85
Aug-2003	10.12
Sep-2003	9.12
Oct-2003	8.38
Nov-2003	8.24
Dec-2003	7.84
Jan-2004	8.53
Feb-2004	8.26
Mar-2004	8.15
Apr-2004	8.94
May-2004 Jun-2004	10.42
Jul-2004	10.95
Aug-2004	12.07
Sep-2004	11.29
Oct-2004	10.62 9.3
Nov-2004	9.84
Dec-2004	9.42
Jan-2005	9.34
Feb-2005	9.15
Mar-2005	8.81
Apr-2005	10.38
Лау-2005	11.49
Jun-2005	11.92
Jul-2005	12.3
Aug-2005	12.9
·	12.0

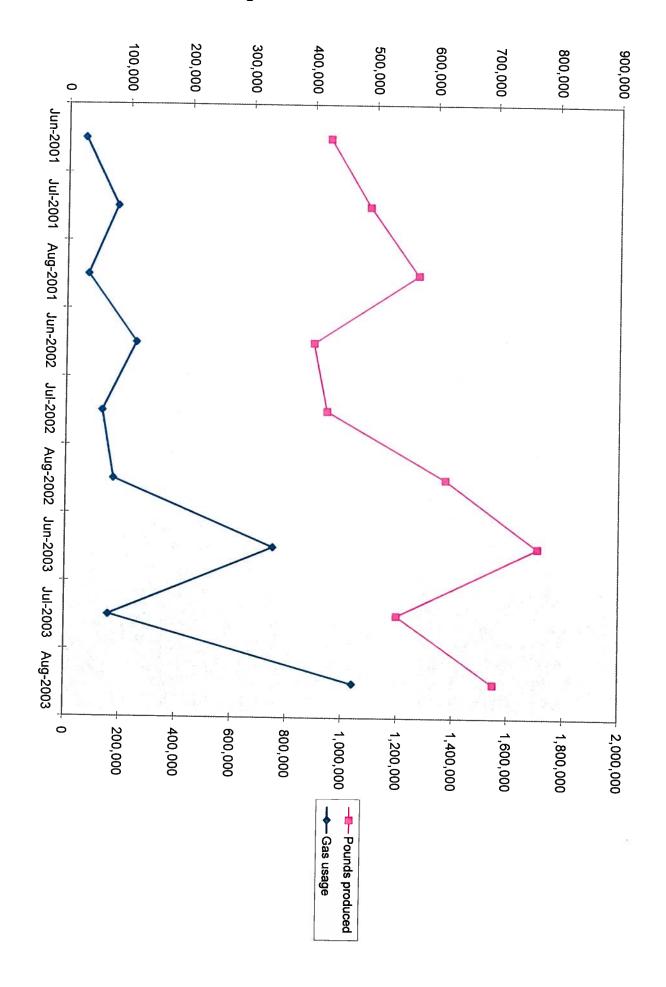
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Oct-2005	14.29
Nov-2005	14.54
Dec-2005	13.82
Jan-2006	13.35
Feb-2006	12.37
Mar-2006	10.59
Apr-2006	9.85
May-2006	10.42
Jun-2006	10.31
Jul-2006	11.1
Aug-2006 Sep-2006	11.17
Oct-2006	10.54
Nov-2006	9.09
Dec-2006	8.87
Jan-2007	9.72 9.68
Feb-2007	9.00
Mar-2007	10.07
Apr-2007	10.84
May-2007	11.2
Jun-2007	12.49
Jul-2007	13.41
Aug-2007	12.99
Sep-2007	11.79
Oct-2007	10.95
Nov-2007	10.42
Dec-2007	9.77
Jan-2008	9.54
Feb-2008	10.15
Mar-2008	11.14
Apr-2008	12.16
May-2008	14.36
Jun-2008	16.78
Jul-2008	18.76
Aug-2008	18.66
Sep-2008 Oct-2008	16.19
Nov-2008	13.89
Dec-2008	12.27
Jan-2009	10.66 9.54
Feb-2009	9.5 <del>4</del> 9.15
Mar-2009	8.15
Apr-2009	7.29
May-2009	8.75
Jun-2009	9.8
Jul-2009	10.6
Aug-2009	11.23
Sep-2009	10.34
Oct-2009	8.25
Nov-2009	8.1
Dec-2009	7.28

Jan-2010	8.07
Feb-2010	8.65
Mar-2010	8.89
Apr-2010	9.3
May-2010	10.16
Jun-2010	11.32
Jul-2010	12.81
Aug-2010	12.31
Sep-2010	11.73
Oct-2010	9.55
Nov-2010	8.03
Dec-2010	7.22
Jan-2011	7.23
Feb-2011	7.4
Mar-2011	7.72
Apr-2011	8.13
May-2011	9.21
Jun-2011	11.58
Jul-2011	12.78
Aug-2011	12.85
Sep-2011	11.51
Oct-2011	9.6
Nov-2011	8.37
Dec-2011	7.68
Jan-2012	6.93
Feb-2012	6.53
Mar-2012	7.78
Apr-2012	7.64
May-2012	10.36
Jun-2012	10.63
Jul-2012	12.05
Aug-2012	11.81
Sep-2012	10.04
Oct-2012	8.3
Nov-2012	7.51
Dec-2012	7.28
Jan-2013	6.87

ollars per Thousand Cubic Feet)

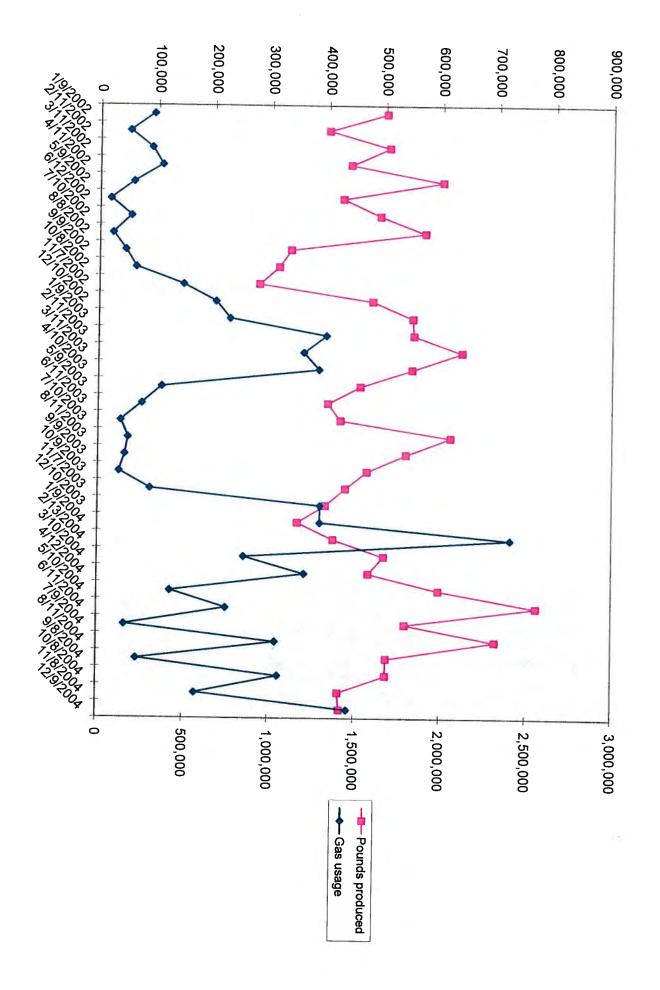
VIOLICHEY VIO03850 VIO04220 VIO04685 VIO07905 VIO08125 VIO08428 VIO11957 VIO12274 VIO12731	Date 6/12/2002 7/10/2002 8/8/2002 6/11/2003 7/10/2003 8/11/2003 6/11/2004 7/9/2004 8/11/2004	61202 71002 80802 61103 32 81103 61104 70904 81104	Amount current Oue \$539.81 \$1,331.04 \$563.92 \$2,884.71 \$1,344.56 \$1,700.32 \$8,282.23 \$1,711.62 \$10,519.99	6/12/2002 7/10/2002 8/8/2002 6/11/2003 7/10/2003 8/11/2003 6/11/2004 7/9/2004	Payment reference 35921 36076 36352 38570 38770 38984 41250 41438 41700	Method of payment CHK	425,326 490,796 569,986 401,362 423,349 616,558 768,522 538,630 696,579	Jun-2001 Jul-2001 Aug-2001 Jun-2002 Jul-2002 Aug-2002 Jun-2003 Jul-2003 Aug-2003	9.04 7.41 7.54 10.74 10.38 9.9 11.05 10.85 10.12	59,713 179,628 74,790 249,973 129,534 171,749 749,523 157,753 1,039,525	0.140395 0.365992 0.131215 0.622812 0.305974 0.278562 0.975279 0.292878
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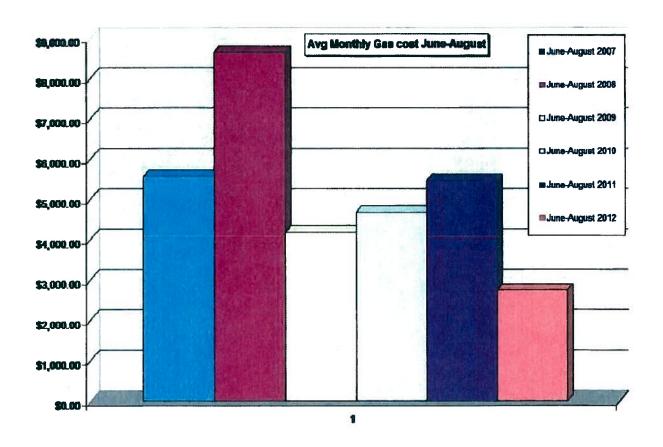


Page 1





V1001740	Date	invoice	Amount current Du	e date	Payment reference	Method of payment					
	1/9/2002	10902	\$3,420.24	1/9/2002	34428	CHK	200 000				
VI002221	2/11/2002	21102	\$1,819.56	2/11/2002	34735	CHK	500,856	Jan-2001	11.13	307,299	0.613548
VI002588	3/11/2002	31102	\$2,674,45	3/11/2002	35086	CHK	400,054	Feb-2001	10.76	169,104	0.422703
VI003049	4/11/2002	41102	\$3,051.11	4/19/2002	35354		506,322	Mar-2001	9.02	296,502	0.422703
VI003400	5/9/2002	50902	\$1,693,19	5/9/2002	35653	CHK	438,780	Apr-2001	8.53	357,692	0.815196
V1003850	6/12/2002	61202	\$539.81	6/12/2002	35921	CHK	600,566	May-2001	8.78	192,846	0.321107
VI004220	7/10/2002	71002	\$1,331,04	7/10/2002		CHK	425,326	Jun-2001	9.04	59,713	
VI004665	8/8/2002	80802	\$563,92	8/8/2002	36076 36352	CHK	490,796	Jul-2001	7.41	179,628	0.140395
V1005099	9/9/2002	90902	\$939.98	9/9/2002		CHK	569,986	Aug-2001	7.54	74,790	0.365992
V1005499	10/8/2002	100802	\$1,008.90	10/8/2002	36578	CHK	334,589	Sep-2001	6.3	149,203	0.131215
V1005901	11/7/2002	110702	\$2,676.33	11/7/2002	36780	CHK	314,275	Oct-2001	4.8	210,188	0.44593
VI006181	12/10/2002	121002	\$3,496.75		37036	CHK	279,970	Nov-2001	5.49	487,492	0.668801
VI006558	1/9/2003	10903	\$4,734.95	12/10/2002	37203	CHK	478,546	Dec-2001	5.15	678,981	1.741229
VI006912	2/11/2003	21103	\$8,166.29	1/9/2003 2/11/2003	37452	CHK	549,190	Jan-2002	6.21	762,472	1.418841
VI007168	3/11/2003	31103	\$7,641.45		37636	CHK	551,534	Feb-2002	6.16	1,325,696	1.388357
VI007413	4/10/2003	41003	\$8,682,67	3/11/2003	37862	CHK	636,383	Mar-2002	6.4		2.403653
V1007667	5/9/2003	50903	\$3,234.01	4/10/2003	38105	CHK	548,821	Apr-2002	6.76	1,193,977	1.876192
VI007905	6/11/2003	61103	\$2,684,71	5/9/2003	38332	CHK	457,928	May-2002	8.87	1,284,419 364,601	2.340323
VI008125	7/10/2003	32	\$1,344.56	6/11/2003	38570	CHK	401,362	Jun-2002	10.74		0.796197
VI008428	8/11/2003	81103	\$1,700.32	7/10/2003	38770	CHK	423,349	Jul-2002	10.38	249,973	0.622812
VI008733	9/9/2003	90903		8/11/2003	38984	CHK	616,558	Aug-2002	9.9	129,534	0.305974
V1009077	10/9/2003	100903	\$1,435.59 \$1,009.64	9/9/2003	39190	CHK	538,688	Sep-2002	9.33	171,749	0.278562
VI009445	11/7/2003	110703		10/9/2003	39498	CHK	470,097	Oct-2002	8.31	153,868	0.285635
VI009903	12/10/2003	121003	\$2,510.31	11/7/2003	39721	CHK	432,764	Nov-2002	8.35	121,497	0.258451
VI010231	1/9/2004	10904	\$10,546.51	12/10/2003	39982	CHK	398,009	Dec-2002	8.14	300,636	0.694688
VI010611	2/13/2004	21104	\$9,066.24	1/9/2004	40188	CHK	349,422	Jan-2003	0.14	1,295,640	3.255303
VI010924	3/10/2004	31004	\$17,367.75	2/13/2004	40394	CHK	412,265	Feb-2003	7.21	1,295,177	3.706627
VI011229	4/12/2004	41204	\$8,105.96	3/10/2004	40631	CHK	500,860	Mar-2003	9.5	2,408,842	5.842945
VI011584	5/10/2004	51004	\$11,083,92	4/12/2004	40819	CHK	474,162	Apr-2003	9.2	853,259	1.703588
VI011957	6/11/2004		\$4,122.93	5/10/2004	41019	CHK	597,427	May-2003		1,204,774	2.540849
VI012274	7/9/2004	61104	\$8,282.23	6/11/2004	41250	CHK	768,522	Jun-2003	9.77	421,999	0.706361
VI012731	8/11/2004	70904	\$1,711.62	7/9/2004	41438	CHK	538,630	Jul-2003	11.05	749,523	0.975279
VI012731	9/8/2004	81104	\$10,519.99	8/11/2004	41700	CHK	696,579		10.85	157,753	0.292878
VI013494	10/8/2004	90804	\$2,080.83	9/8/2004	41908	CHK	506,242	Aug-2003	10.12	1,039,525	1.492329
VI013839	11/8/2004	100804	\$8,849.15	10/8/2004	42112	CHK	505,341	Sep-2003	9.12	228, 161	0.450696
VI014244		110804	\$4,701.70	11/8/2004	42330	CHK	422,564	Oct-2003	8.38	1,055,984	2.089647
¥1017244	12/9/2004	120904	\$11,440.70	12/9/2004	42575	CHK	425,178	Nov-2003	8.24	570,595	1.350315
							723,178	Dec-2003	7.84	1,459,273	3.432146



297,224 224,200 500,856 549,190 349  272,002 279,999 400,054 551,534 412  389,448 371,488 506,322 636,382 500  381,927 454,040 600,566 457,928 578  382,432 397,472 699,76 415,349 558  232,432 397,472 599,70 40,362 506  378,747 329,627 334,899 538,688 506  378,747 329,627 324,899 538,688 500  318,747 329,627 3445,006 502,057 516,349  SS (FOOTAGE)  SS (FOOTAGE)  299,297 200,325 5,340,066 6,024,883 6,197,  200,325 200,325 5,340,066 3,024,883 6,197,  200,325 200,325 5,340,066 3,024,883 6,197,  200,325 200,325 5,340,066 3,024,883 6,197,  200,326 200,325 5,340,066 3,024,883 6,197,  200,326 200,325 5,340,066 3,024,883 6,197,  200,326 200	422 549,279 465 488,494 162 568,196 162 563,946 529 427,687 520 436,827 530 664,148 541 492,621 564 455,855 178 507,377 192 6,088,480 3% 2% 3% 2%	553,897 606,947 518,682 518,682 588,126 670,120 631,867 641,384 465,975 442,381 320,656 320,656 6,341,083 6,341,083 65%	370,108 425,217 425,217 519,188 530,075 496,535 601,209 503,688 525,014 486,707 389,195 447,832 487,832 6,853,985	510,751 459,139 456,740 357,761 473,817 548,388 488,196 4712,186 471	397,307 326,538 446,336 428,355 428,355 485,112 518,361 518,36	384,396 564,902 563,706 488,240 443,285 435,194 443,285 435,194 418,616	505,690 414,591 550,547 540,944 431,528 486,192	496,235 585,500	678,855 559,742
272,002 279,999 400,054 551,534 412 329,469 371,488 506,322 656,383 500 329,469 371,488 506,322 656,383 500 341,927 454,040 600,566 457,928 598 323,143 464,074 490,796 425,329 508 323,143 464,074 490,796 425,329 508 378,747 329,627 598 689 698 698 698 698 698 698 698 698 6	265 488,494 860 588 186 186 186 186 186 186 186 186 186 1	666,947 677,403 518,622 581,126 670,120 631,857 641,334 461,334 461,334 461,334 461,334 461,334 6341,083 6341,083 630190 65% 65%	425,217 425,217 519,188 530,188 69,635 69,635 69,635 48,707 39,195 447,832 47,832 47,832 47,832 65,853,985	459,139 456,740 357,761 474,182 423,817 548,388 464,157 4712,185 471	326,538 446,336 442,502 428,355 485,112 518,361 50,87,183 315,186 5,059,201 5,059,201	564,902 562,843 562,843 482,240 472,673 443,285 435,194 436,194 438,187	550,547 550,547 540,944 431,528	585,500	559,742
329,448 371,488 506,322 636,383 500 324,448 471,489 506,322 636,383 500 324,307 470,136 425,326 4471,928 587 323,143 464,074 490,796 473,349 538 323,143 464,074 490,796 616,556 696 323,143 388,883 314,275 69986 616,556 696 471,493 388,883 314,275 470,097 506 293,974 296,024 279,970 432,764 422 293,974 296,024 279,970 432,764 422 293,974 396,024 279,970 432,764 422 293,974 375,027 445,006 502,057 516, all 3,847,780 4,500,325 5,340,066 6,024,683 6,197, screen and the second s	860 568,196 162 529,346 1427 651,910 150 604,748 150 608,480 150 608,480	537,403 518,662 588,126 670,120 631,857 643,746 465,975 465,975 6,341,083 530190 6,341,083 6,341,083 65% 65%	519,183 530,075 486,535 488,535 661,209 559,468 525,014 487,032 399,195 487,832 487,832 5,853,985 52%	456,740 357,761 474,182 423,817 548,388 464,157 437,587 412,185 421,632 43,544 5,394,525 5,394,525	446,336 441,015 420,502 428,355 485,112 518,361 518,361 337,183 337,183 441,433 441,433 441,433 35,183 37,183 37,183 37,183 37,183 315,186	563,706 563,706 486,240 472,673 436,194 418,616 399,187	550,547 540,944 431,528 486,192	565,300	247,800
393,663 463,077 438,780 548,821 474 341,927 454,040 600,566 457,928 597 323,433 464,074 490,796 423,349 598 323,434 397,472 569,986 616,568 696 324,432 397,472 569,986 616,568 696 324,432 384,883 314,279 508,883 514,270 506 283,974 296,024 279,796 422 219,297 361,312 476,546 398,009 425 320,648 375,027 445,006 6,024,683 6,197, 3847,780 4,500,325 5,340,066 6,024,683 6,197, 38 47,780 7,500,325 5,340,066 6,024,683 6,197, 38 (FOOTAGE)  SS (FOOTAGE)	162 629,346 427 651,910 522 42,817 579 604,748 242 53,885 544 45,865 178 399,662 183 607,373 182 6,088,480 3% -2% 3% -2%	518,662 588,126 631,657 631,745 643,745 442,361 442,361 6,341,083 530190 6 30190 6 59,8424 6,341,083	530,075 496,535 488,527 601,209 569,468 525,014 486,707 399,195 442,342 487,832 5,853,985 52%	357,761 474,182 423,817 548,381 464,157 421,632 421,632 448,544 5,394,525 5,394,525	441,015 402,502 428,135 485,135 508,132 508,133 316,188 316,188 37,183 37,183 421,600 5,089,201	443,286 443,286 443,286 435,194 418,616 399,187	540,944 431,528 486 192		SOR 365
SS (FOOTAGE)  341,927 454,040 600,566 457,928 597  322,430 470,146 490,796 427,928 598  322,430 470,14 490,74 490,796 423,349 598  323,143 48,4074 490,796 423,349 508  378,747 329,620 334,589 538,688 500  411,493 388,83 314,275 470,097 500  229,374 296,024 279,966 538,688 500  229,297 361,372 478,546 388,009 425  system 100% 17% 19% 13%  thmark from 20 0% 17% 38% 57% 649  SS (FOOTAGE)	427 561,910 529 427,851 530 488,827 542 533,885 544 482,621 543 507,373 543 507,373 554 568,885 574 578 575 56,088,480 578 58% 578 58%	588 126 670,120 631,857 145 461,334 465,975 142,361 320,656 6341,083 633190 d copy reads ^ 4% 65%	488 927 691 209 569 488 525,014 486,707 389,135 447,332 487,332 5,853,985	474,182 423,817 548,388 464,157 377,597 421,185 421,632 421,632 421,632 421,632 421,632 421,632 421,632 421,632 421,632 421,632	402,502 428,365 428,365 485,112 508,873 441,433 315,189 421,600 5,059,201 5,059,201	472,673 472,673 473,285 435,194 418,616 399,187	431,528	400 405	647.627
312, 430 470, 136 425,326 401,362 788 323, 143 480,796 423,349 538 686 686 686 411,493 384,472 5970 5970 432,795 605 698 506 686 698 506 686 698 506 686 698 506 686 698 506 6	522 427,687 530 486,827 547 560,448 541 492,621 564 455,855 178 507,377 192 6,088,480 3% 2% 3% 2%	60,120 631,857 643,745 461,334 465,975 442,361 320,8424 6,341,083 6,341,083 6,341,083 6,341,083	488 927 601 209 601 209 529 468 525 014 389 195 487,832 <b>487,832</b> <b>5,853,985</b> -9%	423,817 548,388 464,157 37,397 412,185 421,632 449,544 5,394,525 -8% -8%	428,355 485,112 518,361 508,873 441,433 337,183 421,600 5,059,201	472,673 472,673 435,194 418,616 399,187	486 192	402,433 700 100	012,032
SS (FOOTAGE)  224,432 397,472 284,932 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,472 387,689 38,883 314,275 387,780 38,883 314,275 387,780 422,764 422 388,883 314,780 432,764 422 388,003 314,780 4,500,325 5,340,066 6,024,683 6,197,803 SS (FOOTAGE)	630 488,827 630 488,827 642,621 644 45,865 178 399,662 183 607,373 192 6,088,480 3% -2% 31% 56%	631,857 643,746 461,374 465,374 442,361 320,656 <b>5.341,083</b> 6,341,083 630190 65% 65%	601,209 569,468 525,014 486,707 399,195 442,342 487,832 5,853,985 5,853,985	548,388 464,157 377,587 412,185 421,632 5,394,525 -8% -8%	455,112 518,361 518,362 315,186 337,183 5,089,201 -6%	443,285 435,194 436,194 418,616 399,187	/K (20)	504 467	
SS (FOOTAGE)  284,432 397,472 569,986 616,568 696  284,432 397,472 569,986 538,688 506  314,778 386,883 314,275 470,097 506  219,297 361,312 478,546 396,009 425  318,47,780 4,500,325 5,340,066 6,024,683 6,197,  SS (FOOTAGE)  2000 2001 2002 2003 57%	578 604,488 242 533,685 341 42,521 464 455,855 178 399,662 192 6,088,480 3% -2% 378 588	543,745 461,334 486,975 442,361 320,656 <b>528,424</b> <b>6,341,083</b> 530190 d copy reads* 4%	569,468 525,014 486,707 399,195 442,342 487,832 5,853,985	484,167 377,597 488,196 4121,852 421,632 <b>5,394,525</b> -8% -8%	5/059,201 5/059,201 5/059,201	435,194 435,194 418,616 399,187	202 204	504 000	
SS (FOOTAGE)  318,747 329,620 334,889 538,688 508  411,493 388,883 314,275 470,097 505  219,374 286 314,275 470,097 505  219,297 361,312 478,46 432,764 422  219,297 361,312 478,606 502,057 516,  31,847,780 4,500,325 5,340,066 6,024,683 6,197,  SS (FOOTAGE)  SS (FOOTAGE)	242 533,885 341 492,621 564 455,855 133 507,373 192 6,088,480 3% 2% 3% 2% 51% 56%	465,975 485,975 485,975 320,656 <b>6,341,083</b> 6,341,083 630190 4% 65%	525,014 486,707 399,195 442,342 487,832 5,853,985 -8% 52%	377,597 488,196 4712,186 449,544 5,394,525 -8%	508.873 315.186 337,183 421,600 5,059,201 5,059,201	418,616 399,187	565,230	208,100 AAA ACA	
SS (FOOTAGE)  291,474 292,924 296,024 296,024 296,024 297,780 296,024 297,780 296,024 276,970 442,764 422 296,024 276,970 445,006 5,024,683 6,197,80 2001 2007 2007 2007 2007 2007 2007 200	3% -2% 3% -2% 3% -2% 3% -2%	6,341,083 6,341,083 6,341,083 6,50190 65%	25,014 486,0195 399,195 442,342 487,832 5,853,985 -8% 52%	267,394 481,186 471,632 489,544 5,394,525 -8% -8%	204/6/3 204/4/33 315,186 421,600 5,089,201 -6%	399,187	000,000	440,440	
SS (FOOTAGE)  211,397 3 388,883 3 314,275 47097 505  219,397 361,312 296,024 422  219,397 361,312 478,546 396,009 425  320,648 375,027 445,006 6,024,683 6,197,  341,7780 4,500,325 5,340,066 6,024,683 6,197,  358 (FOOTAGE)  SS (FOOTAGE)	341 42.52.1 184 455.85.1 178 399,662 133 507,373 192 6,088,480 3% -2% 37 58%	65% 65% 65% 65% 65% 65%	486,707 399,105 442,342 <b>487,832 5,853,985</b> -8% 52%	488,198 471,632 421,632 5,394,525 -8% 40%	441,433 347,185 421,600 5,059,201 6%	399,187	555,904	538,021	
SS (FOOTAGE)  293,974 296,024 279,970 432,764 422,764 361,979,970 361,312 375,027 445,006 502,057 516,979 425 320,648 375,027 445,006 6,024,683 6,197,780 17% 19% 13% 113% 113% 113% 113% 113% 113%	564 455,855, 173 507,373, 192 6,088,480, 3% -2%, 3% -2%,	442,361 220,656 <b>6,341,083</b> 630190 d copy reads^ 4% 65%	399,195 442,342 442,832 5,853,985 -8% 52%	412,185 421,632 5,394,524 -8% 40%	315,186 337,183 421,600 5,059,201 -6% 31%	404 AOE	587,185	728,890	
Trage 219,297 361,312 478,546 398,009 425 320,648 375,027 445,006 6,024,883 6,197, 30 4,500,325 5,340,066 6,024,883 6,197, 30 4,500 320,000 2001 2002 2003 2003	178 399,662 183 507,373 192 6,088,480 3% -2% 31% 56%	320,656 <b>528,424 6,341,083</b> 530190  d copy reads^ 4%  65%	442,342 487,832 5,853,985 -8% 52%	449,544 5,394,525 -8% -8%	337,183 421,600 5,059,201 6% 31%	401,400	512,175	479,181	
rrage         320,648         375,027         445,006         502,057         516, st.	6,086,480 6,086,480 -2% 58%	<b>528,424 6,341,083</b> 530190 d copy reads* 4% 65%	5,853,985 -8% 52%	449,544 5,394,525 -8% 40%	<b>5,059,201</b> 5,059,201 -6%	380,606	353,412	460,721	
al         3,847,780         4,500,325         5,340,066         6,024,683         6,197           over year         100%         17%         19%         13%           hmark from 20         0%         17%         39%         57%           SS (FOOTAGE)         2000         2001         2002         2003	6,088,480 -2% 58%	6,341,083 630190 630190 65% 65%	<mark>5,853,985</mark> -8% 52%	<mark>5,394,525</mark> -8% 40%	<b>5,059,201</b> -6% 31%	459,588	491,408	571,097	614,399
over year 100% 17% 19% 13% thmark from 20 0% 17% 39% 57% SS (FOOTAGE) 2000 2001 2002 2003	.2%	530190 d copy reads^ 4% 65%	-8%	-8%	-6% 31%	5.515,053	5.896.892	6.853.169	2.457.594
SS (FOOTAGE)  2000  2001  2002  2003		<b>%</b> 59	52%	40%	31%	<b>%</b> 6	7%	16%	%8
SS (FOOTAGE)  SS (FOOTAGE)  2000  2001  2002  2003		833	8 5	Ş	8	7367	7063	7007	7800
2000 2001 2002 2003									
n D D T	2004 2005	2006	2007	2008	2009	2010	2011	2012	2013
b b c c c c c c c c c c c c c c c c c c									
I T	26,317,187	29,780,699	22,549,047	26,438,659	23,880,110	20,708,469	25,622,370	23,576,519	31,873,523
IT.	24,625,151	30,277,345	19,927,993	25,094,658	18,734,294	26,282,854	20,192,169	29 428 461	28,764,458
Y.	27,239,048	28,253,827	23,921,469	26,583,221	23,596,699	31,684,534	27,242,677	28,503,114	29,762,575
The state of the s	28,298,999	22,541,997	24,535,754	20,103,589	22,288,474	26,023,762	21,913,287	25,006,707	31,521,659
	27,453,046	26,471,453	21,541,328	23,150,832	19,164,744	24,258,800	22,087,522	29,536,259	
Jun	22,123,547	31,597,051	24,538,907	23,049,409	23,747,961	24,101,096	25,079,145	24,489,052	
July 100 mg	22,541,857	29,306,108	29,126,678	26,480,698	25,238,706	24,020,908	19,679,108	26,174,673	
Aug	27,290,705	26,238,646	29,452,735	25,915,212	28,123,277	20,809,908	28,714,287	40,486,323	
Sep	25,998,998	21,961,048	27,940,645	20,104,138	26,860,373	22,511,995	26,335,238	23,737,066	
Oct	25,803,226	21,947,764	28,177,079	23,454,857	23,616,571	20,711,964	30,002,239	31,806,637	
Nov	19,685,053	19,650,805	21,402,381	18,452,333	15,001,451	21,397,595	25,384,350	23,715,362	
Dec	20,007,530	15,763,487	18,748,880	21,478,396	19,455,448	18,175,797	17,678,402	24,625,501	
Ave	24,765,362	25,315,853	24,321,908	23,358,834	22,475,676	23,390,640	24,159,233	27,590,473	30,480,554
Total	297,184,347	303,790,230 29	291,862,896 28	280,306,002 2	269,708,108	280,687,682	289,910,794	331,085,674	121,922,215
Started collecting reliable footage									
year over year "Tim Piper	0	2.22%	-3.93%	-3.96%	-3.78%	4.07%	3.29%	14.20%	10.47%
benchmark from 2000 moving forward	0	2.22%	-1.79%	-5.68%	-9.25%	-5.55%	-2.45%	11.41%	23.08%