ILLINOIS POLLUTION CONTROL BOARD
December 19, 2013

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

CHRISTOPHER J. GRANT, L. NICHOLE SANGHA, ASSISTANT ATTORNEYS GENERAL, APPEARED ON BEHALF OF COMPLAINANT; and

ROY M. HARSCH, JOHN A. SIMON, DRINKER BIDDLE & REATH LLP, APPEARED ON BEHALF OF RESPONDENT.

SUPPLEMENTAL OPINION AND ORDER OF THE BOARD (by J.A. Burke):

The People of the State of Illinois (People) brought this action against Packaging Personified, Inc. (Packaging) to enforce statutory, regulatory, and permit requirements for air pollution control at a facility located at 246 Kehoe Boulevard in Carol Stream, DuPage County. The Board previously found Packaging violated various air pollution control requirements over a period of years and imposed a civil penalty of $456,313.57. Subsequently, having partially granted a motion for reconsideration, the Board ordered a supplemental hearing on Packaging's theory of lowest cost compliance alternative and agreed to reconsider the penalty amount. For reasons discussed below, the Board now reaffirms the civil penalty amount ordered on September 8, 2011. The Board assesses a $356,313.57 economic benefit penalty and a $100,000 non-economic penalty for a total penalty of $456,313.57.

PROCEDURAL HISTORY

The People brought this enforcement action alleging that Packaging violated air pollution control requirements for the company's polyethylene and polypropylene film processing and printing facility. The People filed an eight-count complaint against Packaging on August 5, 2003. Packaging answered the complaint on January 16, 2004. On July 11, 2005, the People filed a motion for leave to file an amended complaint, attaching the amended twelve-count complaint. In an order dated August 18, 2005, the hearing officer granted the motion. Packaging answered the amended complaint on October 31, 2005 (Ans.).

Hearing was held on June 29, 2009 (Tr.1) and June 30, 2009 (Tr.2) in Elmhurst. Seven witnesses testified. The following witnesses testified on behalf of the People: David Bloomberg and Gary Styzens, both of the Illinois Environmental Protection Agency (IEPA). The following witnesses testified on behalf of Packaging: Richard Trzupek, at the time with Mostardi Platt

Environmental; Dominic Imburgia, President of Packaging; Joseph Imburgia, General Manager of Packaging; Timothy Piper, Quality Compliance Manager of Packaging; and Christopher McClure, at the time with Navigant Consulting. Mr. Trzupek also testified as an adverse witness for the People. At hearing, the People offered 13 exhibits (Comp. Exh.) and Packaging offered 51 exhibits (Resp. Exh.), all of which were admitted into the record.

On September 25, 2009, the People filed a post-hearing brief (2009 People Br.). On November 6, 2009, Packaging filed a post-hearing brief (2009 Pack. Br.). On December 3, 2009, the People filed a reply brief (2009 People Reply).

The Board issued its opinion and order on September 8, 2011. On October 19, 2011, Packaging moved the Board to reconsider that order (Pack. Mot.). The People filed a response opposing the motion on November 2, 2011. On November 15, 2011, Packaging requested leave to reply in support of the motion. On March 1, 2012, the Board granted in part Packaging's motion for reconsideration and ordered a supplemental hearing to address the economic benefit portion of the penalty imposed by the Board.

On March 28, 2012, the People moved to reconsider (People Mot.) the Board's March 1, 2012 order. On April 16, 2012, Packaging filed a response opposing the People's motion for reconsideration. On June 7, 2012, the Board denied the People's motion for reconsideration.

The Board on three separate occasions granted requests to extend the record closing deadline. *See*, *e.g.*, People v. Packaging Personified, Inc., PCB 04-16 (March 7, 2013) (granting extension of record closing deadline to July 3, 2013). These extensions were granted as the parties continued to resolve discovery-related issues in advance of hearing, including how to treat certain confidential information. The Board also granted a request to extend the discovery schedule.

The supplemental hearing was held on May 21, 2013 in Elmhurst. Four witnesses testified. The following witnesses testified on behalf of Packaging: Joseph Imburgia, General Manager of Packaging; Richard Trzupek of Trinity Consultants, Inc.; and Christopher McClure of Crowe Horwath. Kevin Mattison of IEPA testified on behalf of the People. The People offered six exhibits at hearing, all of which were admitted into the record (Comp. Exh.). Packaging offered eight exhibits at hearing, seven of which were admitted (Resp. Exh.). Respondent's Exhibit 63, discussed during the confidential portion of the hearing, was accepted by the Board's hearing officer as an offer of proof. On May 31, 2013, the Board received two transcripts: one public copy (Tr.3) and one containing claimed confidential information.

Packaging filed its post-hearing brief (Pack. Br.) on June 12, 2013. The People filed two post-hearing briefs on June 24, 2013: one containing public information (People Br.) and one addressing confidential information. On July 3, 2013, Packaging filed its reply to the People's post-hearing brief (Pack. Reply).

FACTS

The Board incorporates by reference the findings of fact from the Board's September 8, 2011 opinion and order but repeats relevant background facts here. *See* Packaging, PCB 04-16, slip op. at 5-11 (Sept. 8, 2011).

Sources of Emissions

Packaging's extrusion and printing operations emit volatile organic material (VOM). Ans. at 2-3, 18; Comp. Exh. 13; Tr.1 at 42-43. Packaging installed two plastic bag extruders and began operating them in 1989. Comp. Exh. 5 at 3; Ans. at 9. Packaging installed and began operating an additional extruder in 1992 and another extruder in 1995. Ans. at 3, 7, 9, 18; Comp. Exh. 5 at 3-4. Packaging installed and began operating flexographic printing presses as follows: press 1 in 1992; press 4 in February 1992; presses 2 and 5 in 1995; press 6 in late 2003 or early 2004. Ans. at 3, 7, 18; Comp. Exh. 5 at 4-6, 14; Resp. Exh. 55 at 3; Resp. Exh. 56 at 3.1-1. Packaging ceased operating press 4 at the Carol Stream facility in December 2002. Resp. Exh. 4; Tr.1 at 29, 220; Tr.2 at 91. Packaging moved press 4 to the Sparta, Michigan facility in December 2004. Comp. Exh. 5 at 14-15.

On press 4 and press 5, Packaging used solvent-based inks with a VOM content in excess of 40% by volume of the ink. Ans. at 36; Comp. Exh 5 at 12-13; Tr.1 at 193-94; Tr.2 at 13. Press 4 and press 5 processed "high-slip film," which necessitates solvent-based inks as "water-based inks do not adhere to high-slip film." Resp. Exh. 55 at 6-7; Tr.1 at 194. The vast majority of inks used by Packaging were solvent-based inks. Tr.2 at 14-15.

VOM is released from the solvent-based inks used on the presses. Resp. Exh. 55 at 3. Press 4 was never connected to any emission control device. Tr.2 at 13; Comp. Exh. 5 at 14; Tr.1 at 194. To accelerate the ink-drying process, press 5 came with a "tunnel dryer" or recirculating drying oven (Tr.1 at 25, 194-95, 220-21), which generated heat by burning VOM emissions, reducing natural gas usage (Tr.1 at 25-26, 198, 221; Tr.2 at 15-16; Resp. Exh. 55 at 3).

"Informal" Emissions Testing

On December 12, 2001, Packaging's environmental consultant, Mr. Trzupek, then of Huff & Huff, Inc., performed an "informal emissions test" on the press 5 tunnel dryer system to assess its VOM capture and destruction efficiency. Comp. Exh. 5 at 15; Comp. Exh. 8 at 1; Resp. Exh. 21; Tr.1 at 30-31, 93-94; Tr.2 at 16-17, 112. Press 5 had ink-drying units associated with its printing stations, along with a tunnel dryer after the last printing station. Comp. Exh. 8 at 1. Fumes captured at the drying units were vented to the tunnel dryer, which had an "internal, recirculating thermal oxidizer to destroy VOM emissions." *Id*. Mr. Trzupek measured for VOM emissions at the inlet to and exhaust from the tunnel dryer to assess its VOM destruction efficiency, while monitoring press 5's VOM usage rate for solvents and inks. Testing was conducted for approximately 30 minutes at each of the two locations, during which time press 5 "operated without interruption or change in production rate." *Id*. at 1-2; Tr.2 at 17-18. Based on

his testing, Mr. Trzupek concluded that the "capture efficiency of the control system on [press 5] is 82.6%, and the destruction efficiency is 93.6%, thus providing an overall control of 77.3%." Comp. Exh. 8 at 2; Tr.2 at 18.

Mr. Trzupek's test did not include three one-hour test runs. Tr.2 at 80-82; Comp. Exh. 5 at 15; Comp. Exh. 8 at 1; Tr.1 at 31, 45-46. As part of this test, Mr. Trzupek did not directly measure press 5's VOM capture efficiency, which he described as "a time consuming and expensive process." Resp. Exh. 55 at 3; Tr.2 at 81. At the time of the informal testing, Mr. Trzupek explained to Packaging that a "formal compliance test" on the press 5 tunnel dryer would still be necessary if the tunnel dryer was ultimately chosen as Packaging's emission control device. Tr.1 at 26; Tr.2 at 40; *see also* Tr.1 at 28-31 and Tr.2 at 18-19, 39-40, 77-78.

SUMMARY OF PRIOR BOARD DECISIONS

September 8, 2011 Board Opinion and Order

After hearing and briefing, the Board found, on September 8, 2011, that Packaging violated the Board's flexographic printing rule (35 Ill. Adm. Code 218.401) by failing to control printing press emissions of VOM. Packaging, PCB 04-16, slip op. at 22-23 (Sept. 8, 2011). The Board also held that Packaging failed to comply with permitting, reporting, recordkeeping, and compliance demonstration requirements of the Environmental Protection Act (Act) (415 ILCS 5 (2012)) and regulations, including requirements of the Clean Air Act Permit Program (CAAPP) for major sources in a severe ozone nonattainment area. *Id.* at 13-27. Packaging violated numerous provisions of the Act (415 ILCS 5/9(a), 9(b), 39.5(5)(a), and 39.5(6)(b) (2012)), the Board's regulations (35 Ill. Adm. Code 201.142, 201.143, 201.302(a), 203.201, 203.203(a), 203.301, 203.601, 205.300(a), 205.310(a)(1), 218.401(a), and 218.404(c)), the IEPA's regulations (35 Ill. Adm. Code 254.137(a), 254.501, and 270.201(b)), and a 2003 construction permit (Conditions 5, 15, and 16). *Id.* at 43.

The People asked the Board to impose a civil penalty, one component of which was "an economic benefit of $711,274.00 resulting from the delayed installation of a pollution control device and avoided annual costs." 2009 People Br. at 23. The People argued that Packaging's press 4 and press 5 violated the flexographic printing rule and that the lowest cost alternative for press 4 and press 5 to comply with the rule required installing air emission control equipment known as a regenerative thermal oxidizer (RTO). *Id.* at 10, 29. The People's expert calculated an economic benefit of $71,705 to Packaging from delaying the purchase of an RTO and $505,212 from avoiding the costs to operate and maintain the RTO. Comp. Exh. 10 at 1, 3, Att. C; Tr.1 at 111-15, 118-22; 2009 People Br. at 28-29, 31. These delayed and avoided compliance costs total $576,917. Factoring in principal and interest through December 2008, the People determined the value of the economic benefit of noncompliance to be $711,274 ($88,404 attributable to delayed costs, and $622,870 attributable to annual avoided costs). 2009 People Br. at 29. The People did not present a calculation of any economic benefit to Packaging from the company's other violations. 2009 People Reply at 9. The People requested an additional $150,000 non-economic penalty, for a total requested civil penalty of $861,274. 2009 People Br. at 23, 40.

Packaging argued that the People's requested penalty was excessive. Packaging asserted that the company's economic benefit from noncompliance ranged from $16,853 to $119,020. 2009 Pack. Br. at 42-45. Packaging argued that press 5 was in "substantive compliance," thus the company's arguments on lowest cost compliance alternatives were focused on press 4. *Id.* at 8-9, 42-45. Packaging presented three lowest cost alternatives for bringing press 4 into compliance: (1) obtaining an adjusted standard for press 4 ($33,707 economic benefit); (2) moving press 4 to the company's Sparta, Michigan facility ($16,853 economic benefit); or (3) installing a refurbished RTO on press 4 ($119,020 economic benefit). *Id.* at 42-45; Resp. Exh. 4A; Resp. Exh. 55 at 6. As to the third alternative of installing an RTO, Packaging's expert calculated an economic benefit of $25,150 to Packaging from delaying the purchase of an RTO and $93,870 from avoiding the costs to operate and maintain the RTO. Resp. Exh. 4A, Scenario 2. These delayed and avoided compliance costs total $119,020. The differences between the People's total of $711,274 and Packaging's total of $119,020 were due to differing assumptions on the size of the RTO and the length of time the RTO would have been operating.

Based on the factors of Section 33(c) of the Act (415 ILCS 5/33(c) (2012)), the Board ruled that a civil penalty was warranted. The Board imposed a $456,313.57 civil penalty based on the factors of Section 42(h) of the Act (415 ILCS 5/42(h) (2012)). Packaging, PCB 04-16, slip op. at 43 (Sept. 8, 2011). $100,000 of this penalty was the non-economic benefit portion to deter future violations and enhance compliance. *Id.* at 41-42. As to the economic benefit portion of the penalty, the Board assessed $356,313.57 to reflect the economic benefit to Packaging from not having timely installed air pollution control equipment on press 4 and press 5 to comply with the flexographic printing rule. *Id.* at 41. Specifically, the Board found that both press 4 and press 5 required an RTO. *Id.* at 37. The Board found that "installing an RTO with capacity to control VOM emissions from two presses was Packaging's lowest cost alternative to comply with the flexographic printing rule." *Id.* at 38.

Using information provided by experts for both the People and Packaging, the Board calculated the economic benefit of noncompliance, on a per unit per year basis, for not installing an RTO on press 4 for seven years and press 5 for eight years. Packaging, PCB 04-16, slip op. at 39-40 (Sept. 8, 2011). The seven year period for press 4 was calculated from the March 15, 1995 effective date for the flexographic printing rule to the end of 2002 when the unit shut down. *Id.* at 39. The eight year period for press 5 was calculated from the 1995 installation date to early 2004 when the RTO was tested. *Id.* The Board arrived at a total delayed and avoided cost benefit to Packaging of $285,900 from its noncompliance. *Id.* at 39-40. Adding interest to this figure for nonpayment of the economic benefit resulted in a total economic benefit of $356,313.57. *Id.* at 40-41.

March 1, 2012 Board Order

On October 19, 2011, Packaging filed a motion for reconsideration to which the People objected. Packaging argued that the Board erred in using the RTO as the compliance method for press 4 and press 5. Pack. Mot. at 4. Packaging asserted that it "decided to proceed to include [press 5] along with the new press [6] for purposes of [RTO] control in hopes that IEPA would find that to be something that would lead them to be reasonable." *Id.* at 5. The Board granted

partial reconsideration of its September 8, 2011 order to address the civil penalty. The Board denied reconsideration of other issues not discussed here.

Packaging offered an alternative economic benefit calculation and requested that the Board reduce the economic benefit component to $12,077. Pack. Mot. at 6. Packaging argued that the lowest cost alternative for achieving compliance was to "shut down [press 4], transfer the production from [press 4] to [press 5] and demonstrate that [press 5] complied with VOM emission requirements through a formal stack test" of the press 5 tunnel dryer system, also referred to as a recirculating oven. *Id.* at 3. At no cost, press 4 was shut down and all of the production from press 4 was shifted to press 5 after 2002. *Id.* at 3-4, citing Tr.1 at 204-06. Press 5, without the RTO, would have passed a formal compliance stack test if the company "would have incurred an additional $15-$30,000 cost of constructing total temporary enclosure for press #5 and performed a $6,180 stack test." *Id.* at 3, citing Tr.2 at 18-22, 102. According to Packaging, using $30,000 for the cost to construct a temporary total enclosure and $6,180 for the cost to conduct the compliance stack test "results in a total economic benefit to Packaging of $12,077." *Id.* at 4, Pack. Mot. Exh. A. Packaging provided its calculation of $12,077 in an October 19, 2011 letter from its expert. Pack. Mot. Exh. A (also found at Resp. Exh. 65). Attached to the letter are two documents: one page of calculations and a $6,180 invoice dated March 4, 2004 from ARI Environmental, Inc. to Packaging for the February 26, 2004 stack test on the RTO. *Id.*

The Board found that Packaging's motion to reconsider presented a new argument for the company's lowest cost compliance alternative and resulting economic benefit. Packaging, PCB 04-16, slip op. at 11 (March 1, 2012). The Board also found that Packaging's exhibits to its motion to support the claimed $12,077 economic benefit were additional evidence. *Id.* The Board found, however, that there was a reasonable explanation for Packaging's failure to argue the stack test as the lowest cost compliance alternative and failure to provide the exhibits. *Id.* at 13.

The Board granted Packaging's motion to reconsider the Board's economic benefit calculation. Packaging, PCB 04-16, slip op. at 16 (March 1, 2012). Section 42(h)(3) of the Act requires that any economic benefit accrued by Packaging from noncompliance must be based on the "lowest cost alternative for achieving compliance." 415 ILCS 5/42 (h)(3) (2012). Accordingly, the Board determined that it would be an error in applying the law to find an economic benefit under Section 42(h)(3) if the record established that there was a lower cost compliance alternative. Packaging, PCB 04-16, slip op. at 15-16 (March 1, 2012). The Board found that evidence in the record established a colorable claim for a smaller, albeit unspecified, economic benefit from noncompliance than the one determined by the Board. *Id.* at 16. Accordingly, the Board agreed to reconsider the civil penalty.

The Board then directed the parties to return to hearing solely to address the following:

1. Did the press 5 tunnel dryer system constitute a "capture system and control device" under 35 Ill. Adm. Code 218.401(c)?

2. Would press 5 and the tunnel dryer system have accommodated the entire production of both press 4 and press 5 from March 15, 1995 to February 26, 2004? What costs, if any, did Packaging avoid or delay by not shifting press 4's production to press 5 until after press 4 ceased operating in December 2002?

3. Would a formal stack test of the press 5 tunnel dryer system have demonstrated compliance with the capture and control requirements of 35 Ill. Adm. Code 218.401 (c)? What costs, if any, did Packaging avoid or delay by not building a [temporary total enclosure] for press 5 and performing a formal stack test of the tunnel dryer system?

4. Interest due for nonpayment of the economic benefit component of the penalty. Packaging, PCB 04-16, slip op. at 17 (March 1, 2012).

June 7, 2012 Board Order

On March 28, 2012, the People moved the Board to reconsider its March 1, 2012 order. The People argued that in the March 1, 2012 order, the Board (1) misapplied the term "compliance" in Section 42(h)(3) by inviting argument on the hypothetical non-operation of press 4: (2) erred by implicitly finding that press 5 could be deemed in retroactive compliance; and (3) ran afoul of the Board's Panhandle precedent "by allowing extensive consideration of hypothetical compliance options" to the detriment of the deterrent effect of civil penalties. People Mot. at 2, 13-14; *see also* People v. Panhandle Eastern Pipe Line Co., PCB 99-191 (Nov. 15, 2001). The Board addressed each of these arguments and denied the People's motion.

POST-HEARING ARGUMENTS

Packaging's Post-Hearing Brief

On June 12, 2013, Packaging filed a post-hearing brief. Packaging requests that the Board "reduce the penalty amount from $356,313.57 to $12,077[1], which is the amount calculated using the avoided cost for constructing a temporary total enclosure and conducting a formal stack test." Pack. Br. at 17. Packaging addressed each of the four issues presented by the Board in its March 1, 2012 order.

Press 5 Tunnel Dryer System as Capture System and Control Device

Packaging states that, at hearing, Joseph Imburgia testified that he purchased press 5 "based on the vendor's representations of energy savings created by the burning of spent solvent in a recirculating oven [tunnel dryer] to produce heat." Pack. Br. at 6, citing Tr.3 at 43-44. Mr. Trzupek further testified that, in his opinion, the press 5 recirculating oven meets the definitions

[1] The Board notes that Packaging also states the economic benefit of noncompliance as $12,057 (*see, e.g.*, Pack. Br. at 15), but attributes this to scrivener's error as the amount provided in Mr. McClure's report is $12,077, *see* Resp. Exh. 65.

in the air pollution regulations of a control device, capture system and afterburner. *Id.*, citing Tr.3 at 151. Mr. Trzupek stated that the press 5 recirculating oven

> was built and operated to capture the exhaust gases leaving the oven section and send a portion to the combustion chamber for use as combustion air where they would be burned to produce heat that was then sent back to the oven to assist in the drying of the ink. *Id.* at 6-7, citing Tr.3 at 153, 234.

Packaging therefore contends that the record affirmatively shows that the press 5 tunnel dryer system is a capture system and control device and that nothing has been presented to refute this showing. *Id.* at 7.

Press 5 Accommodating Production of Both Press 4 and Press 5

Packaging argues that "the record clearly establishes that press 5 had the capacity to absorb all of the solvent-based printing produced on press 4 and press 5 from March 15, 1995 to February 26, 2004." Pack. Br. at 7. Packaging points to Mr. Imburgia, who testified that Packaging "produced all of their solvent-based printing using only press 5" in 2003 after shutting down press 4 in 2002. *Id.*, citing Tr.3 at 27, 40. Mr. Imburgia further testified that Packaging "printed more in 2003 than they had printed in any previous year." *Id*. Mr. Imburgia also testified that the annual potential capacity for press 5 is 6,930,408 pounds of printed material, which would accommodate all of the potential production that could be produced by press 4 running two shifts (1,457,172 pounds) as it was when it was shut down in 2002. *Id.* at 9.

Packaging contends that "operating only press 5 and not operating press 4 did not result in any added or delayed costs." Pack. Br. at 10. Mr. Imburgia testified that Packaging saved costs when only using press 5. *Id.*, citing Tr.3 at 205-206. This is because press 5 "had a faster run time" and "was more efficient." *Id.* Because of this efficiency, press 5 could accommodate the production of both press 4 and press 5 with fewer people. *Id.* Using only press 5 also saved energy costs because it burned solvent emissions to provide heat in the dryer, unlike press 4 which required natural gas to produce heat. *Id.*

Stack Test of Press 5 Tunnel Dryer System

Packaging notes that Mr. Trzupek conducted an engineering test on press 5 and determined that press 5 was in compliance with the flexographic printing regulation found at 35 Ill. Adm. Code 218.401(c). Pack. Br. at 10-11. Mr. Trzupek's test results were that the press 5 tunnel dryer system achieves 82.6% capture efficiency, 93.6% destruction efficiency, and an "overall capture destruction efficiency" of 77.3% efficiency to control VOM emissions. *Id.* at 12. These results, according to Packaging, exceed the regulatory requirements of 90% destruction and an overall reduction of 60% VOM emissions. *Id.*, citing 35 Ill. Adm. Code 218.401(c). Mr. Trzupek opined that "press 5 was in compliance with the regulatory requirement" and stated that he used the results of these tests in his submittals to IEPA. *Id.*

Packaging summarizes Mr. Mattison's objections to the 2001 stack test as "the test did not follow the prescribed requirements applicable to formal stack tests that are required to be

performed to demonstrate compliance with applicable rules." Pack. Br. at 13-14. Packaging agrees with this position, but states that "[i]t was a diagnostic test of the type that is routinely performed by experienced stack testers." *Id.* at 14.

Packaging notes that the record shows avoided costs for the compliance stack test "would have been between $15,000 to $30,000" for costs associated with building a temporary total enclosure, and $6,000 for the cost of the test, for a total ranging from $21,000 to $36,000. Pack. Br. at 15.

Interest Due

Packaging states that it presented an economic benefit of $12,077 based upon the inputs of the avoided costs for a compliance stack test. Pack. Br. at 17. Mr. McClure testified that if the Board does not find that press 5 would have complied when a compliance stack test was performed, the Board "should look at the low cost of installing a properly sized refurbished control device" which Mr. McClure presented in the original hearing. *Id.* at 15-16. Packaging states that the Board appears to have used these numbers but added them together for two presses. *Id.* at 16, citing Packaging, PCB 04-16, slip op. at 40 (Sept. 8, 2011). Packaging states that, "[i]f the Board accepts the testimony that there was no cost to shut down press 4 and shift production to press 5, the lower cost option that the Board believes is justified should only be applied just one time." *Id.* Packaging states that this "would result in a substantial lower calculated economic benefit penalty when that avoided cost is determined and the bank prime rate is applied as the Board previously did." *Id.*

The People's Redacted Post-Hearing Brief

On June 24, 2013, the People filed a post-hearing brief. The People argue that Packaging has the burden of proof on Packaging's "shutdown/shift theory" and they have not made this demonstration. People Br. at 2. Further, Packaging's theory does not recover the economic benefits actually accrued by Packaging for its noncompliance in running press 4 and therefore conflicts with Section 42 of the Act. *Id.*, citing 415 ILCS 5/42 (2012). The People contend that Packaging's reported gross profit and total income for 2003 reveal that operating only press 5 in 2003 "had a severe negative impact on Packaging's business results." *Id.* at 2-3. The People also seek an additional non-economic penalty based on information obtained for the supplemental hearing. *Id.* at 3.

Compliance with 35 Ill. Adm. Code 218.401(c)

The People first argue that Packaging misrepresented press 5's control efficiency. The People state that, in Packaging's initial CAAPP permit application to IEPA, Packaging claimed that press 5 was in compliance and that compliance was demonstrated by a "manufacturer's guarantee." People Br. at 3. The People contend, however, that no such guarantee was ever produced in discovery, and that Mr. Imburgia admitted at hearing that no "manufacturer's guarantee" ever existed. *Id.* at 4.

The People next argue that Packaging repeatedly failed to perform a compliant stack test. The People contend that the record shows that Packaging passed up numerous opportunities to perform a valid and compliant test. People Br. at 5. This is despite the relatively small cost involved with performing a compliant stack test. *Id.* The People argue that the Board is faced with determining whether a compliant stack test would have demonstrated compliance because Packaging chose not to spend between $6,000 and $11,180 to test press 5. *Id.* at 6. Thus, the People state that Packaging "is asking the Board to decide this issue based on a noncompliant, incomplete, one-hour evaluation performed in December 2001." *Id.* at 5.

The People attack the 2001 test on various grounds to argue that the test was not reliable. The People contend that, due to these failures to follow reliable test protocols, the 2001 test "could not produce accurate, statistically valid results." People Br. at 7. The People explain each of their criticisms of the 2001 test.

Multiple Tests. The People state that Packaging did not perform three separate one-hour tests, but rather performed a single one-half hour test on the inlet to the press 5 tunnel dryer, as well as a single one-half hour test on the outlet. People Br. at 10. The People further state that these two tests were performed sequentially, not simultaneously. *Id.* The People contend this is significant because the Board's emission testing regulations provide in part that the test "shall consist of three separate runs, each lasting a minimum of 60 minutes." *Id.*, citing 35 Ill. Adm. Code 218.105(f)(1). Further, 35 Ill. Adm. Code 218.105(d) requires that the control device efficiency "shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates" in accordance with the gas phase test methods specified in Section 218.105(f). *Id.* Mr. Mattison testified that a single short test would not provide accurate and reliable results. *Id.* at 11. Mr. Mattison further testified that, without performing additional test runs, there is no way to conclude that the first test was accurate. *Id.*, citing Tr.3 at 294.

VOM Input Data. Mr. Mattison contends that the 40 pounds per hour VOM input used in the calculations is inaccurate based on other data provided by Packaging. People Br. at 12-13, citing Tr.3 at 296-297, Comp. Exh. 13. As an example, the People state that ink usage data provided by Packaging in 2003 suggests a maximum ink usage rate of 20 pounds per hour. *Id.* at 13, citing Comp. Exh. 13. The People contend that "[a]ccurate VOM data is an absolute prerequisite to a reliable estimate of capture efficiency" and that it

> is hard to believe Mr. Trzupek's statement, made 12 years after the fact and based purely on his recollection, that he carefully compared the ink and solvent VOM content to arrive at exactly 40 pounds per hour of VOM. *Id.*

The People state that no particular printing ink was identified in the 2001 stack test report and no information was provided later at hearing. People Br. at 14. Based on VOM content of inks in a 2003 document, the People contend that the inks used by Packaging varied significantly. *Id.*, citing Comp. Exh. 13. The People therefore argue that "it is unlikely that the actual VOM usage was an even 40 pounds per hour" and that an assumed VOM content number "could not have resulted in an accurate result." *Id.* Mr. Mattison testified that Mr. Trzupek's formula "would calculate capture efficiencies of between 107% and 127%, clearly impossible

results" if the actual ink VOM content is substituted for the 40 pound VOM estimate. *Id.* The People therefore conclude that the capture efficiency and overall control efficiency reported by Packaging are unreliable. *Id.*

Flow Measurements. The People first question whether Packaging properly selected the two sampling points. People Br. at 15. Next, the People claim that the tunnel dryer was not under negative pressure because the inlet flow reported was two and one half times greater than the outlet flow. *Id.* The People state that, if the recirculating oven was under positive pressure, the solvent emissions would have been pushed out of the oven and the reported destruction efficiency would be incorrect. *Id.* Alternatively, the People claim that the inlet flow data was wrong. *Id.* The People state that, were the oven under negative pressure, then the flow data reported by Packaging is incorrect. *Id.* The People contend that, "[i]n either event, the results of the 'informal stack test' cannot be used to support any reasonable opinion regarding the VOM capture and destruction efficiency of the recirculating tunnel dryer system on [press 5]." *Id.*

VOM Response Factor. The People state that Packaging failed to convert the propane assumption from its calculations to the actual VOM used in the test. People Br. at 16. The People contend that a conversion number, known as a response factor, should have been used in the calculations. *Id.* Without this response factor, the People contend, the capture efficiency reported by Packaging is invalid. *Id.* Based on a 2003 document, the People state that the VOM content of inks used by Packaging vary considerably. *Id.* at 16-17, citing Comp. Exh. 13. The People contend that, because no records were retained, "we do not know [] the proper response number for the inks and solvents used" in the 2001 test. *Id.* at 17.

Shutdown of Press 4

The People argue that Packaging did not demonstrate that it could have operated without press 4 without a negative financial impact to Packaging. People Br. at 23. The People note that, except for 2003, Packaging always operated with two solvent presses. *Id.* The People contend that in 1999 press 4 ran 38.2% of Packaging's solvent printing business and in 2000 and 2001 press 4 handled about 43% of the solvent printing business. *Id.* at 24. The People note that, after learning of press 4's noncompliance, Packaging increased press 4's share of the solvent printing business to 50.1% instead of shutting down press 4. *Id.* The People contend that Packaging operated two solvent presses at the Carol Stream facility from March 15, 1995 until the present, except for 2003. *Id.* When a press was taken out of commission, Packaging replaced it with another. *Id.*, citing Tr.3 at 68. For example, when Packaging received IEPA's notice of violation for press 4, Packaging decided that it would withdraw press 4 from service and replace it with a new press. *Id.* at 24-25, citing Comp. Exh. 13.

The People argue that reports from Packaging show that press 4 was heavily used by Packaging. People Br. at 25. The People note that, on May 2, 2003, Packaging reported the same actual operating hours of 6,000 hours each for press 4 and press 5. *Id.* at 26. The People conclude that this data shows that Packaging "relied equally" on press 4 and press 5. *Id.* Further, the People argue that Packaging could not have run its business in 2002 with only press 5 because the total number of hours that Packaging ran press 4 and press 5 (12,000) exceeds the total number of hours in a year (8,760). *Id.* The People contend that this difference of 3,240

hours "is simply too much" to argue away with a representation that Packaging could have run press 5 at a higher rate. *Id.* Packaging also submitted a report on December 16, 2002 which provided specific information on the distribution of business between press 4 and press 5, in response to IEPA's violation notice. *Id.* The People argue that this production information "shows that [press 4] was critical to Packaging's solvent printing business." *Id.* at 27. The People further argue that the production information, when compared to Packaging's financial results, "shows that Packaging's profits were tied to the maximum operation of" press 4. *Id.*

The People further argue that reports prepared by Packaging for hearing are unreliable. The People note that Packaging has not retained records of production, ink usage, monthly operation of press 4 and press 5, or other data that might show that press 5 could have handled all of the solvent printing production beginning on March 15, 1995. People Br. at 27. The People note that Packaging "attempted to recreate production records in late 2012 solely for the purpose of this hearing." *Id.* at 28. The People contend that Packaging's reports presented at hearing are "[b]ased on the estimates used in Packaging's 2009 [Federally Enforceable State Operating Permit (FESOP)] information, records made beginning in 2005, hearsay evidence from Tim Piper, and by making all assumptions [in] favor of Packaging's theory of the case." *Id.* The People note that Packaging did not enter backup data at hearing and such backup data was used at Mr. Imburgia's May 1, 2013 deposition, where the "raw data used in his calculations was shown to be seriously flawed." *Id.* The People state further that Packaging's 2003 annual emission report (AER) conflicts with the reports prepared for this hearing. *Id.* at 29. Specifically, the People note that Packaging reported total VOM emissions of 50.69 tons in the 2003 AER but reported 59.84 tons from only press 5 in the "2012-2013 back-calculated report." *Id.* at 29-30. The People contend that the reports prepared for hearing should be considered "biased and unreliable" because they conflict with Packaging's AERs and other VOM emission information. *Id.* at 30.

The People contend that Packaging's financial data show that press 4 was critical to Packaging's business. People Br. at 31. The People disagree that Packaging's 2003 financial results prove that press 4 was unnecessary to its business. *Id.* Rather, the People contend that Packaging's financial information for the period proves that operation of press 4 "was critical to Packaging's overall business results." *Id.* at 32. The People argue that Packaging's tax information proves that non-operation of press 4 would have had "a serious negative impact on Packaging's profits from 1995 through 2002." *Id.*

Civil Penalty

The People argue that their original proposed civil penalty was appropriate. People Br. at 35-36. The People argue that their estimate of $711,274.00 for Packaging's economic benefit of noncompliance is appropriate because it was based on the actual RTO installed by Packaging. The People request, if the Board continues to believe that its estimate of $356,313.57 in economic benefit is appropriate, that the Board impose an additional non-economic penalty to address "knowing violations related to the operation of Press No. 4 in 2002." *Id.* at 36. The People contend that Packaging knowingly continued to operate press 4 in violation of the Act for an additional year after being made aware of its noncompliance, and increased production on

press 4 during that time. *Id.* at 36-37. The People further state that the increase in press 4's production coincided with a year of record profits for Packaging. *Id.* at 37.

The People therefore request that the Board "assess an additional civil penalty of $100,000 against Packaging for the violations related to operation of" press 4 in 2002. People Br. at 37. The People state that Packaging "knowingly and intentionally" continued to operate press 4 for one year after being advised of its noncompliance. *Id.* at 38, citing 415 ILCS 5/33(c)(1) (2012). The People further assert that Packaging's financial information shows it could have afforded a VOM control device in 2001 and that the consultant who advised Packaging of its noncompliance in 2001 was the same consultant who assisted Packaging in the VOM control of press 5 and press 6. *Id.*, citing 415 ILCS 5/33(c)(4) (2012). The People therefore contend that the Section 33(c) factors of the Act support an additional civil penalty. *Id.*

The People further state that a review of the Section 42(h) factors supports an increased civil penalty. People Br. at 38. The People observe that Packaging knowingly operated press 4 in violation of the Act, at an increased production level, for at least one year. *Id.*, citing 415 ILCS 5/42(h)(1) (2012). Further, the People remark, Packaging showed no diligence in attempting to comply with the VOM control requirements for press 4. *Id.* at 38-39, citing 415 ILCS 5/42(h)(2) (2012). The People contend that circumstantial evidence suggests that Packaging benefitted economically from continued operation of press 4. *Id.* at 39, citing 415 ILCS 5/42(h)(3) (2012). The People also believe that "deterrence is the strongest argument for an increased civil penalty" because the evidence "indicates that Packaging put its business interests and future expansion plans well above environmental compliance." *Id.*, citing 415 ILCS 5/42(h)(4) (2012). The People argue that "knowing violations" must be deterred by an "appropriately large civil penalty to prevent others from choosing to act similarly." *Id.* at 40.

The People request that the Board "recognize [the People's] original economic benefit of noncompliance estimate of $711,248 as part of a civil penalty calculation."[2] People Br. at 40. The People alternatively request, should the Board retain its initial estimate of $356,313.57, that the gravity and deterrence portion of the overall civil penalty be increased from $100,000 to $200,000, for a total civil penalty of $556,313.57. *Id.*

Shutdown/Shift Theory

The People urge that Packaging's penalty theory of shutting down press 4 and shifting production to press 5 "conflicts with the directives of Section 42(h) of the Act." People Br. at 40, citing 415 ILCS 5/42(h) (2012). The People state that this theory "ignores the obvious, admitted economic benefit stemming from the operation of" press 4. *Id.* at 41. The People further state that "the issue is not whether Packaging's overall printing business was noncompliant, it is whether [press 4] was noncompliant." *Id.* The People contend that how Packaging could have brought its overall business into compliance "has no relevance to the seven year [press 4] violation." *Id.* The People therefore argue that the lowest cost alternative for achieving compliance for press 4 was the lowest cost of VOM control for press 4. *Id.* The

[2] The Board notes that the People cite to the amount as $711,274 throughout their post-hearing brief (*See* People Br. at 3, 36) and attributes the $711,248 amount to scrivener's error.

People believe that to ignore the VOM violations from the uncontrolled emissions of press 4 "conflicts with the requirement that the economic benefit of noncompliance for the [press 4] violation be recovered, and therefore violates the Act." *Id.* Therefore, the People argue, the "cost of the failure to control emissions from [press 4] can only be recovered by looking to the avoided control costs of" press 4. *Id.* at 42.

Packaging's Witnesses

The People raise various concerns with the admissibility and reliability of the testimony and opinions of Packaging's witnesses Mr. Trzupek and Mr. McClure.

The People argue that Mr. Trzupek's opinion cannot be allowed because it does not meet the admissibility standard for scientific opinions. The People contend that scientific opinion evidence is governed by Frye v. US, 293 F. 1013 (D.C. Circuit 1923). People Br. at 18, citing Tr.3 at 293. Under the Frye standard, a "novel" scientific method may only be considered if it meets the "general acceptance test," *i.e.*, it is reasonably relied upon by experts in a particular field. *Id.* at 18-19. The People state that Packaging presented no evidence "to show any general consensus in the scientific or regulatory community that the informal stack test was reliable, accurate, or a legitimate method of measuring VOM control." *Id.* at 19. Further, Mr. Mattison testified that the method is novel and "he deems it unreliable and unacceptable." *Id.*, citing Tr.3 at 307. The People argue that, because Packaging failed to demonstrate "general acceptance," the Board should find Mr. Trzupek's opinion unreliable as a matter of law. *Id.* at 20.

The People also claim that Mr. Trzupek's conclusions are unreliable because he has demonstrated a bias against environmental regulators through certain published works. People Br. at 20-22. The People concede that Mr. Trzupek is "entitled to his opinions about the overall environmental regulation," but state that his written comments "demonstrate a strong bias against environmental regulators and in favor of his clients." *Id.* at 21. The People further argue that Mr. Trzupek has taken inconsistent positions with respect to other clients. *Id.*

The People also challenge Mr. McClure's opinion as unreliable. The People contend that Mr. McClure's testimony does not have any bearing on the Board's decision in this case. People Br. at 35. The People state that Mr. McClure "only performed an arithmetical calculation of the interest from the deferred cost of avoiding stack test expenditures," that "all of his information was provided to him by Packaging's attorneys," and that his opinion "ignores [press 4's] uncontrolled emissions, [Emissions Reduction Market System (ERMS)] violations, permit violations, recordkeeping violations, CAAPP violations, and all of the regulatory violations." *Id.*

Packaging's Reply

Packaging filed a reply brief on July 3, 2013.

Tax Returns

Packaging notes the People's statement that tax returns "are often prejudicial." Pack. Reply at 8. Packaging describes the People's manner of utilizing gross profit and total income figures as "inconceivable." *Id.* at 10. This evaluation is based on the testimony of Mr. Imburgia.

Mr. Imburgia testified that the gross profit and total income values listed in Complainant's Exhibit 17 are not an indicator of net income. Pack. Reply at 9. Mr. Imburgia testified that gross profit and total income values are adjusted by subtracting the cost of doing business, resulting in the actual taxable income. *Id.* Mr. Imburgia further testified that

> just the differences in depreciation and inventory amounts for 2002 and 2003 was enough to account for any difference in Gross Profit and Total Income values listed in Complainant Exhibit 17 for these two years. *Id.*

Packaging states that the values listed in Complainant Exhibit 17 are "simply not the total of actual profit available to Packaging for these years." *Id.* at 10.

Credibility and Admissibility

In response to the People's "attacks on the credibility of [Packaging's] witnesses," Packaging states that all three witnesses who testified at the May 21, 2013 hearing "testified at the previous hearing and as noted by the Board were found by the Hearing Officer to be credible witnesses." Pack. Reply at 11, citing Tr.2 at 163, Packaging, PCB 04-16, slip op. at 5 (Sept. 8, 2011). Packaging therefore states that the Board should "dismiss this effort by [the People] as unfounded, waived, previously determined, highly prejudicial and untrue." *Id.* at 12.

Packaging agrees with the People that the Frye standard governs scientific opinion evidence in Illinois. Pack. Reply at 12. However, Packaging notes that Mr. Trzupek stated that the 2001 stack test was never intended to demonstrate compliance. *Id.* Rather, "[i]t is merely being used after the fact to determine whether the press would have demonstrated compliance had a formal stack test been conducted." *Id.*

Packaging states that, while true that Mr. Trzupek's book contains a chapter addressing this case, the book was published over two years after he first testified and following the Board's September 8, 2011 order. Pack. Reply at 14. Packaging states that Mr. Trzupek's testimony at the first hearings was substantially the same as his testimony at the May 21, 2013 hearing. *Id.* at 15. Packaging contends that the Board found Mr. Trzupek's testimony to be credible. *Id.*, citing Tr.2 at 163, Packaging, PCB 04-16, slip op. at 5 (Sept. 8, 2011). Packaging therefore argues that the Board should reject this attempt to disqualify Mr. Trzupek. *Id.*

Packaging states that, while the input costs used by Mr. McClure may have been originally provided by Packaging's attorneys, "the record contains the basis for the reasonableness of these costs which have not ever been at issue in this proceeding." Pack. Reply at 16. Packaging notes that Mr. McClure used these documented costs "to calculate the economic benefit of not conducting a formal stack test on Press 5." *Id.*

Packaging contends that there is no misrepresentation in Packaging's CAAPP application. Pack. Reply at 17. Mr. Trzupek explained that he used "manufacture's guarantee" as "shorthand" for performance of a unit based on design. *Id.*, citing Tr. 3 at 156. Mr. Trzupek further testified that, in preparing a permit application, "it is typical to use the regulatory required minimum destruction rate" when information like he had from his 2001 stack test demonstrated that the actual destruction rate exceeded that requirement. *Id.* at 17-18. Packaging argues that Mr. Trzupek's testimony regarding the use of manufacturer's guarantee, the design of the tunnel dryer system, and using a 90% destruction rate in the permit application provides a reasonable explanation. *Id.* at 18.

Issues the Board Ordered to be Addressed at Reconsideration Hearing

Press 5 Tunnel Dryer System as "Capture System and Control Device". Packaging contends that the People neither addressed this question in their brief nor presented any testimony at hearing on the issue. Pack. Reply at 21. Packaging states that press 5 "was designed and manufactured to be an energy efficient press." *Id.*

Press 5 Accommodating Production of both Press 4 and Press 5. Packaging contends that the "record clearly establishes that press 5 had the capacity to absorb all of the solvent-based printing produced on Press 4 and Press 5 from Mach 15, 1995 to February 26, 2004." Pack. Reply at 22. Packaging states this is "precisely what occurred in 2003" when, using only press 5, Packaging printed more than it had printed in any previous year. *Id.* Packaging disputes the People's argument that press 4 produced more product than press 5 in 2002. *Id.* at 22. Packaging maintains that the production numbers relied upon by the People were for half of 2002, and the actual distribution difference is only 0.2%. *Id.*, citing Tr.3 at 136. The People's position is further refuted by the average process weight rate for 2002, listed as 14.99 pounds per hour for press 4 and 34.97 pounds per hour for press 5, which Mr. Trzupek testified should be used to determine relative utilization of the presses. *Id.* at 23, citing Tr.3 at 184. Packaging further argues that it did not suffer an economic impact from shutting down press 4 in 2003, and in fact saved money. *Id.* at 24.

Stack Test of Press 5 Tunnel Dryer System. Packaging contends that Mr. Trzupek's test results "clearly show press 5 would have passed the test." Pack. Reply at 26, 27, citing Tr.3 at 201. Packaging states that the technical points raised in the People's response are ones that are applicable to formal stack testing conducted to demonstrate compliance, or have otherwise been responded to in Mr. Trzupek's testimony. *Id.* at 29. Packaging further states that there is "no controversy over the estimated cost for either constructing a [temporary total enclosure] or the cost of a stack test." *Id.* at 29. Regarding the People's contention that Mr. McClure did not calculate any economic penalty for any of the other violations found by the Board, Packaging states that Mr. McClure testified that there is a difference between economic benefit and gravity components of a penalty, and an economic benefit penalty is not always required. *Id.*, citing Tr.3 at 280-281, 283.

Interest Due. Packaging states that the People have not addressed this issue. Pack. Reply at 31. Mr. McClure testified that once the dollar amount for economic benefit is

determined, the appropriate interest rate is applied for the time period at issue. *Id.*, citing Tr. 3 at 258.

Response to the People's Increased Penalty Request

Packaging argues that the People misinterpret Section 42(h) of the Act. Pack. Reply at 31. Packaging states that Section 42(h)(3) "unambiguously defines economic benefits as the lowest cost alternative for achieving compliance." *Id.* Further, any delay in complying with air pollution control requirements "is already taken into consideration by this definition." *Id.* Therefore, "no adding on or piling on to the penalty amount is necessary to fulfill the mandate of Section 42(h)." *Id.* Packaging therefore contends that the People's arguments regarding the period of noncompliance are irrelevant. *Id.* at 31-32. Packaging notes its "considerable compliance activities" undertaken in response to IEPA's inspection and states that these efforts "were noted by the Board in the Order as reasons to support the $100,000 penalty it imposed for the violations it found." *Id.* at 32. Packaging also reiterates that the People's argument that Packaging increased production on press 4 in 2002 is factually wrong. *Id.* Further, the People's use of the total amount of gross profit and total income for the years in question is wrong and prejudicial to Packaging. *Id.* at 32-33.

EVIDENTIARY ISSUES AT HEARING

Pre-Hearing Motions

On May 3, 2013, the People filed a motion (May 3 Mot.) to admit a publication of Mr. Trzupek titled Regulators Gone Wild: How the EPA is Ruining American Industry. May 3 Mot. at 4. The People contended that Mr. Trzupek's book, which includes a chapter dedicated to this enforcement action, "contains a number of inflammatory statements and conclusions that demonstrate a clear bias against [IEPA], and environmental regulation in general." *Id.* at 2.

On May 6, 2013, Packaging filed its response to the People's motion accompanied by Packaging's own cross motion to admit additional publications of Mr. Trzupek (May 6 Mot.). Packaging did not object to the admission of the book chapter, but it took "issue with [the People's] characterization of the contents of the chapter, and with [the People's] implication that this chapter is representative of Mr. Trzupek's general views on environmental regulation." May 6 Mot. at 1. Packaging therefore moved the Board to admit additional publications of Mr. Trzupek "to present the Board with an accurate representation of Mr. Trzupek's views." *Id.* at 1-2, citing May 6 Mot. Exh. A.

The People filed their response to Packaging's cross-motion on May 10, 2013 (May 10 Resp.). The People stated that they intended to use additional material from the book "outside of the specific chapter on the Packaging Personified case, to demonstrate bias." May 10 Resp. at 2. The People contended that Packaging's proposed list "is overwhelmingly long" and noted that it "will object to any overbroad application of prior publications by [Packaging]." *Id.*

At the Board's May 21, 2013 hearing, the parties agreed to admit the chapter of Mr. Trzupek's book, as well as Packaging's document list and materials from the two times that Mr.

Trzupek testified before Congress. The Board hearing officer granted both parties' motions as agreed to by the parties. Tr.3 at 213; *see also* Hearing Officer Order, PCB 04-16, slip op. at 1-2 (June 3, 2013).

Confidential Documents: Packaging's Tax Returns

On May 6, 2013, Packaging moved to mark certain tax documents as trade secret or nondisclosable information (Tax Mot.). Packaging states that it "has always maintained its tax returns as confidential and has never disclosed them to anyone unless required." Tax Mot. at 2. Packaging further states that these tax documents

> contain business plan and financial information which would allow both its competitors and its customers to gain knowledge concerning its business plan and to take economic advantage in terms of pricing their products in competition to those produced by [Packaging] or negotiating purchase prices for the products that [Packaging] sells. Tax Mot. at 2.

Packaging states that it would "suffer economic loss should this information be made public." *Id.* The People agreed that "the tax information produced in discovery has been held confidential by Packaging" and that "full public disclosure of the information could potentially harm Packaging's business." May 10 Resp. at 1. The People state, however, that Packaging "brought its financial results into this case" and that the "tax information is highly relevant, and important to [the People's] case." *Id.* at 1-2.

At the May 21, 2013 hearing, Packaging informed the Board that the parties had stipulated to how they would "handle certain confidential information that was taken from tax returns" and marking Packaging's tax documents as confidential. Tr.3 at 9-10. The Board's hearing officer granted the motion subject to final Board approval, and all related discussion was reported in a separate, confidential transcript. *Id.* at 12. The Board affirms the hearing officer's decision and treats Packaging's tax documents as confidential and non-disclosable information.

Rejected Offer of Proof: Packaging's Exhibit 63

At the May 21, 2013 hearing, Packaging moved to admit Respondent's Exhibit 63 into the record. Respondent's Exhibit 63 includes the first two pages of Packaging's 2002 and 2003 tax returns. The People objected, stating that the evidence was not timely submitted.

The Board agrees with the People. On November 15, 2012, the Board's hearing officer ordered Packaging "to produce complete federal tax returns, with all schedules and attachments for the years 1995 through 2004." Hearing Officer Order, PCB 04-16 (Nov. 15, 2012). On February 14, 2013, Packaging stated that it would "serve [the People] with the federal tax returns on or before March 11, 2013." Hearing Officer Order, PCB 04-16 (Feb. 14, 2013). At the May 21, 2013 hearing, the People entered an agreed stipulation of facts that included tax information. Packaging then moved to enter Respondent's Exhibit 63, more than six months after the Board originally ordered that the information be produced, and over eight months from when the People originally moved to compel production of Packaging's tax returns for the period from

1995 through 2004. *See* People's Motion to Compel, PCB 04-16 (Aug. 30, 2013). The Board finds that Packaging had sufficient time to produce these documents and that admitting the documents at hearing would prejudice the People. The Board therefore does not consider Respondent's Exhibit 63 in rendering its decision below.

Credibility of Witnesses

The People raise various concerns with the admissibility and credibility of the testimony and opinions of Packaging's witnesses Mr. Trzupek and Mr. McClure. The Board notes that, at the first hearing, the parties stipulated that Mr. Styzens and Mr. McClure were experts in economic benefit analysis. Tr.1 at 103. Also at that hearing, the Board's hearing officer found "no credibility issues with any of the witnesses who testified here." Tr.2 at 163. The Board has considered the arguments of both parties and finds that the hearing officer's prior determination that these witnesses are credible need not be changed.

BOARD DISCUSSION

The Board partially granted reconsideration of its September 8, 2011 order to reconsider the economic benefit aspect of the civil penalty imposed for Packaging's violations of the Act, regulations, and permit requirements. *See* Packaging, PCB 04-16, slip op. at 1 (March 1, 2012). The Board noted, however, that on reconsideration, it would "issue a supplemental opinion and order setting forth its reasoning for either retaining or modifying the $456,313.57 penalty imposed upon Packaging." *Id.* at 18.

For the reasons below, the Board retains the civil penalty amount ordered on September 8, 2011. *See* Packaging, PCB 04-16 (Sept. 8, 2011). The Board assesses a $356,313.57 economic benefit penalty and a $100,000 non-economic penalty for a total civil penalty of $456,313.57. Accordingly, the Board discusses below Packaging's economic benefit from noncompliance, and addresses other aspects of the civil penalty raised by the parties.

Economic Benefit of Packaging's Delay in Compliance

To determine a civil penalty, Section 42(h) of the Act provides that "the Board is authorized to consider any matters of record in mitigation or aggravation of penalty." 415 ILCS 5/42(h) (2012). The Act then sets forth various factors, including:

> (3) any economic benefits accrued by the respondent because of delay in compliance with requirements, in which case the economic benefits shall be determined by the lowest cost alternative for achieving compliance . . . . 415 ILCS 5/42(h)(3) (2012).

Additionally, the Act provides that

> the Board shall ensure, in all cases, that the penalty is at least as great as the economic benefits, if any, accrued by the respondent as a result of the violation,

> unless the Board finds that imposition of such penalty would result in an arbitrary or unreasonable financial hardship. 415 ILCS 5/42(h) (2012).

Accordingly, for purposes of calculating a civil penalty, any economic benefit accrued by Packaging from its delay in compliance must be determined by the "lowest cost alternative for achieving compliance." 415 ILCS 5/42(h)(3) (2012).

In this case, the People did not seek any economic benefit penalty for Packaging's failure to timely comply with the permitting, reporting, recordkeeping, and compliance demonstration requirements. Packaging, PCB 04-16, slip op. at 41 (Sept. 8, 2011). For purposes of the lowest cost compliance alternative, the parties addressed only compliance of press 4 and press 5 with the flexographic printing rule in Section 218.401 of the Board's regulations. 35 Ill. Adm. Code 218.401.[3] The Board previously found that Packaging violated this rule in its operation of press 4 and press 5. Packaging, PCB 04-16, slip op. at 23 (Sept. 8, 2011). Section 218.401 of the Board's regulations required Packaging to comply with limitations on the types of inks and coatings it used or to equip the printing line with a capture system and control device. 35 Ill. Adm. Code 218.401. Packaging did not use compliant inks and coatings[4] on press 4 or press 5 and did not assert compliant coatings as a possible "lowest cost alternative for achieving compliance." Accordingly, the Board limits its analysis to achieving compliance with the rule using a capture system and control device.

The Board previously found that press 4 never had a control device and rejected Packaging's argument that press 5 was adequately controlled by the tunnel dryer. Packaging, PCB 04-16, slip op. at 22 (Sept. 8, 2011). Section 218.401(c) required that the capture system and control device must meet specifications, such as "reduc[ing] the captured VOM emissions by at least [90%] by weight" through carbon adsorption or incineration or otherwise providing "[90%] control device efficiency," "provid[ing] an overall reduction in VOM emissions of at least . . . [60%]," and having "monitoring equipment . . . installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use." 35 Ill. Adm. Code 218.401(c). Further, the capture system and control device must be

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[3] The Board notes that the Board amended 35 Ill. Adm. Code 218.401 and the version applicable to this case is that adopted in RACT Deficiencies in the Chicago Area: Amendments to 35 Ill. Adm. Code Part 215 and the Addition of Part 218, R91-7 (July 25, 1991). The Board made non-substantive changes to 35 Ill. Adm. Code 218.401 in Omnibus Cleanup of the Volatile Organic Material RACT Rules Applicable to Ozone Nonattainment Areas: Amendments to 35 Ill. Adm. Code Parts 203, 211, 218 and 219, R93-9 (Sept. 9, 1993). The Board added 35 Ill. Adm. Code 218.106(c), setting a compliance deadline of March 15, 1995 for 35 Ill. Adm. Code Subpart H, including Section 218.401, in Reasonably Available Control Technology for Major Sources Emitting Volatile Organic Materials in the Chicago Ozone Nonattainment Area: 25 Tons (Amendments to 35 Ill. Adm. Code Parts 211 and 218), R93-14 (Jan. 6, 1994).

[4] A compliance alternative was to use a "weighted averaging" of compliant and noncompliant inks (35 Ill. Adm. Code 218.401(b)), but Packaging's inks would not comply. Packaging, PCB 04-16, slip op. at 22 (Sept. 8, 2011).

> operated at all times when the subject printing line is in operation. The owner or operator shall demonstrate compliance with this subsection by using the applicable capture system and control device test methods and procedures . . . and by complying with the recordkeeping and reporting requirements. 35 Ill. Adm. Code 218.401(c)(6).

Because Packaging failed to demonstrate the tunnel dryer's compliance through required testing and recordkeeping, the Board found that Packaging violated Section 218.401(a). Packaging, PCB 04-16, slip op. at 23 (Sept. 8, 2011).

Further, the Board found that "installing an RTO with capacity to control VOM emissions from two presses was Packaging's lowest cost alternative to comply with the flexographic printing rule." Packaging, PCB 04-16, slip op. at 38 (Sept. 8, 2011). A calculation of the economic benefit accrued typically includes compliance costs avoided or delayed by a respondent from the start of the noncompliance period. *See*, *e.g.*, *id.* at 21, 39. Using information provided by both the People and Packaging, the Board calculated the economic benefit of noncompliance, on a per unit per year basis, for not installing an RTO on press 4 for seven years and press 5 for eight years. *Id.* at 39-40. The Board calculated this portion of the penalty, along with interest for non-payment, to be $356,313.57. *Id.* at 40-41.

In its motion for reconsideration, Packaging offered a different lowest cost compliance alternative and requested that the Board reduce the economic benefit of noncompliance to $12,077. Pack. Mot. at 6. Specifically, Packaging argued that the lowest cost alternative for achieving compliance was to "shut down [press 4], transfer the production from [press 4] to [press 5] and demonstrate that [press 5] complied with VOM emission requirements through a formal stack test" of the tunnel dryer system. *Id.* at 3.

The Board previously did not evaluate this compliance alternative. Packaging ultimately did shut down press 4 and, for a time, shifted press 4's production to press 5, but Packaging never demonstrated press 5's compliance through a compliance stack test of the tunnel dryer system. Determining the lowest cost alternative for a respondent to comply with regulatory requirements, however, may include consideration of hypothetical compliance alternatives, where supported by evidence. Packaging, PCB 04-16, slip op. at 9 (June 7, 2012). Accordingly, the Board ordered an additional hearing to evaluate this compliance alternative for purposes of evaluating the economic benefit portion of the penalty.

Prior to the September 8, 2011 decision in this case, the Board applied Section 42(h)(3), in its current form (P.A. 93-575, eff. Jan. 2004), to assess the economic benefit of noncompliance in two prior cases. In People v. Toyal America, Inc., the Board calculated an economic benefit of $316,440 based upon emission control device costs. People v. Toyal America, Inc., PCB 00-211, slip op. at 16-17, 58-60 (July 15, 2010), *aff'd sub nom.* Toyal America, Inc. v. Illinois Pollution Control Board, 2012 IL App (3d) 100585. In Toyal, also an air enforcement case, the emission control measures required for compliance were uncontested. *See* Toyal, PCB 00-211, slip op. at 60. Rather, the contested penalty issue was whether the respondent's economic benefit from noncompliance should be offset by a financial benefit it would have enjoyed if it installed the needed control equipment. In People v. Community

Landfill Co., the Board calculated the economic benefit of noncompliance at $1,059,534.70 which was the amount the landfill company saved by not paying premiums on required financial assurance. People v. Community Landfill Co., PCB 03-191, slip op. at 35, (June 18, 2009), *aff'd in relevant part* City of Morris v. Community Landfill Co., 2011 IL App (3d) 090847.

In each of these earlier cases, the Board did not consider competing claims of which compliance method was the "lowest cost alternative for achieving compliance." In contrast, here, nearly every aspect of the economic benefit was in dispute.

Packaging proposes that its lowest cost alternative to comply with the flexographic printing rule was to shut down press 4 and transfer its production to press 5. Using this compliance option, Packaging argues that its economic benefit from noncompliance was $12,077 – the cost of the compliance stack test on the press 5 tunnel dryer system, including the cost of constructing a temporary total enclosure for test purposes. To find that this compliance option was the lowest cost alternative for achieving compliance, the Board must find that (1) the press 5 tunnel dryer system constituted a capture system and control device; (2) the press 5 tunnel dryer system would have passed a formal compliance stack test; and (3) press 5 would have accommodated the production from press 4.

As discussed below, the Board finds that the record does not establish that the press 5 tunnel dryer system would have passed a formal compliance stack test and further finds that the record does not show that press 5 would have accommodated production from press 4 between 1995 and 2002. Based on these findings, the Board finds it unnecessary to address the issue of whether the press 5 tunnel dryer system constituted a capture system and control device, but the Board assumes, only for purposes of analyzing the two other issues, that the tunnel dryer system was a capture system and control device within the regulatory definitions of those terms.

Formal Compliance Stack Test on Press 5 Tunnel Dryer System

On December 12, 2001, Packaging's environmental consultant, Mr. Trzupek, performed "an informal emissions test" on the press 5 tunnel dryer system to assess VOM capture and destruction efficiency. Comp. Exh. 5 at 15; Comp. Exh. 8 at 1; Resp. Exh. 21. Mr. Trzupek concluded that the press 5 system achieved 82.6% capture efficiency, 93.6% destruction efficiency, and an overall control efficiency of 77.3%. Comp. Exh. 8 at 2; Tr.3 at 162-63. Section 218.401(c) required 90% destruction efficiency and 60% overall reduction in VOM emissions. 35 Ill. Adm. Code 218.401(c). Packaging argues, therefore, that the 2001 test results show that press 5 would have passed a formal compliance stack test if one had been performed. Pack. Br. at 11; Reply at 26; Tr.3 at 163-64.

The People contend, in part, that the 2001 test did not follow required test protocols and, therefore, cannot be used to show that press 5 complied with Section 218.401(c). *See* People Br. at 4-5. The People note various ways in which the 2001 test failed to meet regulatory requirements for demonstrating compliance. This question, however, has already been answered. Indeed, the Board previously held that the 2001 test was insufficient to demonstrate compliance and, accordingly, found Packaging liable for violating the flexographic printing rule for press 5. Packaging, PCB 04-16, slip op. at 23 (Sept. 8, 2011).

The current question then is whether Packaging could have demonstrated compliance with Section 218.401 using a compliance stack test. Packaging argues that the Board can infer from the 2001 test results noted above that Packaging could have demonstrated that press 5 complied with Section 218.401 using a compliance stack test. Pack. Br. at 14; Reply at 26.

The People argue that the 2001 test results are unreliable and the test method "could not produce accurate, statistically valid results." People Br. at 7; *see also* Tr.3 at 292. The People further contend that the single test in 2001 is insufficient to show that press 5 was in compliance with Section 218.401 starting on March 15, 1995. People Br. at 7-8. Both Packaging and the People agree, and the Board previously found, that Mr. Trzupek's protocol for the 2001 test differed from the regulatory requirements for a compliance stack test. Pack. Br. at 12; Reply at 27; People Br. at 10-18; Tr.3 at 160. However, the parties dispute whether these differences cause the 2001 test results to be unreliable for purposes of showing that press 5 could have passed a compliance stack test. Accordingly, the Board reviews each of these differences for the purpose of analyzing whether the 2001 test results can be used to infer that press 5 would have passed a compliance stack test showing at least 90% destruction efficiency and 60% overall reduction in VOM emissions.

Number of Test Runs. Packaging did not conduct three one-hour runs. Tr.3 at 160, 199-200, 293-94. Rather, Packaging conducted testing for approximately 30 minutes at each of two locations (the inlet to and exhaust from the tunnel dryer). Comp. Exh. 8 at 2. Mr. Trzupek explained that when the data "is very consistent over an hour, you essentially get a flat-line readout" which is sufficient to show a "representative concentration, rather than repeating it three times." Tr.3 at 161; *see also id.* at 320. By using two sequential 30-minute tests and only one run, the People claim that the results were statistically invalid. People Br. at 11. With one run, Mr. Mattison explained, "you don't know whether or not that is going to be repeatable." Tr.3 at 294.

Capture Efficiency. For the 2001 test, Packaging did not construct a temporary total enclosure to determine capture efficiency. Comp. Exh. 8 at 1; Tr.3 at 161. Rather, Packaging estimated capture efficiency by using a liquid-gas mass balance. Tr.3 at 161, 167. Packaging calculated VOM input from the VOM content of ink and solvent applied. Comp. Exh. 8 at 1; Tr.3 at 162, 321-23. Packaging used VOM input of 40 pounds per hour (lbs/hr) which was "the amount of VOM going into the system, not the amount of ink." Tr.3 at 168; *see also* Comp. Exh. 8 at 2, Tr.3 at 191-92. This VOM input included solvent which was 100% VOM plus the VOM content of the inks used. Tr.3 at 168. Packaging used manufacturer data for the VOM content of ink. *Id.*

The People challenge Packaging's claimed VOM input of 40 lbs/hr. People Br. at 12. The People point to information in 2003 that Packaging had a maximum *ink usage* rate of 20 lbs/hr. People Br. at 12-13, citing Comp. Exh. 13 at Att. D (emphasis added); *see also* Tr.3 at 296. The People also note that Packaging has not provided raw data from the 2001 test and has not provided information on which inks were in use at the time of the 2001 test. People Br. at 12, 14. Accordingly, as the People explain, the 40 lbs/hr VOM input cannot be verified. Tr.3 at

295-96. Mr. Mattison explained that in calculating VOM input using liquid to gas mass balance "if those numbers are off, our calculations are off." *Id.* at 296.

VOM Response Factor. Packaging measured inlet VOM concentration as propane rather than ink. Tr.3 at 168. Mr. Trzupek explained that this assumption "will underestimate the amount of VOM captured" as compared to the acetates used by Packaging. *Id.* at 169-70. Further, according to Mr. Trzupek, using a VOM response factor, *i.e.*, a conversion number used to adjust capture efficiency results, to convert from propane to actual inks used would result in a higher capture estimate and be less conservative. *Id.* at 170-71. The People challenge Packaging's failure to use a VOM response factor to adjust capture efficiency for actual inks used, stating that "this failure invalidates the VOM capture efficiency results reported by Packaging." People Br. at 16. The People also note that Packaging did not provide records of actual inks and solvents used during the 2001 test. *Id.* at 17; Tr.3 at 302. Mr. Mattison explained that for the test results to be reliable, "we would have to know the exact ink, the exact organics that were used to make an accurate determination of the true input value of the organics being used at the time of the test." Tr.3 at 302.

Inlet and Outlet VOM Flow. Packaging measured inlet and outlet VOM flow to calculate destruction efficiency. Comp. Exh. 8 at 1. The 2001 test recorded inlet flow as 2,417 dry standard cubic feet per minute (dscfm) and outlet flow as 818 dscfm. People Br. at 14; Tr.3 at 300, citing Comp. Exh. 8 at 3. According to the People, if these flow numbers are accurate, then the tunnel dryer was under positive, not negative, pressure during the test. People Br. at 15. Under positive pressure, VOM emissions "would have been pushed out of the oven and not [] measured" and the claimed destruction efficiency would not be correct. *Id.* Mr. Trzupek claimed that the pressure was "absolutely negative." Tr.3 at 171. He stated both that he measured the pressure and if there was positive pressure the room would smell like solvent, which it did not. *Id.* at 172.

Alternatively, the People contend that the flow data were incorrect, which calls into question the capture and destruction efficiency numbers. People Br. at 15. Mr. Mattison explained that with a recirculating flow, the VOM "goes through the system once. You count it on the [flame ionization detector (FID)] at the inlet. It goes through – it may get reduced somewhat . . . but you still have some left over. It gets recounted again by that FID." Tr.3 at 299. Thus, the amount of VOM captured may be inflated, according to Mr. Mattison. *Id.* Destruction efficiency is calculated at "inlet minus our outlet divided by our inlet and then we times that by 100." *Id.* at 303. Accordingly, if the VOM input is higher than the true value, the destruction efficiency will be inflated. *Id.* Mr. Trzupek explained that the inlet flow is more than two times the outlet flow because "the majority of the gas flow is actually in the loop as it goes back around to be recirculated" and only a portion of the flow is allowed "to exhaust to the atmosphere." Tr.3 at 171. Further, Mr. Trzupek stated that VOM concentrations do not build up in the recirculation loop. Tr.3 at 326.

Board Finding. The Board finds that the record does not establish that the press 5 tunnel dryer system would have passed a formal compliance stack test. Although the 2001 test results showed destruction and control efficiencies exceeding the required efficiencies in Section 218.401(c), Packaging has not adequately supported the "informal" stack test results. Most

importantly, Packaging has not supported its use of a VOM input of 40 lbs/hr with evidence on how it calculated this number. While Mr. Trzupek explained how he arrived at the VOM input rate of 40 lbs/hr in general terms (*see, e.g.*, Tr.3 at 191-92), Packaging has not provided evidence on inks and solvents that were being used at the time of the 2001 test and the VOM content of the inks.

Mr. Trzupek explained

> in flexographic printing you use approximately two pounds of solvent, which is [100%] VOM for every pound of ink, and then adding to it the VOM portion of the ink that was used. The VOM portion of ink that was used was determined by looking at the manufacturer's safety data sheets for the inks, which has a listing of the VOM content, and that's how we have arrived at the 40 pounds an hour. Tr.3 at 168.

To arrive at a VOM input of 40 lbs/hr, Mr. Trzupek stated that "we measured the amount of solvent used directly" and "[w]e weighed the amount of ink used, and then we took the VOM percentage of the ink and added it to the weight of the solvent used." Tr.3 at 191. Mr. Trzupek attributed 10 lbs/hr VOM input to ink (multiplying 20 lbs/hr ink used by 50% VOM content of ink) and 30 lbs/hr VOM input to solvent to arrive a total VOM input of 40 lbs/hr. *See Id.* at 191-92.

However, Mr. Trzupek has not explained, and his report does not provide, why his calculations used a 50% VOM content of ink, which inks were being applied at the time of the 2001 test, or the actual VOM content of the inks being applied during the test. It appears from testimony that Mr. Trzupek may have reviewed ink purchase records around the time of the 2001 test. *See, e.g.*, Tr.3 at 180. For example, at the supplemental hearing, Mr. Trzupek acknowledged the following:

> Q. Now, the ink records that you are talking about, those are copies of invoices from ink manufacturers and copies of invoices from solvent -- from vendors of solvents, solvent distributors, that sort of thing?
>
> A. That's correct. Tr.3 at 177.

The Board also notes that an August 2002 document prepared by Mr. Trzupek and submitted to IEPA included data on the pounds purchased of certain inks from 1995 through 2001 and VOM emissions attributed to these inks. Resp. Exh. 13. However, this data does not describe the specific inks applied during the 2001 test or the VOM content of the inks.

In 2003, Packaging submitted ink and solvent information for press 5, including ink usage rates and VOM content, to the People's attorney. But, these records do not show which inks were in use at the time of the 2001 test, or any variations in the types of inks used year to year since 1995. *See* Comp. Exh. 13 at Att. D. The Board also notes that, using Packaging's information in its 2003 letter on the VOM content of its inks and 20 lbs/hr ink usage rate, the VOM input rate would be 55.4 lbs/hr at the maximum ink VOM content (76.9%) or 53 lbs/hr at

the average ink VOM content (65%). *See* Comp. Exh. 13 at Att. D; Tr.3 at 192. The Board observes that if these higher VOM input rates are used to calculate overall control efficiency, instead of a VOM input rate of 40 lbs/hr used in the 2001 test, then the press 5 tunnel dryer system does not meet the 60% overall VOM reduction required by Section 218.401(c). *See* Comp. Exh. 8. Thus, using the information of VOM content of inks contained in Packaging's 2003 letter, the Board calculates that Packaging would not comply with Section 218.401(c). This calculation casts doubt on whether Packaging's use of a VOM input of 40 lbs/hr in the 2001 test was appropriate and whether the press 5 tunnel dryer system would have passed a compliance stack test.

Accordingly, the Board finds that the record does not establish that Packaging's claimed 40 lbs/hr VOM input is accurate. Without accurate information in the record, the Board cannot find that the press 5 tunnel dryer system would have met the regulatory requirements of achieving 90% destruction efficiency and 60% overall reduction in VOM emissions by passing a compliance stack test had one been performed. *See* 35 Ill. Adm. Code 218.401(c). As Mr. Mattison noted,

> A lack of data prevents me from making anything else other than assumptions of this data. When a formal stack test comes in, we have a lot of data. We have the actual raw data sheets, the exact location of where the testing was done, the actual organic concentration, the FID data points, the calibration of that information, all that's put into the test report to validate the data. Tr.3 at 295.

The Board does not have sufficient information to find that the press 5 tunnel dryer system would have passed a compliance stack test. The Board requires more data to provide confidence that the VOM input was correct. If the VOM input is not correct, the remaining calculations, *i.e.* destruction efficiency and overall control efficiency, will be incorrect. *See* Tr.3 at 296.

As to the remaining test protocol issues contested by the parties, the Board finds that these issues further call into question the reliability of the 2001 test for purposes of retroactively assessing the ability of the press 5 tunnel dryer system to comply with Section 218.401. Testing three runs for a full hour would have improved the reliability of the test by showing that the results were repeatable. Using a VOM response factor for the inks and solvents used would have more accurately reflected actual operating conditions at the facility. However, the Board also recognizes that Packaging's approaches may have been reasonable for Packaging's initial purpose in conducting the 2001 test. Yet, for the purpose of this proceeding, Packaging has not provided sufficient evidence to validate the assumptions and calculations used in the 2001 test.

Further, the Board finds that the record does not establish that press 5 would have complied with Section 218.401(c) starting in 1995. The 2001 test, even if supportable for some informal purposes, provides a snapshot of press 5's operations in 2001. Packaging claims that the press 5 tunnel dryer system always has been operated in the same manner. Tr.3 at 44. However, Packaging has not provided production data prior to 2000 (*see, e.g.*, Tr.3 at 53, 137); contemporaneous emission data prior to 2002 (*see, e.g.*, Tr.3 at 51); or sufficient operational data such as ink usage (only provided for 2003, *see* Comp. Exh. 13 at Att. D). Accordingly, the

Board finds that the record contains insufficient evidence to show that the press 5 tunnel dryer system would have complied with Section 218.401(c) from 1995 through 2001.

For the above reasons, the Board finds that the 2001 test results are not reliable and do not show that the press 5 tunnel dryer system would have complied with the capture and control requirements of Section 218.401(c) from 1995 through February 26, 2004, when the RTO passed the formal compliance stack test. Accordingly, the Board finds that this record does not demonstrate that the press 5 tunnel dryer system would have passed a formal compliance stack test. The Board therefore concludes that the press 5 tunnel dryer system was not an alternative for Packaging to achieve compliance with Section 218.401.

Shifting Press 4 Production to Press 5

To shut down press 4 and shift its production to press 5, Packaging's press 5 and the tunnel dryer system would have needed to accommodate the entire production of both press 4 and press 5 during press 4's period of noncompliance. Press 4 failed to comply with the flexographic printing rule from March 15, 1995 when the rule became effective through December 2002 when press 4 was shutdown. Packaging conducted a compliance stack test on the RTO for press 5 and press 6 on February 26, 2004.

Packaging argues that press 5 "had the capacity to absorb all of the solvent-based printing produced on press 4 and press 5 from March 15, 1995 to February 26, 2004." Pack. Br. at 7. Packaging supports this argument with two points: (1) in 2003, using only press 5, Packaging produced more than it had in 2000, 2001, or 2002 with both press 4 and press 5 operating (*see* Resp. Exhs. 59 and 60); and (2) Packaging's "average production" (Tr.3 at 28) shows that press 5 could have handled press 4's production (*see* Resp. Exh. 61).

2003 Production. In 2003, after shutting down press 4, Packaging reports it printed more in 2003 using only press 5 than printed in any previous year. Pack. Br. at 7; Tr.3 at 39-40. Specifically, Packaging relies on production records showing that "the actual weight of printed materials in 2003 exceeds that printed in 2000 through 2002 when both press 4 and 5 were used, based on existing records from weighing printed materials." Pack. Br. at 8.

Packaging first presented Respondent's Exhibit 59, which includes two tables. One table lists VOM emissions in tons per year separately from press 4 and press 5 for each year from 1995 through 2003. At hearing, Mr. Imburgia noted that in 2003 press 4 had zero emissions and press 5 "shows significantly more production than it did in previous years." Tr.3 at 39. The second table lists monthly and annual production in pounds for press 4 and press 5 combined for each year from 2000 through 2003. Tr.3 at 21-22. Mr. Imburgia testified that this data is from Packaging's production records going back to 2000. *Id.* at 22.

Packaging next presented Respondent's Exhibit 60, which includes two tables. One table lists monthly and annual production for the offline presses, *i.e.*, the solvent-based flexographic presses (press 4 and press 5), in pounds of film produced for each year from 2000 through April 2013. *See also* Tr.3 at 23. For 2000 through 2002, the offline presses were press 4 and press 5. Tr.3 at 23. Mr. Imburgia testified that in 2003 press 4 did not operate, press 5 operated alone,

and press 6 was added. Tr.3 at 23, 27. The production figure of 6,024,683 pounds in 2003 from press 5 exceeded each of the prior years of 2000 (3,847,780 pounds), 2001 (4,500,325 pounds), and 2002 (5,340,066 pounds) when Packaging operated both press 4 and press 5. The second table lists monthly and annual production for the offline presses in footage of printed material for each year from 2005 through April 2013. The footage record starts in 2005 because Packaging determined that the footage data for prior years was not accurate. Tr.3 at 25.

The People argue that, in 2002, Packaging used press 4 more than press 5 and could not have operated without press 4. People Br. at 23-24. The People point to a letter dated December 16, 2002 from Packaging's attorney to IEPA attaching a table listing production data and VOM emissions for press 4 and press 5 for each year from 1999 through most of 2002. Resp. Exh. 12; Tr.3 at 64. The People note that this 2002 letter listed the distribution of solvent-based printing between press 4 and press 5 varying from 38.2% on press 4 and 61.8% on press 5 in 1999 to 50.1% on press 4 and 49.9% on press 5 in 2002. *See* People Br. at 24, 26-27, citing Resp. Exh. 12. The People note that, with the exception of 2003, Packaging always operated with two solvent presses at the Carol Stream facility between March 15, 1995 and the present. *Id.* at 25. Based on this information, the People conclude that "Packaging's solvent printing operations required the operation of two solvent based printing presses." *Id.* at 25.

Based on a letter dated May 2, 2003, the People further argue that "Packaging could not possibly have run its business in 2002 with only Press No. 5." People Br. at 26, citing Comp. Exh. 13 at Att. D. In that letter, Packaging stated that its average annual operating hours for each press were 6,000 hours. Comp. Exh. 13 at Att. D. The People assume that these hours represent 2002 operations and argue that Packaging operated press 4 and press 5 for a total of 12,000 hours in 2002. People Br. at 26. Because the maximum one press can operate in a year is 8,760 hours, the People claim Packaging could not have operated with only press 5 in 2002. *Id.*

It is not apparent to the Board that the information in either of these letters can be characterized as set forth by the People. The assumptions, calculations, and underlying data supporting the information in these letters are unclear. Without additional information, the Board cannot conclude that these letters support the People's argument.

The Board also is not persuaded by Packaging's argument that 2003 data shows that press 5 could have accommodated press 4's production from 1995 through 2002. The Board finds, for the reasons below, that the data in the record are incomplete and inconsistent and, as such, does not support a conclusion that press 5 could have accommodated production from press 4.

First, the Board is only able to compare Packaging's 2003 production data to 1999, 2000, 2001, and 2002 production data and not prior years because the record does not include production data for earlier years from 1995 through 1998. Mr. Imburgia testified that Packaging's "production records [] at this point in time only go back to year 2000 for pounds produced out of the press room, the off-line presses." Tr.3 at 22; *see also* Tr.3 at 53. However, the December 2002 letter also included production data for 1999. Resp. Exh. 12.

Second, the production data in Respondent's Exhibit 60 differs from production data provided in Respondent's Exhibit 12. The table below compares total pounds of printed material produced from press 4 and press 5 as provided by Respondent's Exhibit 12 and Respondent's Exhibit 60.

Year	Production Pounds	
	Resp. Exh. 12	Resp. Exh. 60
2000	3,583,906	3,847,780
2001	4,373,153	4,500,325

Third, the Board notes that Packaging's reported VOM emissions for 1999 through 2002 differ among Packaging's December 2002 letter (Resp. Exh. 12), Packaging's 2009 FESOP application (Resp. Exh. 59), and Packaging's AER for 2002 (Comp. Exh. 22). The table below compares annual VOM emissions from press 4 and press 5 in tons as provided in Respondent's Exhibits 12, 13, and 59 and Complainant's Exhibit 22.

Year	VOM Tons						
	Resp. Exh. 12			Resp. Exh. 59			Resp. Exh. 13 & Comp. Exh. 22
	Press 4	Press 5	Total	Press 4	Press 5	Total	Total
1999	21.62	9.50	31.12	8.71	20.34	29.05	29.05
2000	25.99	10.04	36.03	9.34	21.78	31.12	31.12
2001	35.31	11.61	46.92	12.18	28.42	40.60	40.60
2002	No data	No data		7.72	27.58	35.30	44.93

The Board notes that Packaging relies on VOM emissions data in the 2009 FESOP application (Resp. Exh. 59) to develop a relationship between available production data and VOM emissions to correlate VOM emissions to the amount of production. Tr.3 at 19-21, 52-54. However, the discrepancies in VOM emissions data cause the Board to question whether production data estimated from VOM emissions is reliable.

For these reasons, the Board finds that Packaging's production data is incomplete and unreliable. Without complete and reliable data, the Board cannot conclude that 2003 production data shows that press 5 would have accommodated production from press 4 each year from 1995 through 2002.

Average Production. Packaging prepared an analysis of press 4 and press 5 production capacity under various operating conditions to support its argument that press 5 could accommodate production from press 4. Specifically, Packaging presented Respondent's Exhibit 61, which includes two tables. One table lists various parameters to estimate average production capacity of press 4 running one, two, and three shifts per day. The second table lists the same parameters to estimate average production capacity of press 5 running one, two, three, and four shifts per day. The tables make assumptions for setup time, shutdown time, cleanup time, numbers of colors, and other factors. Tr.3 at 28-37. Packaging argues that Respondent's Exhibit 61 shows that the "potential capacity of 6,930,408 pounds [per year] by running press 5

on a four shift basis set forth is more than adequate to accommodate all of the potential production that could be produced by press 4 running two shifts." Pack. Br. at 9. Packaging asserts that press 4 was running two shifts at the time it was shutdown in 2002. *Id.; see also* Tr.3 at 37. Mr. Imburgia also testified that he believes, but was not sure, that press 5 was operating three shifts when press 4 shut down. Tr.3 at 38.

The People argue that Packaging relied equally on press 4 and press 5 and could not possibly have operated in 2002 with only press 5. People Br. at 26. The People note that from March 15, 1995 through December 2002, Packaging operated with two solvent-based presses. *Id.* at 30. More specifically, Packaging used press 4 and press 5 from 1995 through 2002. *See, e.g.,* Tr.3 at 23. Packaging later also used two solvent-based presses: press 5 and press 6 starting in 2004, and later replacing press 5 with press 7. Tr.3 at 68. Thus, only in 2003 did Packaging use only one solvent-based press. *Id.* at 67. In addition, Mr. Imburgia testified that Packaging has greater flexibility in managing its operations by running two presses. *Id.*

Board Finding. Packaging has not provided production data prior to 1999. Mr. Imburgia testified that "[t]he information I was missing was the amount of pounds of printed material produced out of the press room, production pounds produced out of the press room prior to 2000." Tr.3 at 53. However, the December 2002 letter includes production data for 1999 as well. Resp. Exh. 12. Therefore, the record does not include information on the production levels for press 4 or press 5 from 1995 through 1998 to analyze whether press 5 could have accommodated press 4's production in those years. As noted above, the Board questions the accuracy of the production numbers based on inconsistent numbers provided by Packaging in documents prepared by Packaging. Accordingly, the Board finds that the record does not establish that press 5 would have accommodated the production from press 4 between March 15, 1995 and December 2002 when press 4 shut down.

Board Conclusion on Economic Benefit Penalty

The Board finds that the 2001 test results are not reliable and do not show that the press 5 tunnel dryer system would have complied with the capture and control requirements of Section 218.401(c) from 1995 through February 26, 2004 when the RTO passed the compliance stack test. Further, the Board finds that the record does not establish that press 5 would have accommodated the production from press 4 between March 15, 1995 and December 2002. For these reasons, the Board reaffirms its September 8, 2011 determination of $356,313.57 for the economic benefit portion of the civil penalty amount.

Non-Economic Penalty

The People argue that their original economic benefit penalty calculation of $711,274 continues to be appropriate. People Br. at 35-36. The People contend that, should the Board determine that the Board's $356,313.57 calculation fairly represents the economic benefit realized by Packaging, then an additional non-economic penalty should be imposed to address knowing violations related to operating press 4 in 2002. *Id.* at 36. The People originally requested a non-economic penalty of $150,000. 2009 People Br. at 23. The Board imposed a non-economic penalty of $100,000. Packaging, PCB 04-16, slip op. at 42 (Sept. 8, 2011).

The People now request, should the Board retain its initial economic benefit finding of $356,313.57, that the gravity and deterrence portion of the non-economic penalty be increased from $100,000 to $200,000, for a total civil penalty of $556,313.57. *Id.* at 40. The Board previously held that

> the parties' arguments may address "any matters of record in mitigation or aggravation of penalty," including each of the enumerated factors of Section 42(h). 415 ILCS 5/42(h) (2010). Accordingly, regardless of the positions taken previously by the parties, their respective briefs may advocate any total penalty amount, including any penalty calculation based upon economic benefit under Section 42(h)(3) (415 ILCS 5/42(h)(3) (2010)). Packaging, PCB 04-16, slip op. at 18 (Mar. 1, 2012).

Accordingly, the Board addresses the People's request that the Board increase the non-economic portion of the civil penalty by $100,000 beyond the Board's previously imposed non-economic penalty of $100,000 for a revised non-economic penalty of $200,000.

The People address both the factors of Section 33(c) (415 ILCS 5/33(c) (2012)) and Section 42(h) (415 ILCS 5/42(h) (2012)) of the Act. Typically, the Board considers the Section 33(c) factors in determining whether a civil penalty should be imposed on a respondent. *See* Packaging, PCB 04-16, slip op. at 27 (Sept. 8, 2011). The Board previously determined that a civil penalty is appropriate in this case under these factors. *Id.* at 32. The Board's previous findings on the Section 33(c) factors remain unchanged.

Therefore, the Board now only addresses what the appropriate civil penalty amount should be under Section 42(h) of the Act. Above, the Board determined that $356,313.57 is the appropriate penalty amount for the economic benefit to Packaging from noncompliance pursuant to Section 42(h)(3). As to the remaining factors listed in Section 42(h), the People argue that Sections 42(h)(1), (2), and (4) warrant an additional $100,000 non-economic penalty. People Br. at 38. The Board discusses each of these factors below, as well as production and financial information provided at the supplemental hearing.

Gravity and Duration of the Violation

In determining an appropriate civil penalty, Section 42(h)(1) authorizes the Board to consider "the duration and gravity of the violation." 415 ILCS 5/42(h)(1) (2012). The People contend that Packaging knowingly continued to operate press 4 at an increased production level for at least one year after being advised of its noncompliance. People Br. at 38. The Board previously weighed this factor against Packaging. Packaging, PCB 04-16, slip op. at 35 (Sept. 8, 2011). The Board considered that press 4 was in violation of the flexographic printing rule from 1995 through December 2002 when press 4 shut down and thus considered that press 4 operated during 2002. *Id.* The Board, therefore, already addressed these issues raised by the People. Accordingly, the Board finds that the Section 42(h)(1) factor does not warrant increasing the non-economic penalty against Packaging.

Due Diligence

In determining an appropriate civil penalty, Section 42(h)(2) authorizes the Board to consider "the presence or absence of due diligence on the part of the respondent in attempting to comply with the requirements of this Act and regulations thereunder or to secure relief therefrom as provided by this Act." 415 ILCS 5/42(h)(2) (2012). The People contend that Packaging showed no diligence in attempting to comply with the VOM control requirements for press 4. *Id.* at 39. Packaging continued to operate press 4 in 2002 after learning of its noncompliance. *Id.* Packaging also failed to perform compliance testing on the press 5 tunnel dryer system and easily could have done so for $6,000 to $11,500. *Id.*

The Board previously weighed the Section 42(h)(2) factor against Packaging. Packaging, PCB 04-16, slip op. at 36 (Sept. 8, 2011). The Board considered that Packaging became aware of the flexographic printing rule in October 2001 and continued to operate press 4 in 2002. *Id.* at 35-36. The Board further considered that press 4 did not comply with the flexographic printing rule for its entire period of operation from 1995 through 2002. *Id.* at 36. The Board also considered that Packaging did not demonstrate compliance for press 5 until it connected press 5 to an RTO and conducted a compliance stack test in February 2004. *Id.* The Board, therefore, already addressed these issues raised by the People. Accordingly, the Board finds that the Section 42(h)(2) factor does not warrant increasing the non-economic penalty against Packaging.

Deterrence of Future Violations

In determining an appropriate civil penalty, Section 42(h)(4) authorizes the Board to consider "the amount of monetary penalty which will serve to deter further violations by the respondent and to otherwise aid in enhancing voluntary compliance with this Act by the respondent and other persons similarly subject to the Act." 415 ILCS 5/42(h)(4) (2012). The People argue that a large civil penalty is needed to deter Packaging's violations of the Act because Packaging knowingly violated the Act. People Br. at 39-40. The Board previously determined that a $100,000 non-economic component of the penalty was appropriate "to ensure that Packaging and similarly situated entities familiarize themselves with their environmental obligations." Packaging, PCB 04-16, slip op. at 42 (Sept. 8, 2011). Based on the evidence in the record, the Board finds that its previous determination of this portion of the penalty remains appropriate to deter Packaging and similarly situated entities from similar violations in the future. Accordingly, Section 42(h)(4) of the Act does not warrant increasing the non-economic penalty against Packaging.

New Production and Financial Information

The People argue that the non-economic portion of the penalty should be increased based on "newly discovered evidence" at the supplemental hearing. People Br. at 36. Specifically, this new evidence is that (1) Packaging increased production on press 4 in 2002 and (2) Packaging had record profits during that year. *Id.* at 36-37.

The People argue that an increased penalty is warranted because Packaging knowingly operated press 4 in violation of the flexographic printing rule in 2002 and actually increased

production on press 4 in 2002. People Br. at 37. The People note that in 2001 press 4 represented 43% of Packaging's solvent printing production but as of December 2002 press 4 printed more than half of Packaging's solvent printing. *Id.* Although the People do not provide a source for this data, these percentages appear to be based on a December 16, 2002 letter to IEPA in which Packaging provided information on the distribution of business between press 4 and press 5 for the years 1999 through 2002 (year to date), as discussed elsewhere in the People's brief. *See* People Br. at 26, citing Resp. Exh. 12. As discussed above by the Board, it is not apparent to the Board that the information in this letter can be characterized as set forth by the People and the Board explained above that Packaging's production data is inconsistent and unreliable. Further, Packaging represented at hearing that its production values in linear feet prior to 2005 are not accurate. Tr.3 at 25. In addition, Packaging maintains that the production numbers in the December 2002 letter included only half of 2002. Tr.3 at 136. For these reasons, the Board declines to increase the non-economic portion of the penalty based on any increased production on press 4 in 2002.

The People use Packaging's tax information to show that Packaging's gross profits were at their highest in 2002 when Packaging was running press 4 in knowing violation of the flexographic printing rule. People Br. at 31-32, 37. However, as noted by the People, "corporate income taxes are complicated, and year to year variations in depreciation, raw material cost, and other factors would be expected to affect reported gross income and total income." People Br. at 33. The People also note that "Packaging estimates its solvent printing business at approximately one third of sales." *Id.* This does not take into account what portion of the solvent printing business is a result of press 4's production, as acknowledged by the People. *See id.* at 39. The Board is hesitant to rely on gross profits in tax returns, which the People acknowledge to be circumstantial evidence (*id.* at 33, 39), to find that operating press 4 in 2002 was responsible for any particular portion of that profit.

Board Conclusion on Non-Economic Penalty

As discussed above, in assessing its original non-economic penalty of $100,000, the Board weighed the Section 42(h) factors and considered evidence in the record at that time. Packaging, PCB 04-16, slip op. at 34-36 (Sept. 8, 2011). The Board must therefore determine whether, based on any new evidence from the supplemental hearing, the record requires an increase in the penalty amount imposed on Packaging. The Board finds that it does not. For the above reasons, the Board finds that the production information and tax information does not support weighing Section 42(h)(1), (2), or (4) of the Act differently than already found by the Board to increase the penalty. The Board therefore finds that the $100,000 non-economic component of the penalty is appropriate, as described in the Board's September 8, 2011 order.

Conclusion

For the reasons above, on reconsideration, the Board reaffirms the civil penalty amount ordered on September 8, 2011. *See* Packaging, PCB 04-16 (Sept. 8, 2011). The Board assesses a $356,313.57 economic benefit penalty and a $100,000 non-economic penalty for a total civil penalty of $456,313.57. The Board incorporates by reference its findings of fact and conclusions of law from its September 8, 2011 opinion and order. *See id.*

The Board sets forth below its entire September 8, 2011 order, with the original deadline for Packaging to pay the civil penalty changed to Monday, February 2, 2014, which is the 45th day after the date of today's order. The time period for appealing the Board's decision runs anew.

This supplemental opinion constitutes the Board's findings of fact and conclusions of law.

ORDER

1. The Board finds that Packaging violated the following: the Environmental Protection Act at 415 ILCS 5/9(a), 9(b), 39.5(5)(a), and 39.5(6)(b) (2012); the Board's regulations at 35 Ill. Adm. Code 201.142, 201.143, 01.302(a), 203.201, 203.203(a), 203.301, 203.601, 205.300(a), 205.310(a)(1), 218.401(a), and 218.404(c); IEPA's regulations at 35 Ill. Adm. Code 254.137(a), 254.501, and 270.201(b); and Conditions 5, 15, and 16 of construction permit 03030016 issued on August 13, 2003.

2. Packaging must pay a civil penalty of $456,313.57 no later than Monday, February 2, 2014, which is the first business day following the 45th day after the date of this order. Packaging must pay the civil penalty by certified check or money order, payable to the Environmental Protection Trust Fund. The case number, case name, and Packaging's federal employer identification numbers must be included on the certified check or money order.

3. Packaging must send the certified check or money order to:

   Illinois Environmental Protection Agency
   Fiscal Services Division
   1021 North Grand Avenue East
   P.O. Box 19276
   Springfield, Illinois 62794-9276

4. Penalties unpaid within the time prescribed will accrue interest under Section 42(g) of the Environmental Protection Act (415 ILCS 5/42(g) (2012)) at the rate set forth in Section 1003(a) of the Illinois Income Tax Act (35 ILCS 5/1003(a) (2012)).

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2012); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois

Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on December 19, 2013, by a vote of 4-0.

John Therriault, Clerk
Illinois Pollution Control Board