BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

NOTICE OF FILING

TO: L. Nichole Cunningham
Assistant Attorney General
Environmental Bureau
69 West Washington Street, 18th Floor
Chicago, Illinois 60602

Christopher Grant
Assistant Attorney General
Environmental Bureau
69 West Washington Street, 18th Floor
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.

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

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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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.

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

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.

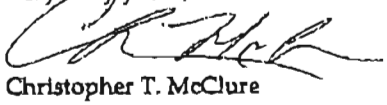
In addition to your assumptions, I have assumed that the total cost of compliance of $11,180 is an expense and not a capital asset, therefore no depreciation expense is included.

This calculation is limited to analyzing the potential economic benefit penalty component only 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.

[1] ARI invoice attached to this letter

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

Scenario Description: Delay of cost of constructing a permanent total enclosure around press 5

		A	B	C	D	E	F	G	H
Month - Year	Period	Delayed Annual Costs	Total Annual Delayed Costs	Tax Adjustment @ 37.8%	After Tax Annual Cost/ (Benefit)	Actual Spending	Cumulative Deferred Spending	Applicable Interest Rate	Time Value of Deferred Spending
15-Mar-95	1	10,594	10,594	(3,920)	6,674	0	6,674	5.94%	$314
1996	2	0	0	0	0	0	6,988	5.52%	$386
1997	3	0	0	0	0	0	7,374	5.63%	$415
1998	4	0	0	0	0	0	7,789	5.05%	$393
1999	5	0	0	0	0	0	8,182	5.08%	$416
2000	6	0	0	0	0	0	8,598	6.11%	$525
2001	7	0	0	0	0	0	9,123	3.49%	$318
2002	8	0	0	0	0	0	9,441	2.00%	$189
2003	9	0	0	0	0	0	9,630	1.24%	$119
2004	10	0	0	0	0	11,180	3,076	1.89%	$58
2005	11	0	0	0	0	0	3,134	3.62%	$113
2006	12	0	0	0	0	0	3,247	4.94%	$160
2007	13	0	0	0	0	0	3,408	4.53%	$154
2008	14	0	0	0	0	0	3,562	1.83%	$65
2009	15	0	0	0	0	0	3,627	0.47%	$17
2010	16	0	0	0	0	0	3,644	0.32%	$12
2011	17	0	0	0	0	0	3,656	0.18%	$7
2012	18	0	0	0	0	0	3,662	0.18%	$7
		10,594	10,594	(3,920)	6,674	11,180			3,662
						Total Economic Benefit / (Detriment)			$3,662 I

KEY

A Annual delayed costs deflated to 1995 using PCI
B Total Annual delayed costs
C Tax benefit at 37%
D After-tax annual delayed cost
E Actual expenditures
F Annual deferred spending + time value
G Risk-free T-Bill rate to inflate dollars to the date of compliance
H Amount earned on the cumulative deferred spending
I Total economic benefit of delayed costs

ARI ENVIRONMENTAL, INC.
951 OLD RAND RD. #106
WAUCONDA, IL 60084
PHONE # 847-487-1580

65101

SALESPERSON	DATE OF INVOICE
	4/29/04

SHIP TO

ATTN: MATTHEW WHALIN

TO:

PACKAGING PERSONIFIED, INC.
ATTN: ACCT PAYABLE
246 KEHOE BLVD
CAROL STREAM, IL 60188

ACCOUNT NO.	DATE SHIPPED	SHIPPED VIA	COLLECT	F.O.B. POINT	TERMS	YOUR ORDER NUMBER
					NET 30	2002

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	FOR SERVICES RENDERED IN CONNECTION WITH CONDUCTING THE VOC EMISSION TEST PROGRAM ON THE REGENERATIVE THERMAL OXIDIZER DESTRUCTION EFFICIENCY AT THE PACKAGING PERSONFIED FACILITY 2/26/04 ARI PROJECT # 425-01	6180.00	6180.00
	TOTAL		6180.00

MAY 1 2004

PAID
JUN 0 6 2004
CK: 41135

Thank You

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

Trinity Consultants

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, 25 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. Emissions Test Costs

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	5
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.

8/9/12
Date

Appendix A

Richard Trzupek Curriculum Vitae

Rich Trzupek

Principal Consultant **– Chicago Office**

Trinity Consultants

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. 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.

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.

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, tar-like 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	Trinity Consultants
2006 - 2012	Mostardi Platt
2000 - 2006	Huff & Huff, Inc.
1994 - 2000	Air Solutions, Inc.
1992 - 1994	Mostardi Platt
1985 - 1992	Almega, Inc.

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, 18th Floor
Chicago, Illinois 60602

John A. Simon