ILLINOIS POLLUTION CONTROL BOARD
July 15, 2010

PEOPLE OF THE STATE OF ILLINOIS,	)	
	)	
Complainant,	)	
	)	
v.	)	PCB 00-211
	)	(Enforcement – Air, Land)
TOYAL, INC. f/k/a ALCAN-TOYO AMERICA, INC. a foreign corporation,	)	
	)	
	)	
Respondent.	)	

CHRISTOPHER J. GRANT, ASSISTANT ATTORNEY GENERAL, APPEARED ON BEHALF OF COMPLAINANT; and

ROY M. HARSCH AND YESENIA VILLASENOR-RODRIGUEZ, DRINKER, BIDDLE, & REATH, LLP, APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by C.K. Zalewski):

On May 31, 2000, the People of the State of Illinois (People or complainant) filed a seven-count complaint against Toyal America, Inc. f/k/a Alcan-Toyo America, Inc. (Toyal) alleging violations of the Environmental Protection Act (Act) (415 ILCS 5/1 *et seq.* (2008))[1] and the Board's air pollution rules, as well as the hazardous waste storage and handling rules implementing the federal Resource Conservation and Recovery Act (RCRA). The alleged violations occurred during Toyal's operation of an aluminum products manufacturing facility located at 17401 South Broadway, Lockport, Will County, Illinois.

The Board earlier accepted the parties' settlement of the RCRA portion of the complaint[2], leaving for resolution today only the air pollution portions of this complaint, Counts I and II.

[1] The pleadings in this case refer to the 2000 and 2006 versions of the Illinois Complied Statutes (ILCS). As there is no difference in the relevant sections as they relate to the allegations of the complaint from the 2000 to the 2006 and to the 2008 compilation. Since the 2000 and 2006 versions, there have been revisions to the sections of the Act related to remedies and penalties: Sections 33(c) and 42(h). The most material of these is the requirement for recapture of economic benefit as a component of civil penalties, as added to Section 42(h) by P.A. 93-575, effective January 1, 2004. Since the remedies provisions to be applied in this case are those in effect today, the Board will consistently reference the 2008 edition of the ILCS.

[2] By order of July 12, 2001, the Board accepted the parties proposed settlement and stipulation of facts concerning the RCRA violations alleged in Counts III through VII of the complaint. People v. Toyal America, Inc. f/k/a Alcan-Toyo America, Inc., PCB 00-211 (July 12, 2001).

Counts I & II of the complaint relate to Toyal's alleged failure to control emissions of volatile organic materials (VOM) in violation of Section 9(a) of the Act (415 ILCS 5/9(a)(2008) and 35 Ill. Adm. Code 218.986. Count I of the complaint alleges that the Board's VOM rules at 35 Ill. Adm. Code 218.Subpart TT[3] (known as the Subpart TT rules) required Toyal and others in its industry to achieve VOM reductions of at least 81% no later than March 15, 1995, and that Toyal failed to do so. *See* 35 Ill. Adm. Code 218.986. Count II alleges that, by failing to control sources accordingly to industry standards, Toyal caused, allowed, or threatened air pollution in violation of Section 9(a) of the Act. 415 ILCS 5/9(a) (2008).

The Board held hearings on Counts I & II on December 10 and 11, 2008, and received briefs on the issues from both parties. There is no dispute between the parties that Toyal was out of compliance with VOM control standards from March 15, 1995 up to April 30, 2003, nor that Toyal is now in compliance and has been since April 30, 2003., nor that it. The dispute between the parties is over the appropriate penalty, if any, for non-compliance during that eight-year period of non-compliance.

Section 42(a) of the Act provides that persons found in violation of the Act are liable for "a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues". 415 ILCS 5/42(a) (2008). Section 42(h)(7) goes on to require that any penalty be "at least as great as the economic benefits, if any, accrued by the respondent as a result of the violations, unless the Board finds that imposition of such penalty would result in an arbitrary or unreasonable financial hardship." 415 ILCS 5/42(a) (2008). The People calculate the period of violation to be 2,986 days, for which the maximum daily penalty for each count would be $29, 860,000. Adding to this $50,000 for violation of each of two Counts of the complaint, adds $100,000 for a total possible penalty of $59, 820,000 exclusive of any economic benefit.

The People request a total civil penalty of $716, 440, consisting of $316, 440 in costs to be recovered for the economic benefits Toyal received through non-compliance, and an additional $400,000 ($50,000 per year of violation). The People waive any award of attorney fees, asking the Board to take that fact into account in assessing a penalty.

Toyal, in response, maintains that a substantial penalty is not warranted here. Toyal asserts that as it has acted in good faith to achieve compliance with Subpart TT under difficult circumstances, expending over $1,252,016 to do so. Toyal maintains that it has received no

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[3] In January 1994, the Board completed a fast-track rulemaking under Section 28.5 of the Act, 415 ILCS. 5/28.5 (2008). Because the Chicago area was designated by USEPA as a severe ozone non-attainment area, the reach of the Reasonably Available Control Technology (RACT) rules were expanded. The rules were made applicable to sources of VOM emissions that emitted, or had the potential to emit, 25 tons of VOM per year. Among many others, Will County was included in the rules' expanded scope. 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 and 218, R93-14 (Jan. 6, 1994). The compliance date was set at March 15, 1995.

economic benefit through non-compliance, as any otherwise calculated benefit is offset by a $1 million vacuum chiller system purchased in good faith but never installed. In reply, the People challenge these assertions, and contend that Toyal's arguments amount to an impermissible request for a retroactive variance.

Based on the record in this proceeding, the Board finds the respondent in violation as alleged in Counts I & II of the complaint. As a remedy, the Board issues a cease and desist order and assesses the civil penalties requested by the People.

PROCEDURAL HISTORY

On May 31, 2000, the People filed a seven-count complaint against Toyal America, Inc. f/k/a Alcan-Toyo America, Inc. alleging violations of the Act and the Board's rules. The complaint alleged both air violations and RCRA violations.

By order of July 12, 2001, the Board accepted the parties' proposed settlement and stipulation of facts concerning the RCRA violations alleged in Counts III through VII of the complaint. The People alleged that Toyal stored hazardous waste at the Lockport facility for over 90 days without a RCRA permit, and maintained inadequate aisle space at the facility. The People further alleged that Toyal failed to amend its contingency plan when the emergency coordinator was no longer with the company, meet secondary confinement requirements for containers of hazardous waste, and document any inspections that Toyal performed at the facility. This alleged activity was in violation of Sections 21(f)(1) and 21(f)(2) of the Act (415 ILCS 5/21(f)(1), 5/21(f)(2) (2008)); and Sections 703.121, 725.135, 725.154(d), 725.293(e)(2)(D), and 725.295(c) of the Board's regulations (35 Ill. Adm. Code 703.121, 725.135, 725.154(d), 725.293(e)(2)(D), 725.295(c)). Toyal admitted the alleged violations, and agreed to pay a $31,500 penalty. The parties further stipulated that Toyal had come into compliance with these sections of the Act and RCRA rules. People v. Toyal America, Inc. f/k/a Alcan-Toyo America, Inc., PCB 00-211 (July 12, 2001).

As evidenced by the multiple entries on the docket sheet in this action, the parties then attempted over a lengthy period time to settle the air counts; once these attempts proved unavailing, the parties then proceeded to conduct discovery. Among other discovery sought, on October 15, 2008 the People filed a request to admit facts. On November 12, 2008, Toyal filed a response which admitted 55 of 57 facts; as described below, this was entered into the record at hearing.

On December 10-11, 2009, a hearing was held in Bolingbrook, Will County, before Hearing Officer Bradley P. Halloran.[4] The hearing officer marked and admitted as an exhibit a motion he granted on the record (H.O. Exh. 2--"Complainant's Motion to Exclude Late-Disclosed Expert Opinion [of Christopher McClure]"), but marked as exhibits and denied admission two others. *See* H.O. Exh. 1--"Toyal's Motion to Include Witnesses' Narrative

[4] The two hearing transcripts were not consecutively numbered from one day to the next. The transcript of the December 10 hearing is cited as "Tr. 12/10/08" and the December 11 hearing is cited as "Tr. 12/11/08".

Testimony (including attached prepared narrative testimonies of Toyal employees Barry Van Hoose, Raymond J. Malmgren, Dennis Dobrodt, Toyal environmental consultant Steve Anderson, Admiral Environmental Services, Inc., and Toyal financial benefit consultant Christopher McClure, Navigant Consulting) and H.O. Ex 3—"Toyal's Motion to Allow Mr. McClure to Amend Expert Witness Report.

The People presented the testimony of two witnesses. The first was Mr. Gary Styzens, who is employed in the finance and administration section of the Illinois Environmental Protection Agency (IEPA) as its economic benefit analyst and financial analyst. The second witness, called as an adverse witness, Mr. Barry Van Hoose, vice president of operations of Toyal America who had been with Toyal throughout the period of the alleged violations (TR. 12/10/08 at 140). Four exhibits were admitted on behalf of the complainant. Comp. Exh. 17 (Toyal's November 12, 2008 admission of facts), 20, 21, and 22.

Toyal presented the testimony of four witnesses: Mr. Van Hoose, and Mr. Ray Malmgren, a Toyal employee since July 2000 who has been Toyal's safety, heath, and environmental manager, Mr. Dennis Dobrodt, Toyal's engineering manager, Toyal's present environmental consultant Steve Anderson, Admiral Environmental Services, Inc., and Toyal's financial benefit consultant Christopher McClure, Navigant Consulting. Twenty-four exhibits were admitted on behalf of the respondents. Resp. Exh. 2-5, 7-14, 16 -19, 21, 22(a), 22(b), and 27. Three more exhibits were received as offers of proof. *See* Resp. Exh. 23—"Expert Report of Christopher McClure, dated December 1, 2008" and the exhibits to that report which were Exhibit 1, Analysis of Economic Benefit (15 pages) marked as Resp. Exh. 24, and Exhibit 2, Analysis of Economic Benefit (1 page) marked as Resp. Exh. 5.

Pursuant to leave given by the hearing officer[5] during an extended and modified briefing schedule, complainant filed its closing argument and brief on February 20, 2009 (Comp. Br.). On April10, 2009, the respondent filed a brief, followed on April 23, 2009 by an amended brief (Resp. Am. Br.). Complaint filed a reply brief (Comp. Reply) on April 29, 2009.

At hearing and in briefs, the parties preserved various disputes with rulings of the hearing officer, which are disposed of as "Preliminary Matters Regarding Evidence" a bit later in this opinion.

UNCONTESTED AND ADMITTED FACTS

A brief description of the facility and its Subpart TT compliance status follows, based on uncontested and admitted facts. Much of this information is contained in Toyal's response to the People's request to admit facts, admitted as Complainant's Exhibit 17. [6] Other information is contained in Respondent's Exhibit 7 (Resp. Exh. 7), a simple chronology of events that Toyal

[5] *See* PCB 00-211 (hearing officer orders of Feb. 18, 2009, Apr. 6, 2009, and May 13, 2009).

[6] Toyal admitted all but two of the requests. Toyal denied one fact, but further responded, to clarify corporate ownership. Comp. Exh. 17, Fact 2. Toyal denied that its "maximum theoretical emissions under the definition of 35 Ill. Adm. Code 211.390 was in excess of 100 TPY of VOM from March 15, 1995 through April 30, 2003."

prepared for a May 2, 2007 meeting with IEPA, and Respondent's Exhibit 8 (Resp. Ex. 8)[7], additional information produced in response to requests made at that meeting.

The description below does not enumerate Toyal's reasons for non-compliance, or detail its expenditures of engineering, consulting, and financial resources in pursuit of plant expansion and compliance with the Subpart TT 81% VOM control requirements. Toyal's pursuant of plant expansion and compliance is detailed in the summary of hearing testimony, along with the People's interpretation of that pursuit.

The Lockport Facility

Beginning in 1979-1980, aluminum paste, pigments, and powders have been manufactured at the Lockport facility located at 17401 South Broadway, Lockport, in Will County. The Toyal facility is located in the Des Plaines Valley area. The Des Plaines River is located to the east of Toyal. To the north lies property owned by the Water Reclamation District of Greater Chicago and a wetlands area. To the west of Toyal is an Illinois Department of Transportation facility, and Stateville Penitentiary Land. Directly to the south is a publicly-owned treatments works operated by the Village of Crest Hill. Tr. 12/10/08 at 229-230.

Since 1996, the facility has been owned and operated by Toyal America, Inc., a Delaware corporation which is a subsidiary of Toyal Aluminum KK, itself a subsidiary of Nippon Light Metals. Nippon Light Metals Group consists of 115 subsidiaries and 51 affiliates, and its annual report states sales in 2007 to be $5,236,408,000.00. Comp. Ex. 17, Facts 2, 3, 4. Predecessor businesses operating the Lockport site have included Alcan and Alcan-Toyo. The Lockport facility manufactures aluminum paste, pigments, and powders. As of the time of hearing, Toyal employed 89 people (41 salaried positions, and 48 hourly, union positions.) Comp. Exh. 17, Tr. 12/11/08 at 139-140. Toyal itself expected to report losses of $3 million in 2008. 12/10/08 at 143-144.

Toyal's Products and Process

The aluminum atomized powder and aluminum flake and paste Toyal produces can be used in refractory bricks, rocket propellant, munitions, bombs, and the like. The bigger portion of Toyal's business is the production of aluminum paste and pigments, primarily for the automobile industry, *i.e.* car body coloration, and secondarily for various industrial applications. Tr. 12/11/08 at 141-142. Toyal's primary competitors in the United States are Silberline Manufacturing with plants in Pennsylvania and Indiana, and Eckart America with a plant in Kentucky; two other North American competitors have closed. *Id.*

As described by Toyal's engineering manager, Toyal's paste and flake manufacturing process starts with the mixing of aluminum powder, mineral spirits and fatty acids (stearic acid and oleic acid) in a "charge tank." The mix is then sent into a ball mill, where the round particles that resulted from the mix are flattened into flakes over a period of hours. The mill is then

[7] Respondent's Exhibit 8 is a 19-page unnumbered document. When citing to specific pages, this opinion treats the initial page with the exhibit sticker as page 1.

flooded with mineral spirits and sent into a receiving tank. The slurry is pumped through a multiple screener system and a magnetic ferro filter to remove magnetic particles. Finally, the mix is pumped into a filter press,

> where the solvents at that point are extracted to 75, 85 percent solids. And then that product is manually cut out of that filter press and dropped into the mixer where it accumulates multiple batches and then is color matched to the product specifications.
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> In support of all that then is a series of tanks and pumps that move the slurries that hold what we call process oils, which is essentially mineral spirits. That is reused over and over through the process until the contaminants build up in those process oils. So there's (sic) other sundry systems that support that.
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> There are also vacuum pumps that are used to extract mineral spirits from the oversize paste . . . generated in the screening operation. Tr. 12/11/08 at 30-31.

Compliance History 1995-2003

In February, 1992, IEPA requested information from Toyal regarding its maximum theoretical VOM emissions, to determine compliance with 35 Ill. Adm. Code 218.985 (a) and Subpart TT. Comp. Ex. 17, Fact 6. In May 1992, Toyal reported maximum theoretical VOM emissions of 82 tons. But, Toyal also stated that it considered the plant's practical emissions to be 41.5 TPY due to process limitations. At the same time, Toyal reported actual VOM emissions of 28.07 tons in 1990 and 33.61 tons in 1991. *Id.*, Facts 7, 8, 9. Toyal was subject to the VOM control regulations of 35 Ill. Adm. Code 218.Subpart TT from March 15, 1995 through April 30, 2003, because throughout that period its emission sources had the potential to emit in excess of 25 tons of VOM per year. *Id.*, Facts 11, 13. In February 1995, the IEPA advised Toyal of Subpart TT's applicability in a request for additional information regarding a specified permit application. *Id.*, Fact 12.

On March 5, 1996, Toyal applied to IEPA for a Clean Air Act Permit Program Permit (CAAPP), as required by Section 39.5 of the Act, 415 ILCS 5/39.5 of the Act. The application was prepared by Toyal's then-consultant, Montgomery Watson. The application admitted that Toyal's emission units were not in compliance with 35 Ill. Adm. Code 218.986(a) as of March 15, 1995 , and stated that control equipment would be installed in the future. Toyal opted to reach compliance with Subpart TT by controlling VOM emissions by 81% control pursuant to 35 Ill. Adm. Code 218.986. Toyal stated to IEPA that it would apply for a construction permit by February 1998, and demonstrate compliance by November, 1998. Toyal reported VOM emissions of 80.6411 TPY for purposed of calculation of its CAAPP fees. Comp. Ex. 17, Facts 15-19, and Comp. Ex. 21, Vol. 1 of Alcan-Toyo's CAAPP Application, prepared by Montgomery Watson dated February, 1996.

In January 1997, Toyal selected and retained Woodward-Clyde Woodward as its compliance consultant. Toyal wanted the firm to select proper equipment, and design and install the overall system needed for compliance. Resp. Exh. 7 at 2. In February, 1997, Toyal sought

internal company approval to investigate emission control technology. In March, 1998, Toyal requested an extension of the deadline for application of its construction permit until May, 1998, stating that it believed it would "be in complete compliance by February 1999, and would demonstrate compliance through stack testing and mass balance estimates." Comp. Ex. 17, Facts 20-21.

Woodward-Clyde completed design work in May 1998. In the construction permit application for VOM control equipment received by IEPA in June, 1998, Toyal advised IEPA that it would install a Recuperative Catalytic Oxidizer (RCO)[8]. Although Toyal stated it had not yet chosen a supplier for the RCO, Toyal said it would demonstrate compliance by a November 1998 stack test. Comp. Ex. 17, Facts 22-24. The RCO was installed during September through November, and operation began December 1, 1998.

A December 1998 stack test was cancelled, and Toyal requested an extension of the date for demonstrating compliance in December 1998. Comp. Ex. 17, Fact 25. Toyal could not prove compliance, because of initial issues raised by its hoods, the fact that not all sources were connected to the RCO, and questions concerning the need for additional temperature monitoring. Resp. Exh. 7 at 4. Toyal's reported VOM emissions for 1999 were 36.1 tons, and for 2000 were 47.4 tons. *Id*, Facts 29, 30.

In the period from 1999 through 2001, Toyal added a continuous emission monitoring unit on the RCO (after VOM destruction), added hoods, ran additional testing, investigated alternate methods of VOM destruction *(i.e*. an RTO or conversion to one). Toyal also invested in a $1,051,435 centralized vacuum system to capture VOM emissions that it later determined was not needed; the system was never installed or operated. Resp. Exh. 7 at 4.

During the same period, Toyal had nine incidents of fire and explosion, with seven of those being related to the aluminum paste operation. These arise from the nature of the materials used, as well as the process. The primary hazard from aluminum paste is fire, from powder is fire and explosion, and from flake powder both explosion and fire. Resp. Ex. 7 at 6-7. Causes include static discharges, lack of oxidation (forming reactive sites), mechanical action (forming reactive sites), moisture contamination, and impact sparking (from metal to metal). *Id.* at 9.

Consequently, Toyal had concerns "from the safety side" as to how emissions were going to be captured, including concerns for capture points as possible sources of ignition, and for prevention of access for fire fighting. Due to the nature of Toyal's operations, "everything had to be custom designed and installed. Resp. Ex. 7 at 7, 8.

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[8] As an aid to the reader, the Board notes here that there are several other acronyms used with some frequency by the parties in this action. The Board lists them by full name here, as well as at their first appearance in the text. These acronyms are (including RCO): BEN (economic benefit), CAAPP (Clean Air Act Permit Program), CEMS (continuous emission monitoring system), CRO (Catalytic Recuperative Oxidizer), FESOP (Federally Enforceable State Operating Permit), FID (flame ionization detector), PTE (Permanent Total Enclosure), RCO (Regenerative Catalytic Oxidizer), RTO (Regenerative Thermal Oxidizer), TPY (tons per year) and TTE (Temporary Total Enclosure).

In 2001, Toyal was involved in a $5-6 million Unit B expansion. Tr. 12/11/08 at 54. In April 2001, Toyal applied for a construction permit to convert the existing RCO to a Regenerative Thermal Oxidizer (RTO). Toyal stated that it expected to test the RTO for compliance in May 2002. Comp. Ex. 17, Facts 26-27. In that application, Toyal advised IEPA of various facts concerning its various process sources:

> The A-Unit process, consisting of 13 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 34-36.
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> The B-Unit process, consisting of 18 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 37-39.
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> The C-Unit process, consisting of 18 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 40-42.
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> The D-Unit process, consisting of 18 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 43-45
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> The Aluminum Flake process unit, consisting of 3 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 46-48.
>
> The FX Flake process unit, consisting of 9 emissions sources, was subject to, but not in compliance with, the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at 49-50.
>
> The Sigma Mixer process unit, consisting of 3 emissions sources, was subject to, but not in compliance with the 81% VOM control requirements of 35 Ill. Adm. Code 218.986(a). These emissions would be controlled by an RTO, with compliance to be demonstrated by stack testing. *Id.*, Facts at5-53.

Originally, Toyal had thought it would need to submit a CAAPP application because emissions were going to be more than 25 tons per year (TPY). But, after Toyal better determined what was going on in the plant, Toyal instead elected to make an application for a

Federally Enforceable State Operating Permit (FESOP)[9]. Tr. 2/11/08 at 74. On November 1, 2000, Toyal met with IEPA. Toyal asked "to roll . . . into one construction permit" all of its ongoing projects and current understandings about them. *Id.* at 75. Toyal wanted the permit to include

> the expansion project [Toyal was] doing, . . . the modifications needed to show compliance, . . . [Toyal's] initial estimates that the RCO was undersized as far as flow rates go, it was max'd out, [so Toyal] didn't have a full understanding at that time of how much was dilution air versus how much was process air going to the RCO unit [because Toyal] would later find out those numbers. *Id.* at 75.

IEPA gave its approval, and Toyal submitted the construction application in January 2001 for the modified sources, installation of the replacement of the control device, and the installation of the vacuum chiller. Tr. 2/11/08 at 76.

Toyal never installed the centralized vacuum chiller system, purchased at a cost of $1,051, 435. Toyal never converted the RCO to an RTO. Following submission of the April 2001 RTO construction permit application, Toyal began a project to hook all regulated emissions sources to the RCO. Comp. Ex. 17, Facts 54, 56.

Toyal acknowledged that, prior to 2002, it had "internal management issues that caused friction [internally and] between IEPA and internally . . . did not understand the [compliance] problem enough to resolve it." At the end of 2001, Toyal changed its organization to address these issues as well as safety concerns. Toyal made personnel changes in the positions of plant manager, engineering manager, and safety, health, and environmental manager. Resp. Exh. 7 at 10-11. Toyal retained Admiral Engineering as environmental consultant for compliance purposes in place of Woodward-Clyde.

On February 19, 2002, Toyal requested an extension until November 29, 2002 of the date for demonstrating VOM capture and control efficiency to below 25 TPY emissions of VOM. Comp. Ex. 17, Fact 26.

On February 26, 2002, Toyal advised it had not completed engineering to convert its RCO to an RTO. In August 2002, Toyal requested an additional extension for demonstrating compliance with VOM capture and control efficiency. Comp. Ex. 17, Facts 26, 27, 28.

In 1997, Toyal identified to IEPA that its engineering goals during the period 2002-2003 included to better understand compliance requirements, its RCO, its system and the problems to be overcome. Toyal hoped to put together a plan to bring it into proven compliance, and to improve its fire alarms and suppression system. Resp. Ex. 7 at 12. For the same period, additional goals included development, implementation, and registration of management systems

[9] In order to obtain a FESOP at that time, a pollution source would have had to prove that it emits less than 25 TPY. Tr. 12/11/08 at 119. This could be proven by, for instance, "over controlling" some emission sources.

for quality (ISO 9001) safety and health (*i.e.* OHSA S18001) and environmental concerns (*i.e.* ISO 14001). *Id.* at 13-15.

Through mid-2002, Toyal completed the piping and instrumentation diagram of its as-built system, and used an outside consulting firm to better understand its problems. In October 2002, Toyal modified the process to segregate it from dilution air, and purchased a second FID to better its understanding of how the system is working. Resp. Ex. 8 at 12. Through December 2002, Toyal connected all paste production sources with properly sized ducts for flow control. *Id.* at 13.

As previously stated, Toyal's began operation of its RCO on December 1, 1998. Van Hoose explained that Toyal had a distillation unit in 1996 that was recovering solvent. Distillation is performed using vacuum and high temperature. As solvent is evaporated, it goes to a condenser and then passes through a water bath prior to going to a clean tank. Prior to 2003, Toyal used a water wash system, but found that contact area was inefficient to remove acids. Toyal stated that it could not bubble air through the solvent until the tank was connected to the RCO, because it would have caused VOM emissions due to oleic acid breakdown. Resp. Exh. 7 at 16, and Resp. Exh. 8. Toyal stated that other options of controlling emissions, such as flares, were not considered as Toyal "concentrated on obtaining compliance with [the] RCO." Resp. Ex. 8 at 11.

In January 2003, Toyal installed a data acquisition system. In March 2003, Toyal connected process tanks in its tank farm to a knockout pot, and then to the RCO. In April 2003, the solvent distillation clean tank was connected to the tank farm system and to the RCO. In April 2003, the solvent distillation clean tank was connected to the tank farm system and to the RCO. Resp. Ex. 8 at 13. This allowed Toyal to be able to bubble air into the tank. Toyal was able to demonstrate compliance with Subpart TT April 30, 2003. Comp. Exh. 17, Fact 57. Toyal reports that it completed compliance testing in May 2003. Resp. Ex. 8 at 13.

As detailed in the hearing testimony, operation of the RCO allowed Toyal to distill more solvent than previously, resulting in cost savings. These result from the fact both that recycling solvent saves on raw material costs, and that Toyal is disposing of less spent solvent as waste.

Post-Compliance System Improvements

While not specifically relevant to the non-compliance period, to put later portions of this opinion in better perspective, it is also Toyal's uncontroverted testimony that a Catalytic Recuperative Oxidizer (CRO) was installed in July of 2005 to replace the RCO. The CRO was purchased because, in addition to Toyal's belief that IEPA disfavored the RCO, operation of the RCO caused Toyal "a lot of mechanical shutdowns, reports being written to the State, interruptions in production because many of the shutdowns caused exceedance of our permit as far as the timeline goes." Moreover, the RCO could not handle any more expansions of the facility. Tr. 12/11/08 at 118-120.

In December, 2006, there was another fire in the CRO that Toyal operated in compliance with "a provisional permit" (later explained to be a provisional variance). *Id.* at 148, 150 and

Resp. Exh. 4. Toyal also had an explosion in its atomizer collection area on August 26, 2008. *Id*. at 149.

Toyal characterized the CRO as a more efficient piece of equipment than the RCO in its gas use and destruction efficiency. Tr.12/11/08 at 16. Mr. Malmgren stated that, "while the CRO had start-up pains, once these were corrected, the unit has virtually been running continuously unless we choose to shut it down ourselves or mother nature [intervenes]." *Id.* at 16. The CRO increases the efficiency of Toyal's operations, and was installed to replace the RCO used to control VOM emissions in the 1990's. *Id.* at 112. Use of the CRO has allowed Toyal to save money by more efficient solvent recovery.

STATUTORY AND REGULATORY FRAMEWORK

A short summary of the relevant statutes and rules follows.

Part 218 of the Board air rules (35 Ill. Adm. Code Part 218) establishes VOM emission standards and limitations for the Chicago area, which includes Will County, Illinois, where Toyal's facility is located. Subpart TT of the Part 218 regulations applies to "other emission units", which include the aluminum flake and paste operations at Toyal's facility. Toyal agrees that it was subject to the requirements of 35 Ill. Adm. Code 218.986(a), as of March 15, 1995. Comp. Exh. 17, Admitted Fact No. 13.

Section 218.986(a) provides in pertinent part:

> Every owner or operator of an emission unit subject to this Subpart shall comply with the requirements of subsection (a), (b), (c), (d), or (e) below.
>
> (a) Emission capture and control equipment which achieves an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit, or [end text of subsection a]
>
> (Board Note: For the purpose of this provision, an emission unit is any part or activity at a source of a type that by itself is subject to control requirements in other Subparts of this Part or 40 CFR 60, incorporated by reference in Section 218.112, e.g., a coating line, a printing line, a process unit, a wastewater system, or other equipment, or is otherwise any part or activity at a source.)

Section 9(a) of the Act provides that no person shall

> (a) Cause or threaten or allow the discharge or emission of any contaminant into the environment in any State so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, so as to violate regulations or standards adopted by the Board under this Act; (sic) 415 ILCS 9(a)(2008).

Section 33(c) of the Act provides in its entirety that:

(c) In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges or deposits involved including, but not limited to:

(i) the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;

(ii) the social and economic value of the pollution source;

(iii) the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved;

(iv) the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source; and

(v) any subsequent compliance. 415 ILCS 5/33(c) (2008).

Section 42(h) of the Act provides that

In determining the appropriate penalty to be imposed . . . the Board is authorized to consider any matters of record in mitigation or aggravation of penalty, including but not limited to the following factors:

(1) the duration and gravity of the violation;

(2) the presence or absence of due diligence on the part of the respondent in attempting to comply with requirements of this Act and regulations thereunder or to secure relief therefrom as provided by this Act;

(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;

(4) 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;

(5) the number, proximity in time, and gravity of previously adjudicated violations of the Act by the respondent;

(6) whether the respondent voluntarily self-disclosed, in accordance with subsection (i) of this Section, the non-compliance to the Agency; and

(7) whether the respondent has agreed to undertake a "supplemental environmental project," which means an environmentally beneficial project that a respondent agrees to undertake in settlement of an enforcement action brought under this Act, but which the respondent is not otherwise legally required to perform.

In determining the appropriate civil penalty to be imposed under subsection (a) or paragraph (1), (2), (3), or (5) of subsection (b) of this Section, 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. However, such penalty may be offset in whole or in part pursuant to a supplemental environmental project agreed to by the complainant and respondent. 415 ILCS 5/42(h) (2008).[10]

PRELIMINARY MATTERS REGARDING EVIDENCE

After calling the hearing to order on December 10, 2009, the hearing officer made evidentiary rulings on certain proposed testimony and exhibits, and accepted offers of proof during the hearing. These relate to proposed use of narrative testimony, and addition to, and amendment of, expert testimony. The hearing officer sponsored and admitted one exhibit (H.O. Exh. 2--"Complainant's Motion to Exclude Late-Disclosed Expert Opinion [of Christopher McClure]"), but denied admission to two others. *See* H.O. Exh. 1--"Toyal's Motion to Include Witnesses' Narrative Testimony" (including attached prepared narrative testimonies of Toyal employees Barry Van Hoose, Raymond J. Malmgren, Dennis Debrodt, Toyal environmental consultant Steve Anderson of Admiral Environmental Services, Inc., and Toyal financial benefit consultant Christopher McClure of Navigant Consulting) and H.O. Ex 3—"Toyal's Motion to Allow Mr. McClure to Amend Expert Witness Report".

Use of Narrative Testimony

The Board's procedural rule at 35 Ill. Adm. Code 101.626(d), entitled "Written Testimony", provides:

Written testimony may be introduced by a party in a hearing only if provided

[10] As previously stated, the provision in the the hanging paragraph beginning "In determining" and ending with "complainant and respondent." was added to Section 42(h) by P.A. 93-575, effective January 1, 2004. *See, supra,* p. 1 at n. 1.

> to all other parties of records prior to the date of the hearing and only after the opposing parties have had an opportunity to object to the written testimony and to obtain a ruling on the objections prior to its introduction. Written testimony may be introduced by a party only if the persons whose written testimony is introduced are available for cross-examination at hearing.

As discussed on the hearing record (Tr. 12/10/08 at 5-14), Toyal's plan had been to offer testimony of its various witnesses in narrative fashion, in order to streamline the hearing. These testimonies, amounting to some 38 pages, were those of Toyal employees Barry Van Hoose, Raymond J. Malmgren, Dennis Dobrodt, Toyal environmental consultant Steve Anderson, Admiral Environmental Services, Inc., and Toyal financial benefit consultant Christopher McClure, Navigant Consulting. *See* H.O. Exh. 1--"Toyal's Motion to Include Witnesses' Narrative Testimony (including attached prepared narrative testimonies)".

The hearing officer's order of December 1, 2008 had expressly acknowledged that such testimony was being prepared, but on December 8, when counsel for Toyal contacted complainant's counsel to deliver the written testimony, complainant's counsel stated he would not accept the use of written testimony. The People objected to use of narrative written testimony on December 8, at a pre-hearing telephone status conference on December 9, and prior to the beginning of the hearing December 10. The complainant argued that such written testimony "violated the standard rules of evidence", was not properly used in enforcement cases, particularly where the witnesses were present and could testify, and that the written testimony was presented on the eve of hearing. Tr. 12/10/08 at 10. The hearing officer did not allow the presentation of the narrative testimony on the narrow grounds that:

> Section 101.626 states that any written testimony may be introduced by a party in a hearing only if provided to all of the parties. Well, in this case it was not provided simply because the Complainant did not want to see it. Mr. Harsch offered to provide it, but the Complainant turned them down. Tr. 12/10/08 at 13.

The hearing officer noted that he had believed there to be an agreement between the parties, and that he believed that sufficient time for review of the testimony had been given, or would have been given. Tr. 12/10/08 at 12-13. The hearing officer accepted the written testimonies as an offer of proof.

The Board affirms the hearing officer's decision not to accept the written testimony as evidence, in the interests of avoiding delay of commencement of hearing. In so finding, however, the Board agrees with the respondent and the hearing officer that use of written testimony, even narrative in form, can streamline a hearing such as this where there is no disagreement as to the facts, and where the chronology of events is of such potential importance.

The Board's rules provide that the person giving written testimony must be available for cross-examination, so that the Board fails to understand the source of any evidentiary objection the People may have. The Board rules do not require litigants to agree to use of written testimony, but the Board cautions in future cases against use of any "avoidance of service" as a way of expressing disagreement with use of the rule in a given case. Finally, while finding that

the hearing officer's decision to accept the testimonies as an offer of proof was reasonable, the Board has not considered the substance of these testimonies this matter. The respondent had ample opportunity to present its witnesses' testimony in the usual manner at hearing, and in fact respondent did have each witness present extensive hearing testimony as summarized below. *See, infra,* pp.25-45.

Supplement to McClure Testimony

The next disputed evidentiary ruling concerns an attempt to have admitted a December 1, 2008 supplement to the written report and testimony of Toyal's financial expert, Mr. McClure. The parties and the hearing officer discussed the matter at hearing (Tr. 12/10/08 at 15-22), and each party presented written motions: HO Exhibit 3 is Toyal's motion to supplement the McClure report and HO Exhibit 2 is the People's motion to exclude this material.

The parties agree that Mr. McClure's original report, dated August 2008, was the subject of deposition by the parties on November 8, 2008. At that time, the parties agreed that neither the opinion reports of the People's expert Mr. Styzens nor Toyal's expert Mr. McClure included within their calculation the expense of a "vacuum system" or "vacuum skid" which Toyal had never installed but had bought at an expense of over $1 million. The parties agreed that some off- the- record conversation was had about the possibility of amending the witnesses' testimony. No amendment was made by complainant. On December 8, 2008, Toyal presented complainant with a supplement to the McClure report dated December 1, 2008, arguing that the amendment had been made subject to agreement. HO Exh. 3 at 2.

Complainant argued that the gist of the supplement was that the cost of the vacuum device added an additional "economic detriment" of $1,051,435 to be offset against economic benefit. Based on late presentation of this information to complainant two days before hearing and a week after its preparation date, the People argued that the information should be barred and any testimony as it related to "any excuse of liability or penalty in this matter be excluded." HO Exh.2 at 2.

The hearing officer stated that he had not been privy to any agreement between the parties about amendment of expert witnesses' testimonies. He noted that all prehearing motions were due to be filed on or before November 10, 2008. Finding that the new calculations could be "somewhat of a surprise to the State", the hearing officer granted complainant's motion to exclude "the late disclosed expert opinion". But, he agreed to accept the material as an offer of proof. Tr. 12/11/08 at 21-22, and Resp. Exh. 23—"Expert Report of Christopher McClure, dated December 1, 2008" and the exhibits to that report which were Exhibit 1, Analysis of Economic Benefit (15 pages) marked as Resp. Exh. 24, and Exhibit 2 Analysis of Economic Benefit (1 page) marked as Resp. Exh. 5.

Again, the Board affirms the hearing officer's ruling to exclude the proffered evidence, but to accept it as an offer of proof. The Board agrees that presentation of the new calculations on the eve of hearing could result in unfair surprise, noting Toyal's failure to explain why the material could not have been prepared and presented to complainant for review by its expert at any earlier time. Under these circumstances, the Board will not consider the contents of the

testimony or exhibits which were the subject of the offer of proof or any arguments based thereon. The Board on its own motion accordingly strikes those portions of the briefs arguing these issues *i.e.* Comp. Br. at 28-32, Resp. Am. Brief at 47-52, and Comp. Reply at 6-11.

THE COMPLAINT'S REMAINING AIR ALLEGATIONS

Count I of the complaint alleges that the Board's VOM rules, codified at 35 Ill. Adm. Code 218. Subpart TT, required Toyal and others in its industry to achieve VOM reductions of at least 81% no later than March 15, 1995, and that Toyal failed to do so. *See* 35 Ill. Adm. Code 218.986. Count II alleges that, by failing to control sources accordingly to industry standards, Toyal caused, allowed, or threatened air pollution in violation of Section 9(a) of the Act. 415 ILCS 5/9(a) (2008).

HEARING TESTIMONY AND EXHIBITS

The People's Witnesses

IEPA's Gary Styzens

Gary Styzens March, 29, 2006 Revised Economic Benefit Analysis: Complainant's Exhibit 20. The complainant's first witness was Gary Styzens. Complainant's Exhibit 20 was the resume and economic analysis of Gary Styzens. Comp. Ex. 20. As previously stated, Mr. Styzens, is employed in the IEPA's finance and administration section as its economic benefit analyst and financial analyst. He is a certified internal auditor who has 25 years of background in internal auditing, and who has testified or been deposed in a number of cases. Tr. 12/10/08 at 32-40 and Comp. Exh. 20, Resume of Gary Styzens and March 29, 2006 "Toyal America—Revised Economic Benefit Analysis" (emphasis in original) (Revised Analysis).

To aid the reader in better understanding Mr. Styzens testimony, what follows is the essence of his amended economic benefit report. Mr. Styzens revised *down*, from $982, 516 to $316,440, his March 10, 2005 economic analysis after a November 22, 2005 meeting with Toyal and Navigant. (The original analysis is not in this record.) Comp. Ex. 20 at 1, emphasis in original. Following the meeting, Mr. Styzens' revised his analysis based on enhanced understanding as to the nature of the non-compliance period, which he found was

> a two-phase approach to achieving compliance that resulted in significant capital outlays during the period of the non-compliance period ranging from March 1995 through April 2003. *Id.*

Mr. Styzens also reassessed the costs of capital estimates due to the fact that "Toyal's borrowing rates varied widely." *Id.*

The "overview of a reasonable estimate of the economic benefit for each of the phases" as presented by Mr. Styzens was

1. **Phase 1 Non-compliance period March 15, 1995 through December 31, 1998**
    - **$33, 642** in economic benefit associated with the delay in capital expenditures during Phase 1.
    - **$162,911** in economic benefit associated with annual avoided capital/operating expenditures during phase 1.

2. **Phase 1 Non-compliance period March 15, 1995 through February 28, 2003**

    - **$75,056** in economic benefit associated with the delay in capital expenditures during Phase 2.
    - **$19,157** in economic benefit associated with additional annual avoided capital/operating expenditures during phase 2.

3. Phase 1 and 2 Delayed Penalty Payment period from February 28, 2003 through December 31, 2005

    - **$25, 674** in economic benefit from interest/investment earnings for the delay in payment of the economic benefit penalty for phases 1 and 2. 2.

Total economic benefit estimate for 1) through 3) above is **$316, 440** ($33, 642 + $162,911 + $75,056 + $19,157 + $25, 674). Comp. Ex. 20 at 1-2

The People's Direct Examination. By way of overview, Mr. Styzens explains thathis economic benefit analysis identifies

> delayed and avoided expenditures related to environmental compliance issues with the goal of leveling the playing field with those companies that comply with environmental regulations in an efficient, timely manner against those companies that obtain a financial advantage by delaying or avoiding expenditures associated with environmental compliance. Tr. 12/10/08 at 42 (emphasis in original).

Mr. Styzens states that the methodology, based on basic financial principles, was "somewhat" developed by the United States Environmental Protection Agency (USEPA), and is a cornerstone of the USEPA enforcement policy.[11] *Id.*

Mr. Styzens explains that analysis of an economic benefit is done on a case-by-case basis, to determine how a non-compliant entity had a financial advantage by delaying or avoiding

[11] The USEPA document involved, USEPA's BEN User Manual, is discussed in more detail in the testimony of Navigant's Mr. McClure. Among other things, Mr. McClure explains that BEN is an acronym for economic benefit. *See, infra*, pp.36-39. The BEN Manual is included in the record as part of Mr. McClure's back-up materials. Tr. 12/11/08 at 139-140 and Resp. Exh. 22, 22A (including a tabbed copy of the BEN Manual)

capital expenditures during a noncompliance period, which provide the entity with an opportunity to invest in other areas besides environmental compliance. Tr. 12/10/08 at 43. One of the main principles employed is the time value of money "which recognizes that money has value over time because it can be invested and [one] can obtain a return on that investment." *Id.* at 45. In his revised analysis, Mr. Styzens estimated that the total economic benefit that accrued to Toyal from noncompliance with the Subpart TT VOM 81% control rules was $316,449. *Id.*, and Comp. Exh. 20, Revised Analysis at 1.

Mr. Styzens said that non-compliant entities usually have to make expenditures to implement a pollution control system, Tr. 12/10/08 at 45-46. Mr. Styzens' analysis includes both avoided and delayed costs. Examining the noncompliance period, Mr. Styzens evaluates the delayed period when money should have been spent at the beginning of the compliance period and compares that with when the money was eventually spent to achieve compliance, to recover the investment interest earning for that delayed period on the capital expenditure. *Id.* at 46. Avoided costs are money that was never spent, usually periodic money or annual dollars on maintenance costs, utilities, and similar periodic costs. *Id.* at 46-47. Recovery must be had of not only interest earnings but on the principal because it was in fact never spent. *Id.*

In his original, March 10, 2005 economic benefit analysis, Mr. Styzens had estimated Toyal's benefit to be $982,615. Comp. Exh. 20, Revised Analysis at 1. The revised figure of $316,449 is based on information received from Toyal. *Id.* When Mr. Styzens originally estimated the economic benefit to Toyal, he assumed that Toyal was completely noncompliant for the entire eight years. However, once he realized that Toyal's approach was two-phased; his analysis had to split the noncompliance period into two distinct periods. Tr. 12/10/08 at 47-48. Toyal made some expenditures "earlier in the noncompliance period of approximately $720,000 in Phase I and then several years later, there was another set of expenditures for compliance of around $440,000. *Id.* at 48.

In response to a question as to the source of the interest rates he used, Mr. Styzens stated that he reviewed Toyal's financial reports and determined that Toyal used industrial performance bonds to come into compliance with the RCO. Tr. 12/10/08 at 49. So, he used the rates associated with those bonds to show cost of the capital Toyal needed to comply. *Id*. For interest rates on unpaid penalty, Mr. Styzens used the prime rate, which serves as an estimate of the amount of money the company had to invest in activities other than pollution compliance. Mr. Styzens explained

> Once the noncompliance period is over with and at that point in time the entity has achieved compliance, but should provide an economic benefit penalty payment to the state if it's applicable, from that point forward when the date that the penalty should have been paid, I bring that figure forward through time and basically just try to use a benchmark time value of money and I use the prime lending rate as just a time value of money that -- similar to how that would affect your mortgage rates and your credit card rates. It's just a good benchmark of what the value of money is through time. *Id.* at 50.

Mr. Styzens elaborated on the two phases of expenditures, Phases I and II. Tr. 12/10/08 at 50-51, reviewing People's Exh. 20. He calculated the figure of Phase I activities for the RCO using annual recurring costs from maintenance, operation, and staffing. He primarily used the figures from the Attorney General and Toyal, and adding in an additional$12,500 for operational expenditures. *Id.* at 51. The total was calculated using the same methods as Mr. Styzens used in the "Pipeline case", *i.e.* People v. Panhandle Eastern Pipeline Company, PCB 99-191 (November 15, 2001) (Panhandle PCB 99-191)[12], and "similar" to that used by Toyal's expert, Christopher McClure of Navigant in his November 22, 2005 report. *Id.* at 52, 55-56.

Again, Mr. Styzens stated that the net after-tax benefit that accrued to Toyal from delaying the capital expenditures in Phase I between March 1995 and 1998 was $33,642. Tr. 12/10/08 at 53, reviewing People's Exh. 20. Avoided costs from the failure to control emissions sources until February 23, 2003 was an additional $19,157 because of the increase in additional operating costs that would have resulted from the more complex RCO Phase II project that was eventually implemented. *Id.* at 54.

Mr. Styzens stated that the total savings was $470,887 for the second phase delayed expenditures. Tr. 12/10/08 at 53, reviewing People's Exh. 20. He analyzed Toyal's net economic benefit of noncompliance from delay in the Phase II expenditures to be $75,056. *Id.* at 57. His estimate of benefit from unpaid penalty through 2005 was $25,674. *Id.* at 57. Mr. Styzens stated that carrying the interest through the date of hearing would add some $30,000 or so more. *Id.* at 57. In summary, Mr. Styzens explained, the total of the addition of the individual penalty segments amounts to $316,440, his estimate of the economic benefit of noncompliance to Toyal to a reasonable degree of economic certainty. *Id.* at 58.

The People's counsel directed Mr. Styzens' attention to Mr. McClure's report, the second Navigant report for Toyal. Tr. 12/10/08 at 58, reviewing Resp. Exh. 23. Mr. Styzens commented that both reports done by Navigant estimated—as did he—around $300,000 in economic benefit for delayed and avoided costs for compliance. *Id.* at 59.

But, the Navigant reports used a risk-free borrowing rate, which Mr. Styzens found inappropriate. Tr. 12/10/08 at 59-61, reviewing Resp. Exh. 23. Mr. Styzens believes that according to literature he has reviewed over the last ten years in some of the litigation cases, the best interest rate to use is a company-specific rate, leading to his use of Toyal's bond rates. *Id.* at 60. He believes the risk-free rate "is not an appropriate measurement of time value of money because really the only entity that operates in a risk-free type of investment arena is the United States Government." *Id.*

Mr. Styzens said that Mr. McClure's report did not include a labor and maintenance factor in avoided costs, as did Mr. Styzens' estimate. Tr. 12/10/08 at 59-61, reviewing Resp. Exh.

[12] The 2001 Panhandle case is referred to at several points in the testimony and briefs. In that case, in which compliance had not been achieved at the time of decision, the Board fined the company for 10 years of excess nitrogen oxide emissions. The Board assessed an $850,000 penalty, and awarded the People $115,750 in attorney fees.

23. Mr. Styzens testified that such opportunity costs should be included in the economic benefit analysis:

> since Toyal did not have a fully operating good environmental control system in place for up to eight years . . . once the RCO became operational, Toyal would have to pull staff from other areas to operate and maintain that system. *Id.* at 61.

Mr. Styzens explained that information from Toyal on the RCO indicated that it had significant operating and maintenance (O & M) costs. *Id.* Shifting maintenance staff from one area of the company to another allows avoidance of costs incurred by a "competitor that was trying to be compliant [and who] would have to hire staff to run the pollution control system." *Id.*at 61-62.

Mr. Styzens' disagreed with that portion of Mr. McClure's report that found that "Toyal's economic benefit can be reduced by a theoretical foregone benefit." [13] Tr. 12/10/08 at 63, reviewing Resp. Exh. 23. Styzens testified that

> I have never in ten years seen a case where . . . a rebate was appropriate in the economic benefit analysis due to this negative economic benefit type of approach that some of the companies that are noncompliant use. There's always an economic advantage and a financial advantage to delaying and avoiding capital expenditures in pollution control equipment." *Id.*

Toyal's Cross Examination. In response to questions from Toyal's counsel, Mr. Styzens stated that, while he has exposure to the USEPA BEN model, he did not use it for his analysis in this case. Tr. 12/10/08 at 66-67. Mr. Styzens does not use the BEN model for analysis that moves past the settlement stage, since he believes the BEN model was designed to be a settlement tool. *Id.* at 67. Mr. Styzens agreed that very few cases go to the litigation stage, most being disposed of by settlement. *Id.* at 69.

Mr. Styzens stated that one of the federal guidance documents he has used and reviewed is entitled "Clarification of the Use of Appendix I of the Clean Air Act Stationary Source Civil Penalty Policy" prepared by USEPA and dated July 23, 1995, a document that may have been updated. Tr. 12/10/08 at 69-71, entered as Resp. Exh. 27 at 72. While agreeing that the federal guidance says that the BEN manual is to be used in calculating the benefit from delayed and avoided costs, Mr. Styzens indicated that he believed that this was to be used in the settlement process. *Id.* at 70-71. Mr. Styzens does not know specifically who Toyal's competitors are. *Id.* at 72-73.

Counsel directed Mr. Styzens attention to Mr. McClure's report and to the BEN Manual. Tr. 12/10/08 at 75-80, reviewing Resp. Exh. 22. Mr. Styzens stated that the BEN manual does

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[13] The "foregone benefit" is the cost savings that could have been achieved through earlier, full implementation of the solvent recovery system. This was not possible until 2003, when the solvent recovery system was tied into the RCO, installed in 1998. *See, e.g.* the testimony of Mr. Van Hoose, laid out *infra* at 23.

cover the concept of negative economic benefit. *Id.* at 77-79. But, he also pointed out that the BEN manual warns "to be wary of negative economic benefit results, exclamation mark." *Id.* at 80.

Mr. Styzens emphasized that federal guidance says to analyze situations on an individual, case by case basis, and to "level the financial playing field." Tr. 12/10/08 at 81, reviewing Resp. Exh. 27. Mr. Styzens then referenced Resp. Exh. 28, a USEPA Office of Enforcement and Compliance document, "Leveling the Financial Playing Field," reading into the record USEPA's statement that

> A cornerstone of EPA's civil penalty program is recapturing the economic benefit that the violator may have gained from illegal activity. Recapture helps level the economic playing field by preventing violators from obtaining an unfair financial advantage over their competitors who made the necessary expenditures for environmental compliance. Penalties also serve as incentives to protect the environment and public health. Finally, appropriate penalties help deter future violations for both the penalized entity and similarly situated regulatees. *Id.* at 83.

Mr. Styzens then stated that the document also spoke of the concept of "financial indifference" and

> creating an atmosphere where the corporation will spend the money and take the time to comply with environmental regulations versus spending the money on other investments. *Id.* at 84.

Toyal's counsel sought admission by Mr. Styzens that once a company "makes an investment [of $1 million] in pollution control equipment and that investment turns out not to be be required or was a wrong investment", that the company loses the money for alternate investment. Tr. 12/10/08 at 88-89. Mr. Styzens admitted that "once a company invests a million dollars in their corporation, they no longer can invest it a second time." *Id.* at 90. But he also remarked that a prudent company would

> hire consultants that either have performance bonds or warranties or they back up their work or they do good work so that companies spend a million dollars on equipment that works. And if it [the equipment] doesn't work, they get their money back by taking the time to protect themselves from that risk. *Id.* at 90.

In response to questions, Mr. Styzens stated that he has experience with performance bonds and guaranties and the ability to recover on both and on environmental pollution control expenditures, in part as a result of being an internal auditor for the State of Illinois for 25 years. *Id.* at 90-91.

Mr. Styzens stated that he only "briefly reviewed" "the backup information that is contained in the Navigant November 2005 and August 2008 report regarding the issue of solvent recovery." *Id.* at 91-92. He stated that he identified that the consultants were "attempting to identify over a million dollars in costs that they wanted to have rebate[d]

against the economic benefit calculation", and to "portray the case as some kind of a rebate-focused negative BEN type of approach." But he did not did not review the backup information in detail to determine the estimated gallons of solvent recovered and how costs were applied to it. *Id.* at 93-94.

The People's Re-direct Examination. Mr. Styzens again stated that he did not use the BEN model in estimating the economic benefit to Toyal. Tr. 12/10/08 at 95-96. He believed that Toyal should not get credit for the $1 million spent in an unsuccessful attempt at compliance. Mr. Styzens characterized Toyal's compliance-related activities as "somewhat erratic", in that

> They took two or three years, I believe in 1998, to finally come in with a permit application. They had to do a two-phase approach to an RCO, they looked at an RTO, they looked at a CRO. They seemed to have a kind of a stop-and-go and erratic approach to making management decisions on how to invest their capital in environmental compliance[.] [I]t took seven or eight years.
>
> So at that point I concluded . . . in the area of quickly achieving environmental compliance by making prompt and reasonable capital expenditures, that they were making non-prudent business decisions. *Id.* at 97.

Mr. Styzens stated that it appeared to him that if Toyal had made good business decisions in 1995 and 1996 to quickly come into compliance, that Toyal could have avoided other costs both as to environmental compliance and other areas of their business. *Id.* at 98-99. Mr. Styzens concluded that there should be no rebate, that there was no negative BEN, and that the economic benefit to Toyal was $316,440. *Id.* at 99. Mr. Styzens characterized Toyal's operations as "inefficient and defective", and that is why the deterrent effect of a penalty was necessary.

Toyal's Re-Cross Examination. Mr. Styzens acknowledged that he does not have the expertise from a technical or engineering point of view to judge the complexity of a pollution capture and control system, although he stated that he can glean some concepts of complexity from review of vendor invoices. Tr. 12/10/08 at 102. Mr. Styzens stated that he was aware of the fires and explosions that occurred at Toyal, but thought that they were related to the RCO system. *Id.* at 103. He took those factors into consideration in his economic benefit analysis only insofar as he thought they tended to show that Toyal was not using good-faith or prudent business practices. *Id.* at 104. He was not aware of the of the information exchanges in 2002 regarding the compliance demonstration for the RTO. *Id.* at 106-107.

Toyal's Barry Van Hoose

The People's Direct Examination. The People then presented the testimony of Toyal's Barry Van Hoose, who was questioned as an adverse witness by the People's counsel. Mr. Van Hoose testified that he has been the vice president of Toyal's operations since December 2001, before which he was Vice President of Technology. His job covers engineering, production,

technical, quality, planning and health and safety.[14] Tr. 12/10/08 at 109. Mr. Van Hoose testified that, between 1995 and 2003, Peter Ortleb was president.

Mr. Van Hoose agreed that he is familiar with the Subpart TT rules applicable to Toyal. Tr. 12/10/08 at 110. Currently, Toyal uses a CRO control device to control VOMs; the time from permit application to beginning of operation of the CRO was less than one year. *Id.* at 111-12. The CRO, which increases the efficiency of Toyal's operations, was put in to replace the RCO used to control VOM emissions in the 1990's, which caused outages that Toyal reported to IEPA. *Id.* at 112. Mr. Van Hoose agreed that Toyal was required to come into compliance with the Subpart TT rules by March 15, 1995, but that the RCO was not installed until 1998, and that Toyal did not come into compliance with the 81% control regulations until 2003. *Id.* at 113.

Van Hoose also agreed that when Toyal filed its CAAPP permit application in 1996 Toyal was not in compliance with applicable Subpart TT regulations, and that even after the 1998 RCO installation, Toyal cancelled the stack test that was to demonstrate Subpart TT compliance because Toyal knew that the RCO would not show compliance—particularly after the "pre-visit" with Kevin Mattison of IEPA. Tr. 12/10/08 at 114. Mr. Van Hoose admitted that most of the production equipment at Toyal, including those for paste and flake production, was not in compliance on April 18, 2001. *Id.* at 116-118, reviewing Resp. Exh. 17.

During the noncompliance period between March 15, 1995 and April 30, 2003, Mr. Van Hoose verified that Toyal spent money on capital projects beside the RCO, including some that expanded portions of its production capacity. Tr. 12/10/08 at 118-19. Mr. Van Hoose is aware that Toyal wants to offset credit for the solvent recovery system installed in 2003 against the economic benefit claimed by the People. *Id.* at 119. Toyal is owned by Toyal Aluminum KK, which is owned by Nippon Light Metals, a Japanese company. *Id.* Van Hoose explained that Toyal had a distillation unit in 1996 that was recovering solvent; in 2003 Toyal tied it into the RCO, which

> allowed [Toyal] to be able to bubble air into the tank, the clean tank, which was critical to remove the corrosive acids that were formed because of the oleic acid. And during the process with the heat, it double bonds and the oleic acid break[s] down." *Id.* at 120.

Van Hoose explained that there are two ways to get rid of the short-chain fatty acids—washing it out with water or bubble air up through it to vaporize it. Tr. 12/10/08 at 121. Van Hoose agreed that Toyal affiliate companies were operating the bubbling air system that the Joliet plant installed in 2003 as early as 1995, but that Toyal did not install that technology earlier because it "didn't want to have an unconnected source of emissions" that would result from the bubbles going through the solvent, which would carry the solvent up into the air. *Id.* at 121-22. Mr. Van Hoose did not know the amount of emissions that would have been emitted as a result of the process, but "figured" that it would be "substantial." *Id.* at 122-123.

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[14] Additional information concerning Mr. Van Hoose' background was elicited during his direct testimony for Toyal. *See, infra*, p. 17-18.

Toyal never applied to IEPA for a permit for a flare or other control for those emissions. Toyal did not try to get a permit for a simple flare during the 1997-2003 process because "the last thing on [the company's leaders' minds] was trying to hook up another unit or making—putting another control device in." Tr. 12/10/08 at 123. Instead, they were trying to comply and were trying to connect "all the different devices to the RCO at that time." Mr. Van Hoose admitted, as a matter of "hindsight", that nothing would have prevented Toyal from installing a flare in 1995 to increase the efficiency of the solvent recovery. *Id.* at 124. Toyal did not connect the solvent recovery system to the RCO until after 1998.

In reviewing portions of Toyal's 1996 CAAPP permit application with the People's counsel, Mr. Van Hoose agreed that documents identified the solvent distillation recovery unit as an emission unit in compliance with Subpart TT requirements. Tr. 12/10/08 at 124-130. Toyal did not decide to stop its operations because of failure to comply, nor did it apply for a variance or adjusted standard from the 35 Ill. Code 218.986(a) requirements. *Id.* at 130-131.

Toyal's Cross Examination. Mr. Van Hoose stated that if Toyal had been using air stripping in the solvent recovery unit, he would not have marked it in compliance with Subpart TT in the 1996 CAAPP application. Tr. 12/10/08 at 131-32. Mr. Van Hoose testified that Toyo KK affiliated facilities in Japan and France that did use air stripping do not have "capture-and-control" of VOMs. *Id.* at 132.

Mr. Van Hoose expressed his concerns about installing a flare at the facility to control the solvent emissions. Aluminum pigments and powders are inherently are highly explosive when aluminum powder dust clouds form; Toyal markets its products for rocket propellant. *Id.* at 132-33. Only a small amount of energy is needed to ignite aluminum dust (between two and four millijoules, which is a "spark that one might not even feel". *Id.* at 133. Since aluminum paste is highly reactive, static electricity causing fire is a big concern; Toyal has had a number of fires related to that. *Id.* Aluminum is amphoteric (*i.e.* capable of reacting chemically either as an acid or a base) so that another concern is contamination by moisture, acids or bases, with which aluminum reacts violently. Fighting an aluminum or metal fire with water causes formation of hydrogen gas, which itself creates additional difficulties. *Id.* at 133-34. Mr. Van Hoose stated that "putting an open flame in our plant is something we wouldn't even consider" because although it might meet regulations, it would not meet Toyal's criteria. *Id.* at 134.

Toyal's Witnesses

Toyal's Barry Van Hoose

Toyal's Direct Examination. Toyal called Mr. Van Hoose as its own first witness. Tr. 12/10/08 at 136. He has a Bachelor of Arts degree in biology from Glassboro State College in New Jersey and 34 years of work experience in the aluminum paste, pigments and powders industry. He began at Alcan in 1974, and worked for a competitor between 1978 and 1983. *Id.* at 138. Mr. Van Hoose returned as a technical manager for Alcan in New Jersey. *Id.* at 139.

As to the evolving corporate structure of the company, Mr. Van Hoose explained that in 1987, Alcan began a joint venture with Toyo Aluminum KK of Japan. Tr. 12/10/08 at 139. In

1996, the latter company bought the remaining 20 percent of the stock it had not yet acquired from Alcan and changed the company name to Toyal America, Inc. (an acronym of Toyo and aluminum). Toyal is incorporated in Delaware as a stand- alone, self-financing company. At the time of hearing, Toyal had 89 employees, down from 109 people at the beginning of 2008. Forty-eight of the employees are union members, and the remaining are salaried employees. Tr. 12/10/08 at 139-140.

Mr. Van Hoose explained that, as Vice President of operations, he has "engineering, including quality and maintenance, manufacturing, and Research and Development technical departments all reporting to him." Tr. 12/10/08 at 140. He again related that the Lockport plant primarily produces aluminum atomized powder, and aluminum paste and flake products. The aluminum powder can be used for refractory bricks, rocket propellant, and munitions. The aluminum paste and flake products are primarily used in the automotive industry for aluminum pigments. Aluminum flake and paste also is used for various industrial applications. Toyal uses mineral spirits to make aluminum paste and flake. *Id.* at 141.

Mr. Van Hoose stated that the aluminum paste and flake portion of the business is the subject of this complaint. Tr. 12/10/08 at 141-142. At the time of hearing, Toyal had two remaining competitors in the United States; of the three companies, Toyal is the smallest. The largest competitor-company is Silberline Manufacturing which has plants in Indiana and Pennsylvania, and the next largest is Eckart America which has a plant in Louisville, Kentucky. *Id.* at 142. Now-closed competitors were owned by U.S. Bronze, which used to have plants in New Jersey and in Quebec. *Id.* Toyo Aluminum KK has three other powder, paste, and flake operations in Japan, France and China. *Id.* at 143.

Mr. Van Hoose relayed that Toyal has been affected by the decline of the auto industry, as car paint orders have fallen. He expected Toyal to lose over $3 million in 2008. Tr. 12/10/08 at 143-144. As previously stated, in 2008, Toyal reduced its manpower by 20 people, including both hourly and salaried employees. During December 2008, Toyal was running its paste units at about 20 percent capacity, of which 10 percent was leftover orders that were postponed in November. *Id.* at 144. In 2008-2009, Mr. Van Hoose expected that the Lockport plant would be shut down between December 19, 2008 and January 2, 2009; normally, the plant is only closed for holidays. *Id.* at 144.

Mr. Van Hoose presented testimony supporting the introduction as an exhibit of the official audited financial statement for Toyal dated December 31, 2007. Resp. Exh. 2. Mr. Van Hoose said that the company's economic forecast for 2009 was that the plant would operate at about 60 percent capacity, similar to 2008 operations. Tr. 12/10/08 at 147-148.

Toyal had compiled and submitted to the Agency in May 2007 a history of the fires at Toyal since 1996. Tr. 12/10/08 at 148 and Resp. Exh. 7. Mr. Van Hoose stated that since December 2003, there have continued to be fires or explosions. In December, 2006, there was another fire in the CRO that Toyal operated in compliance with "a provisional permit" (later explained to be a provisional variance). *Id.* at 148, 150 and Resp. Exh. 4. Toyal also had an explosion in its atomizer collection area on August 26, 2008. *Id*. at 149.

Following the December 2006 explosion in the new CRO unit, Toyal immediately shut down paste and flake operations because they were operating without a CRO, which is not allowed under their permit. Tr. 12/10/08 at 150 and Resp. Exh. 7 (150). After receiving the conditions of the provisional variance, Toyal complied with the variance and passed the test after the CRO was repaired. *Id.* at 151, and Resp. Exh. 8.)

Mr. Van Hoose explained that Toyal made large expenditures taking steps to minimize or reduce fires. Tr. 12/10/08 at 152. Toyal installed a fire suppression and alarm system that cost just under $1 million. Toyal has also gone to an OHSAS 18001 management system for safety. Toyal has also improved environmental and quality management so management can "verify that [Toyal is] improving and [is] getting better and also [is] in compliance." *Id*. at 153. Toyal shuts down the plant for a week every year to train the employees to prevent accidents and minimize "incident as far as injuries or damage." *Id.* at 153. Mr. Van Hoose felt that Toyal had been partially successful using these efforts to keep the plant safe because during the small August 2008 explosion "the plan did what it was supposed to do. The building vented, [the area containing the explosion] was isolated, it was one area, no further damage." *Id.* at 154.

When fire or explosion occurs, Toyal pulls together all of the people from management, engineering, technical, production, safety, health and environment and uses them as the accident investigation team to determine the "root cause of these accidents". Tr. 12/10/08 at 154-155. Mr. Van Hoose stated that, after explosions, representatives of insurance companies and the federal Occupational Safety and Health Administration (OSHA) spend a lot of time at the plant. The incident investigation is "very, very time consuming and very, very expensive," requiring use of outside laboratories and safety consultant engineers." *Id.* at 155-157.

As to Toyal's required compliance with Subpart TT regulations, Mr. Van Hoose testified that the plant became aware of the rules' applicability sometime before their effective date of March 15, 1995. Tr. 12/10/08 at 157-158. Mr. Van Hoose again stated Toyal's initial belief that the rules did not apply, under the original, pre-Title V limit of 100 TPY of VOM emissions. But when Toyal reapplied, Mr. Van Hoose said Toyal discovered that the plant was above the new limit of potential-to-emit 25 ton limit of the updated Subpart TT limit. *Id.* at 157-158. Mr. Van Hoose stated that since Toyal was not really satisfied with the performance of environmental consultant Montgomery Watson, Toyal had chosen to work on the Title V application. *Id.* at 159.

Mr. Van Hoose said that part of the Title V permit is putting in a compliance schedule for those companies not in compliance. Toyal then selected Woodward-Clyde to help Toyal engineer emission controls because they were a large firm with a good reputation. Tr. 12/10/08 at 159. Woodward-Clyde recommended that Toyal put in an RCO and capture points and ductwork throughout the system to pull the VOMs into the RCO. The consultant helped Toyal select a vendor, buy the equipment, find a contractor and install it, as well as prepare a permit application for the installation. *Id.* at 160-61. Toyal received its permit from IEPA in June 1998, commenced construction on the RCO in September of 1998, and placed it in operation in December of 1998. *Id.* at 162-163.

Mr. Van Hoose stated that the IEPA notice of violations which gave rise to Counts I & II of the complaint were dated July 15, 1998. Tr.12/10/08 at 164. From the pre-stack test visit by Kevin Mattison of IEPA, Toyal became aware that Mr. Mattison was concerned with the hoods and measurement of temperature across the catalytic bed of the RCO because the RCO does not have a designated bed and it wasn't possible to measure both sides of the bed because of the different technology. *Id.* at 165. As a result of the number and nature of the IEPA concerns, Toyal cancelled the stack test and stopped working with Woodward-Clyde. *Id.* at 166. Toyal then began working with environmental consultant Chemstress. Either that company or Toyal's plant manager, Michael Moore, recommended that Toyal use a vacuum skid system. The system was purchased at a cost of over $1 million, but was never used. *Id.* at 167.

In December of 2001, Toyal changed key plant personnel. Toyal hired Dennis Debrodt as the engineering manager, moved Ray Malmgren from engineering manager into safety, health, and environmental management, (167), and placed Mr. Van Hoose in charge of plant management. Tr. 12/10/08 at167-168. In 2000, during his tenure as engineering manager, Mr. Malmgren recommended that Toyal use Admiral Engineering as its environmental consultant. Admiral's Steve Anderson developed compliance recommendations to Toyal. *Id*. at 168-169, and Exh. 7-8.

Mr. Van Hoose stated that the last step needed prior to compliance testing for the permanent total enclosure and compliance with the 81 percent overall VOM control requirements was for Toyal to connect the tank farm to the RCO. Tr.12/10/08 at 169. The solvent distillation tank was also connected to the solvent tank farm and sent to the RCO. *Id.* at 170.

It was at this point in time that Toyal was able to use air stripping to remove contaminants from solvent, allowing for its reuse. Tr. 12/10/08 at 170. Toyal uses oleic acid in its process as a lubricant. The air stripping removes the reactive, double-bonded oleic acid from the solvent, allowing "short chain acids to vaporize off." *Id.* Before the air stripping system was used, Toyal sent out used solvent as waste, which is burned for its heat value. Solvent disposal usually doesn't cost Toyal anything, as long as there are no contaminants. *Id.* at 171. Thus, solvent reuse saves Toyal the cost of buying brand new oil, rather than saving it disposal costs for used solvent. Mr. Van Hoose estimates Toyal lost about $1 million in new oil expenditures. *Id.* at 172.

Mr. Van Hoose said that the cost of the CRO that replaced the RTO was about $674,000. He deferred questions about installation of the CRO to Mr. Anderson. Tr. 12/10/08 at 172-173.

The People's Cross Examination. Mr. Van Hoose agreed that, although Toyal is a stand-alone company, that it is "owned eventually" by Toyo in Japan, but also restated that Toyal does its own financing, including by borrowing from banks. Tr. 12/10/08 at 174. He agreed that at the time the CAAPP permit application was filed, Toyal had a solvent recovery system that was in compliance with the regulations. *Id.* at 175. Again, Mr. Van Hoose knew that the air stripping operation technology existed "well before" it was installed at the Lockport plant, and that it was being used by "other Toyal entities". *Id.* at 175. Toyal never "sought a permit to discharge solvent vapors to the air of Illinois." *Id.* at 176. Mr. Van Hoose agrees that it is Toyal's obligation to determine what regulations will affect its operations and to comply with

those regulations, and that it was not IEPA's obligation to notify it of the updated Subpart TT rules effective March 15, 1995. But, Mr. Van Hoose also noted that this was a difficult thing for small companies to do and noted that although Toyal is part of a much larger overall Japanese organization, that Toyal is "like a dot at the end of . . .the overall company." *Id.* at 176-77.

Mr. Van Hoose stated that Toyal did not realize that the updated Subpart TT regulations' 81 percent VOM control would apply to its operations until February 27, 1995 as a result of communication by IEPA regarding the permit for one of its units, the FX unit. Tr. 12/10/08 at 178-179 and Comp. Exh.17. Mr. Van Hoose stated that it would be impossible to engineer and install compliance equipment in the two weeks between February 27 and the rules' March 15, 2008 effective date. *Id.* at 179. Moreover, Toyal was preparing a Title V permit application for timely submission and was doing additional testing for that. *Id.* Upon discovering that the need to be in compliance with Subpart TT requirements, Toyal tested, verified, and reported it was not in compliance. *Id.* at 180. When Toyal submitted its Title V permit application in February 1996, Mr. Van Hoose stated that Toyal also submitted a compliance schedule and was hoping for feedback from IEPA, but received nothing, surmising that IEPA was overwhelmed by the total number of pending Title V permit applications. *Id.*

Mr. Van Hoose agreed that in 1992 Toyal reported to IEPA that its VOM emissions had been 28 tons in 1990 and 33.6 tons in 1991. Tr. 12/10/08 at 182. So, Toyal "knew effectively" when the Subpart TT update was passed that controls were required for sources with 25 tons or more of VOM emissions. *Id.* Mr. Van Hoose agreed that Toyal knew which units were non-compliant when it filed its Title V permit application in February 1996. He further agreed that it was not until January 1997that Toyal retained an environmental consultant and made an internal request for approval for the capital expenditures to buy and install the RCO, and that it was not until May 1998 that a permit application for the RCO was submitted. *Id.* at 183-184 and Comp. Exh. 17. During that time, Mr. Van Hoose agreed, the plant continued to operate although it had been out of compliance between 1995 through May 1998. *Id.* at 184, 186.

On May 31, 1998, when Toyal submitted the permit application for the RCO to IEPA, Toyal had not yet found an equipment supplier. Tr. 12/10/08 at 187. At the end of 1998, Toyal sent a letter to Mr. Mattison of IEPA that explained why Toyal was unable to perform stack testing; Toyal made a another extension request four years later in November of 2002. *Id.* at 187,188. Mr. Van Hoose clarified that the solvent distillation system as it existed in 1996 did not require hook-up, and that all then-existing sources that had to be hooked up to the RCO (except the tank farm) could have been hooked up "without the solvent distillation system even existing". *Id.* at 188-189.

Mr. Van Hoose agreed that the $1 million centralized vacuum system (*i.e.* the vacuum skid condenser) was permitted by IEPA in 2001. Tr. 12/10/08 at 190-191. The system was intended to replace all of the then current vacuum pumps, all of which were regulated under Subpart TT, and to send all fumes to one main vacuum that would condense all of the fumes. *Id.* at 191-92. Mr. Van Hoose examined Toyal's April 18, 2001 construction permit, and identified which sources were to have been controlled by the never-purchased-or installed RTO, and which by the vacuum skid condenser. *Id.* at 193-197, 200-202 and Comp. Exh. 22.

Toyal's Re-direct Examination. Mr. Van Hoose clarified that if the solvent tank farm had been hooked up to the RTO, Toyal still would have to demonstrate permanent total enclosure (PTE) to satisfy stack test requirements. Tr. 12/10/08 at 203. He also stated that the exhaust from the plant's five or six existing vacuum systems had initially been directed into the air, and the plan was to replace them with a centralized vacuum system, as best discussed by Mr. Anderson. *Id.* at 204. Mr. Van Hoose agreed that the engineering assumptions in the Montgomery Watson Title V permit changed over time in light of additional work and testing sequentially done by Woodward-Clyde, ARI, and Admiral Engineering. *Id.*

The People's Re-cross Examination. Mr. Van Hoose agreed that Toyal had gotten a construction permit for the RTO which was never purchased, and that it had purchased a skid mounted condenser that was never used. He stated that the purchase of the vacuum condenser was "absolutely" a mistake. Tr. 12/10/08 at 205.

Toyal's Ray Malmgren

Toyal's Direct Examination. Mr. Malmgren joined Toyal in July of 2000 as the engineering manager. He has a degree in chemical engineering and in environmental science. He is certified with a 40-hour Hazwoper, in wastewater operations, and as a certified drinking water technician. Before working at Toyal, he worked at Sun Chemical Corporation as the operations manager of the fluorescence plant in the pigments section. Tr. 12/10/08 at 207. Before that, he worked in engineering, engineering management and operations management. *Id.* at 208.

Mr. Malmgren became Toyal's environmental, health and safety manager after there was a change in management. In that position, he became familiar with Toyal's efforts to comply with the Subpart TT regulations. Tr. 12/10/08 at 209. Mr. Malmgren testified that when Toyal's Michael Moore sent the letter to IEPA's Kevin Mattison on December 30, 1999, the management at Toyal "all thought [that IEPA's primary concern] was IEPA's dislike of the RCO type of equipment for capture and restructure of the air contaminants" and that obtaining an operating permit would be impossible. *Id.* at 209-10. Mr. Malmgren stated that conversation with Mr. Mattison corrected Mr. Moore's mis-impression about RCO equipment; Mr. Malmgren stated that IEPA doesn't " have a real problem with permitting this, it's the associated equipment feeding it that needed to be taken care of and engineered." *Id.* at 211. When Mr. Mattison returned to Toyal in 2002, Toyal had completed installing the CEMS that used a flame ionization detector (FID) under both the inlet and the outlet of the RTO unit. *Id.* at 211-13.

In September, 2002, Mr. Malmgren recommended and Toyal retained a new environmental consultant, Admiral Engineering. Tr. 12/10/08 at 213. Mr. Malmgren worked with Admiral's Steve Anderson as the consultant engineer. *Id.*

Concerning the vacuum skid system recommended by Woodward-Clyde that Toyal purchased but did not install, Mr. Malmgren stated his understanding of the purpose of the vacuum system was to contain and provide permanent total enclosure (PET) or some other method of "taking care of" fugitive emissions. Tr. 12/10/08 at 213-214. Mr. Malmgren stated that Mr. Anderson recommended that, to achieve and demonstrate compliance to IEPA through a

stack test, Toyal should apply for a FESOP, and not pursue its application for a Title V permit. *Id.* at 214-15.

Mr. Malmgren stated that Toyal applied for a construction permit to replace the RCO with the RTO in January 2001, which was then withdrawn and later granted in May 2001. Tr. 12/10/08 at 216. There are 120 sources of VOM at Toyal, which Toyal continued to work to capture and control and install PET. *Id.* at 217. During this time, Mr. Malmgren said that there was a change in "the original engineering estimates that were used in the Title V application and then in the application that gave rise to the May 2001 construction permit." *Id.* This was based on refinements of emissions data based on testing and other work done. Mr. Eric Jones of IEPA was the reviewer of Toyal's permit applications at the time, and Mr. Malmgren engaged with him in conversation and correspondence regarding Toyal's issues, including delays caused by explosion and fire. *Id.* at 217-219 and Resp. Exh. 9 and 10. This resulted in a March 8, 2002 construction permit extension. Id. at 220 and Resp. Exh. 11.

Mr. Malmgren confirmed that Toyal again sought extensions because the "remaining part of [Toyal's] expansion was behind schedule and in order for [Toyal] to achieve a permit, [it] needed to have all of the units operating." Toyal wanted to "get all of the units operational and feeding the RCO so that [Toyal] could indeed secure a permit that covered the entire operation." Tr. 12/10/08 at 221. Toyal again requested a permit modification on August 19, 2002, which IEPA granted in November 2002. *Id.* at 222 and Resp. Exh. 12, 13, 14.

Mr. Malmgren related that the last change Toyal made to the system that allowed Toyal to schedule the stack test was tying in the exhaust from the tank farm. 12/10/08 at 223-24. Mr. Malmgren said that Toyal retained the firm Clean Air to perform the stack test in April 2003, at which point Toyal achieved compliance. *Id.* at 224. Toyal then submitted its FESOP application, which resulted in FESOP permit issuance on November 25, 2003. *Id.* at 224-225.

Mr. Malmgren summarized the reasons why Toyal decided to replace the RCO unit with an RTO unit as follows. 12/10/08 at 225-226. The first original plan to move to an RTO was its belief that IEPA had difficulty accepting the existing RCO unit.

> Subsequently, in making the modifications and doing the engineering, we recognized that the RCO was usable if we properly controlled the emissions rates. In other words, the RCO is acting as a big vacuum cleaner and it was sucking -- literally sucking fumes up into it. And once we started to control those emissions at the sources, we began to realize that the RCO was totally usable.
>
> Unfortunately, the RCO had some operational difficulties. Because of its constant switching back and forth and because of intermittent loading to the RCO that it could not handle, it was shutting down at a pretty regular frequency and it required that I would notify the State on a regular basis and we were sending a lot of letters to the State indicating we had shutdowns.
>
> And it showed us at that point that that unit was definitely not advisable to keep long-term should we decide to expand our operations in the future.

> So we suffered from two problems, one, the unit was causing maintenance and breakdown issues and the unit was not big enough for any kind of future expansions. *Id.*

Mr. Malmgren stated that, aside from the original notice of violation in July 1998, Toyal has not received any other notices of violation, compliance inquiry letters, or complaints regarding air issues. Tr. 12/10/08 at 223-24. Mr. Malmgren assisted in requesting the provisional variance in December 2006 after the fire in the new CRO unit. After that fire, Toyal immediately shut down the CRO pursuant to restrictions in its FESOP operating permit. *Id.* at 226-227.

Mr. Malmgren was asked to explain "one of the representative capture modifications [needed] to control a source of emissions and direct the emissions to the RCO unit. Tr. 12/10/08 at 227. Mr. Malmgren noted that Toyal makes 400 unique products from two key raw materials: aluminum and mineral spirits. So, there are many different operational units in the plant. *Id.* One such is a screening of the slurry manufactured of aluminum and mineral spirits. Mr. Malmgren said that IEPA's Mr. Mattison was adamant about controlling the large number of the screeners used for the slurry. But no commercially-available equipment for the top of the screening unit as Toyal was using it that would provide permanent total enclosure to the top, so Toyal had to engineer, test, design, and manufacture its own system. *Id.* at 228. Mr. Malmgren characterized this as a large undertaking by Toyal because it had "no institutional references" to utilize, requiring in-house development, local manufacture to Toyal specifications, and repeated testings. This situation was representative of the efforts that resulted from Mr. Mattison's visit at the end of 1999 after which Toyal canceled the stack test. *Id.* at 228-229. Mr. Malmgren's direct testimony closed with a description of the physical setting of the Toyal plant. *Id.* at 229-230; *see, infra* at p. 4 for this description.

The People's Cross Examination. Mr. Malmgren repeated that Toyal had 129 VOM sources at the time of hearing. Tr. 12/11/08 at 5. While the RCO had been in use since July 2000, not all of the VOM emission sources had ever been connected to the RCO. *Id.* The RCO has had maintenance problems at least as long as Mr. Malmgren has worked at Toyal and, he opined, "prior to that there were maintenance issues, I'm sure." Under the FESOP, if the RCO shutdown exceeded 15 minutes, plant shutdown was required; if RCO shutdown exceeded two hours, notice to IEPA was required in addition to complete facility shutdown. *Id.* at 6-7. Prior to FESOP issuance, since the RCO "served as a means of ventilation for the operation," for safety reasons the safety manager would decide whether to shutdown the operation when the RCO was not operating. *Id.* at 7.

Mr. Malmgren again stated that the CRO was installed in July of 2005 to replace the RCO. The CRO and was purchased because, in addition to Toyal's belief that IEPA disfavored the RCO, the RCO caused "a lot of mechanical shutdowns, reports being written to the State, interruptions in production because many of the shutdowns caused exceedance of our permit as far as the timeline goes." Moreover, the RCO could not handle any more expansions of the facility. Tr. 12/11/08 at 8. Mr. Malmgren stated that at the time there was no specific discussion

of expansion, but that Toyal has a tremendous amount of available acreage, and the business always looked to the future and possible expansions. *Id.* at 9.

As to the CRO, Mr. Malmgren was involved with the engineering, design concept, and selection of the pollution control device, but he did not write down the information on the design nor submit it to Toyal in any way, nor was he involved in the process of receiving Toyal's approval for the capital required for the CRO. Tr. 2/11/08 at 13. To obtain corporate approval, the Lockport plant was required to submit a proposal including, engineering plans, proposed designs, estimates for equipment and an assessment of other alternatives. *Id.* at 14. Mr. Malmgren could not give an estimate of the time it took from the initial decision to switch from the RCO to the CRO and have that installed and operating, but suggested that Mr. Debrodt might be able to do so. *Id.* at 15.

Mr. Malmgren characterizes the CRO as a more efficient piece of equipment than the RCO in its gas use and destruction efficiency. Tr. 2/11/08 at 16. Mr. Malmgren stated that, "while the CRO had start-up pains, once these were corrected, the unit has virtually been running continuously unless we choose to shut it down ourselves or Mother Nature [intervenes]." *Id.* at 16. Mr. Malmgren verified that the Lockport plant is located in a non-attainment area for ozone, and that VOM contributes to ozone formation. Mr. Malmgren does not know if the area was non-attainment for ozone during the entire noncompliance time between 1995 and 2003, nor does he know if Toyal ever petitioned the Board for an adjusted standard for VOM. *Id.* at 16-17.

Toyal's Re-direct Examination. Regarding RCO unit shutdowns, Mr. Malmgren said these were primarily due to the RCO's overheating and shutting itself down. Tr. 12/11/08 at 17. The overheating was caused by a malfunction of "the units [sic] switching mechanisms back and forth" or the RCO overloaded because too many VOM emissions were directed at it and it had such strong draw that it was evaporating the solvent, which was the primary cause of the shutdowns. *Id.* at 18-19. After getting the FESOP many of the shutdowns were less than 15 minutes long. When the RCO shut down, it was because it would get too hot, shut down, cool off, and alert Toyal staff when it could be brought back online. But, Toyal had to determine the reasons the RCO shut down, which often included shutting off parts of the operation. *Id.* at 18-19. One specific problem was the "widely varying VOM contents being fed to the RCO unit from various batches." Overall, then, the RCO would shut down, Toyal staff would isolate the problem and adjust the process to bring the unit back online. Under the FESOP, the only difference was the need to report shutdowns. *Id.* at 20. When the CRO was constructed adjacent to the RCO it replaced, the capture ductwork system and PTE originally used with the RCO unit did not have to be redone, but were relocated from the RCO to the CRO. *Id.* at 21-22.

The People's Re-cross Examination. Mr. Malmgren stated that "it appears" that the RCO was too small to handle the required emissions when it was purchased. Tr. 12/11/08 at 23.

Toyal's Re-direct Examination. Mr. Malmgren repeated that Toyal successfully conducted a stack test and demonstrated compliance with the RCO unit, obtaining a FESOP permit. Tr. 12/11/08 at 23.

Toyal's Dennis Debrodt.

Toyal's Direct Examination. Dennis Debrodt has a mechanical engineering degree from Purdue University, and has worked in such positions for 34 years. He is currently engineering manager of Toyal. In that position, Mr. Debrodt oversees technical and maintenance staff whose overall duties are to operate the plant utilities, oversee maintenance, and perform "capital and expense projects for different projects, either environmental-, safety-, or production-oriented." Tr. 12/11/08 at 26. As to management of engineering projects at Toyal, if an engineering project is a "process project," Mr. Debrodt testified that Toyal staff will develop the project. However, if the project is too large and includes civil engineering or structural engineering, outside engineering firms and consultants are used to help execute the project. Based on his work experience for a number of identified other firms, Mr. Debrodt state his belief that this is normal for companies of Toyal's size. *Id.* at 26-27.

Mr. Debrodt originally worked at Toyal from 1989 until 1995, left and then returned in December of 2001 to his present position as engineering manager. Tr. 12/11/08 at 27-28. When he returned, he reviewed how Toyal had worked toward VOM emissions compliance for two reasons. First, he was in charge of keeping the RCO operational. And second, he was also trying to bring the plant into compliance. By the time Mr. Debrodt had returned, Toyal had stopped working with Woodward-Clyde. *Id.* at 28. Toyal had been working with Chemstress Engineering until Mr. Debrodt arrived, but he ceased because the projects Chemstress worked on were in their final phase of construction and he was unhappy with Chemstress' work. *Id.* at 28-29. Chemstress worked on the B Unit expansion, engineered a new set of ball mills, and were involved with the RCO improvement work. Chemstress also worked on the design and installation of the chiller vacuum system. *Id.* at 29.

Mr. Debrodt then provided a general description of Toyal's paste and flake manufacturing process. Tr. 12/11/08 at 29-31. During December of 2001, Mr. Debrodt recalled that the problems Toyal faced with respect to compliance were that the RCO was overheating and shutting down. He stated that Toyal's "main challenge" was that Toyal "had not identified a system or how to test the system for compliance" *Id.* at 31. Moreover, Mr. Debrodt identified additional source points that needed to be hooked up to the system, where facilities to do so were not in place. *Id.* at 32. When Mr. Debrodt started at Toyal, the company's primary consultants were ARI and Admiral Environmental. Mr. Debrodt had no opinion at the time as to whether to demonstrate system compliance through the capture portion of the Subpart TT rules, or the destruction efficiency portion. He concluded that "the destruction efficiency of the unit wasn't necessarily an issue . . . [because] [t]he real problem was the ability to capture and quantify what was being captured." *Id.* at 32-33. When Mr. Debrodt arrived, there was very little process data available in terms of VOM concentrations, airflow rates, or other data. Instead, Toyal relied on engineering estimates for permit applications. *Id.* at 33.

Soon after his return to Toyal, Mr. Debrodt investigated whether and what was needed to replace the RCO with an RTO. Tr. 12/11/08 at 35. Sometime in 2002, he determined he "did not need to modify the RTO." Toyal's work with ARI included installing a data acquisition system for the RCO and also to make the operation compliant. However, Mr. Debrodt felt

uncomfortable with the ARI's suggestions and looked for other consultants. *Id.* at 36. Toyal continued trying to control emissions points through total enclosure or venting them to the existing vacuum. Toyal then also employed Admiral Engineering and Clean Air Engineering; together all three companies decided that the best plan was to use a PTE hood for all source points. Mr. Debrodt stated that

> up to that point we didn't really fully understand how that worked or what was Involved in that and so we were able to develop that criteria and a plan for executing it that way . . . we could take each source point and design a hood that would meet that criteria . . . to maintain a vacuum of greater than .007 inches. *Id.* at 37-38.

Mr. Debrodt agreed with counsel's restatement that,

> on any equipment in any place there was an opportunity for emissions, those pieces had to be either enclosed totally or enclosed to meet the qualifications of PTE and connected to the control device. *Id*. at 38.

Mr. Debrodt described one of the projects that he performed to indicate the level of effort that was involved in the compliance pursuit. Tr. 12/11/08 at 38-40. This involved capturing of emissions from the process tanks in the tank farm, an area in which Chemstress had initially worked. In this area, six production units use twelve tanks and where there was "a fair amount of emissions generated at each of those points during the filter press drying steps." *Id.* at 39. The tanks, however, are API-type tanks with pressure vacuum relief devices, so connecting them to the RCO "would impose a vacuum that could be varying and could potentially pull the tanks down to far from a vacuum standpoint." *Id.* at 39. Mr. Debrodt determined that he could install a cyclonic tank that acted as a PTE hood itself that would vent each of the tanks within their prescribed working pressure ranges into the cyclonic tank which would act as the hood to connect to the RCO. This equipment then had to be made, sized, detailed, constructed and then installed, with all ductwork sized properly for flow and routed to the collection header for the RCO. *Id.* All of this was done towards the end of 2002 into 2003 prior to the 2003 compliance test. *Id.* at 40.

Regarding control of the emissions at the screeners, Mr. Debrodt noted that much of that work pre-dated his employment. Tr. 12/11/08 at 40. The hoods that had been developed were very complex, with multiple openings in 46 different screeners, which "were actually partially considered a PTE in one portion of the screener, but then in another portion where it discharged for oversizes in product were considered fugitive emissions points." *Id.* at 40. To determine why the RCO was overloaded and by how much, Toyal bought and installed a second flame ionization detector (FID) and flow monitoring instrumentation. *Id.* at 41. That allowed Toyal to start assessing whether the 39 hoods organically connected to the RCO and the "129 at the end that would be connected" could be captured and still allow the RCO unit to operate. *Id*. Mr. Debrodt then had the data to allow him to decide that it was not necessary to modify the unit. Initially, ARI worked on a data acquisition system, but later Mr. Debrodt designed his own system that collected more data. *Id.* at 42. Around this time, Mr. Debrodt determined that he was not comfortable with the vacuum chiller project, as there was much work on it still to be

done, it would be complex to operate, remote from the process area, and create logistical problems. *Id.* So, he determined to discontinue work on the vacuum chiller altogether. *Id.* at 43.

Mr. Debrodt stated that there are a total of nine vacuum pumps in the plant. Tr. 12/11/08 at 43. Mr. Malmgren knew that at least all of the vacuum pumps on the paste units and flake drier units would have been connected to the vacuum chiller, but he did not specific how many of the total nine would be connected. *Id.* If a vacuum system shuts down, production shuts down because each unit requires a vacuum to complete the batch process. *Id.* at 43-44. Neither the material on the screeners nor the paste that is dried into flakes can be dried without a vacuum. Among the concerns Mr. Debrodt had with the central vacuum system were potential unreliability. Additionally, he stated that meeting the requirements for PTE created "some kind of encumbrance" in Toyal's operations. *Id.* at 44-45. Additional revisions were necessary to the hood work and dampering systems; these included removing the dilution air from individual source points to better balance the system. *Id.* at 45.

Mr. Debrodt explained that more changes were necessary to allow Toyal to use the air stripping process for solvent recovery in the emissions collection system. Tr. 12/11/08 at 46. He designed connection points in the solvent distillation system (the clean oil tan, the surge tank, and an interface tank) and connected them to the RCO. Mr. Debrodt remarked that this process was "somewhat removed from the tank farm, which is also somewhat removed from the paste building, which is where all the main collection headers were." *Id.* at 46. Emissions from the clean air tank (where the air scrubbing system is) was ducted to the ductwork that was the last of the ductwork installed to pick up the tank farms, due to the physical layout of the plant. *Id.* at 47.

The cost of the initial round of work in 2002 (modifying the hoods, completing the data acquisition system, and putting in the second FID) was approximately $75,000. Tr. 12/11/08 at 48. Mr. Debrodt then created a second project "for $382,000 to basically design and execute the installation of the remainder of the hoods. . . tank farm system . . . design[] and construct[]ion and . . . complet[]ion of the rest of the source point connections, the vacuum pumps [etc]." *Id.*

Due to the "long-documented history" of fire and explosion at Toyal, everything designed in the paste operation area is designed to be explosion-proof under electrical classification standards. Tr. 12/11/08 at 48. Toyal works with many of the mineral spirits at temperatures between 90 degrees and 105 degrees Fahrenheit, "which is very close to their flash point and so [the engineer has] to be very careful in the design of any of the process equipment or connections to that process equipment." *Id.* at 48-49. Any proposed change to design of process equipment or connections to it adds complexity to the project, and requires review by other Toyal staff, including production managers and plant operators for issues related both to product quality and safety. *Id.* at 49.

In 2001, Toyal was also under increasing pressure by its insurance company and local fire department "to implement improvements to all of [the] fire suppression systems in the paste operation." Tr. 12/11/08 at 50. So Toyal installed a fire suppression system for the paste units, "a fairly large project" that "involved nine different systems that had to have suppression systems [and associated controls] designed for them." *Id.* Toyal also connected its existing fire suppression and alarm systems to a centralized alarm system that went to the fire department. *Id.*

at 50-51. All of this work also had to be coordinated with the emissions capture system, particularly when the monitoring devices are put into the equipment to detect high heat levels. *Id.* at 51.

Mr. Debrodt determined that the RCO had adequate capacity to handle Toyal's operations once the system was properly balanced, airflows were modified, and enclosures made. Tr. 12/11/08 at 51. This opinion was confirmed when Toyal conducted a "stabbing" test. *Id*. Throughout this work, Mr. Debrodt continued to consult with IEPA's Mr. Mattison, who came to the plant for a pre-stack-test visit. Mr. Mattison agreed that Toyal was "on the right track", and gave insight into source points and suggested modifications that Toyal incorporated prior to the stack test whose results let to the issuance of the FESOP. *Id.* at 52.

The People's Cross-Examination. When Mr. Debrodt rejoined Toyal in 2001, there was ongoing a "B Unit expansion", with a capital cost between $5 and 6 million. Tr. 12/11/08 at 54. Mr. Debrodt again confirmed that before he came onboard in 2001, there were 39 hoods. By the time he arrived, 28 more had been added and in the Phase II, during 2002-2003, more hoods were installed until the total number was 129. Tr. 12/11/08 at 54-55. Mr. Debrodt said that, while capturing emissions is a standard part of chemical processing and related engineering, meeting the PTE criteria "was a little bit more of an issue because . . . there's very specific criteria for that that has to be met." *Id.* at 56. Mr. Debrodt reminded that when the original 39 hoods were installed, Toyal was "pulling a tremendous amount of VOM off [its processing units] and that was creating overloading problems on [the] RCO." *Id.* at 56. Controlling those VOM emissions in a way that met the PTE criteria was "mostly engineering work . . . as opposed to technology itself". *Id.* at 56-57. Mr. Debrodt confirmed that the technology used to control emissions (including the main header of the vacuum and collection equipment, the fume hoods, and vacuum systems) were all available in the early 1990s. *Id.* at 57. But, Mr. Debrodt also testified that he would not have been able to complete the installation of the control equipment faster if the plant had been shut down, because having the plant operating was for testing of flow and loading to determine whether equipment sizing was adequate. *Id*. at 58. Measurement of emissions and flow did not increase fire concerns; these increase during equipment installation and operation. *Id.* at 59.

Toyal's Redirect Examination. When asked whether a "standard fume hood" would quality as a PTE, Mr. Debrodt explained that there is no "standard hood" to meet PTE criteria because they must be custom fit to the specific equipment. Tr. 12/11/08 at 59. Toyal's considerations included space constraints and process piping running through the middle of the hood to get the product to the screener. *Id.* at 60.

Admiral Engineering's Steve Anderson

Toyal's Direct Examination. Mr. Steve Anderson has worked for Admiral Environmental Services, Inc., as an environmental engineer for 18 years. Tr. 12/11/08 at 61 and Resp. Exp. 16. He is licensed in Illinois as a professional engineer and is a hazardous material manager at the master (the highest) level. *Id.* at 63. Prior to Admiral, Mr. Anderson worked as environmental and safety compliance manager for the Bruning Division of AM International, and prior to that worked for Vulcan Materials, previously owned by BASF Wyandotte. *Id.* at 62.

Admiral has been in the business of environmental consulting since 1971 in the metropolitan Chicago area. Tr. 12/11/08 at 63. Admiral has around 180 to 200 clients every year. Many of the clients fall into the industrial manufacturing codes between 20 and 40, "which are the traditional manufacturing codes" (*e.g.* fabricated metal industries, food industries, chemical industries, paper product industries, printers, coders, etc.). *Id.* at 64.

Mr. Anderson is quite familiar with the Board's VOM rules. He has been directly responsible for the Title V permit applications completed by Admiral's clients since applications were first due in 1995. Tr. 12/11/08 at 64-65. Mr. Anderson has been involved with complex FESOP permit applications, and has done a lot of work with clients with compliance issues such as recordkeeping. *Id.* Mr. Anderson testified that at the beginning stages of early stages of Title V permitting process he didn't think that any of Admiral's clients "could say that they were in total compliance with the regulations . . . It was very common to have a noncompliance issue back in the '95-'96 time frame." *Id.* at 65. Title V permits frequently had changes made to them as the Agency became better acquainted with the facilities and as the rules became better understood during "a learning process for everybody involved." *Id.* at 65-66.

Mr. Anderson made his first visit to Toyal in September 2000, after being contacted by Ray Malmgren. Tr. 12/11/08 at 66. Mr. Anderson had been in a lot of different facilities and environments. But, he testified, the Toyal plant "was unique in the number of emission sources they had" and also in the "regulations requirements." Mr. Anderson characterized Subpart TT as a "catchall regulation" that could involve numerous sources. *Id.* at 66-67. Mr. Anderson stated that Toyal staff told him that the oxidizer was equipment the IEPA "disliked","didn't accept", and "didn't want", a stance that Mr. Anderson said was "unusual for the EPA to take." *Id.* at 67. Mr. Anderson stated that

> It took me a while to figure out what the processes were, how they worked, how they could interconnect between each other. It was a very complicated process and it was going to be very complicated to show compliance with the regulations." *Id.* at 67.

When Mr. Anderson started working with Toyal, he thought that the basic issue between Toyal and the Attorney General's office was concern with Toyal's failure to demonstrate the 81 percent control over VOM emissions, and its exceedance of the Subpart TT emission standards in the paste and flake production area; those areas that make the plant unusual. Tr. 12/11/08 at 68. Mr. Anderson stated that there are over 200 VOM emissions units at the Lockport plant, of which 129 are tied to the "afterburner or control device." *Id.* at 69. Emissions from some number of units were going to be fugitive emissions, and other devises were to be closed to become non-emission sources.

When asked whether the Lockport plant was a "batch or continuous processing operation," Mr. Anderson replied that "that became a big issue". Tr. 12/11/08 at 69. The plant has many batches that can be operating at the same time, but all or none of the batch units could be operating at any one time. This made the approach to compliance testing difficult. Mr.

Anderson felt that since each batch process makes multiple product types, to demonstrate compliance

> you have to be at maximum capacity, how are you going to tell if you're at maximum capacity, what products are your going to be doing, can you have all nine operations going at the same time . . .[and] [w]hat is exactly going to be needed to demonstrate compliance here. *Id.* at 70.

Additional challenges are posed because the processing times vary for batches and t the VOM emission rates can vary a lot during the batches. A major problem was the lack of process data available. *Id*. at 71. Stack testing by ARI was infeasible, due to the need to "build temporary total enclosures around everything," and the fact that some emission units were going to be changed. *Id.* at 72-73. To assemble data, Toyal had to go through each process and identify emission points and then the maximum airflow rates of those pieces of equipment. Using that information plus the maximum VOM concentration in the flow rates, Toyal could estimate "what the actual pounds of emissions were either on an hourly basis or a daily or yearly basis." *Id.* at 73.

Originally, Toyal thought the company would need to submit a CAAPP application because their emissions were going to be more than 25 TPY. But later, Toyal determined what was going on in the plant, and realized that thecompany could put in a FESOP application. Tr. 2/11/08 at 74. On November 1, 2000, Mr. Anderson and Toyal met with IEPA. Toyal asked "to roll . . . into one construction permit" all of its ongoing projects and current understandings about them. *Id.* at 75. Mr. Anderson wanted the permit to include

> the expansion project [Toyal was] doing, . . . the modifications needed to show compliance, . . . [Toyal's] initial estimates that the RCO was undersized as far as flow rates so, it was max'd out, [so Toyal] didn't have a full understanding at that time of how much was dilution air versus how much was process air going to the RCO unit [because Toyal] would later find out those numbers. *Id.* at 75.

IEPA gave its approval, and Toyal submitted the construction application in January 2001 for the modified sources, installation of the replacement of the control device, and the installation of the vacuum chiller. Tr. 2/11/08 at 76.

The construction permit application was submitted in January 2001 and Toyal called IEPA reviewer Eric Jones several times to ask if he had questions. In April 2001 he denied the permit because "it was missing some minor information," which Toyal subsequently provided. Tr. 12/11/08 at 76-77. Mr. Harish Desai and Mr. Jones of IEPA also came out for a site visit in May before issuing the construction permit May 30, 2001. *Id.* at 77 and Resp. Exh. 17. That permit showed some units controlled by the vacuum skid condenser and all of them controlled by the "replacement oxidizer". *Id.* at 78.

After reviewing Toyal's emissions sources and control options, Mr. Anderson advised Toyal that if it could exhaust the vacuum skid condenser to the RTO, they would emit fewer than 25 tons and would still be able to use a FESOP rather than the CAAPP.

Tr. 12/11/08 at 80. As to restrictions on fugitive emissions that don't have to be controlled under Subpart TT, Mr. Anderson stated that "emissions units can have up to 2.5 TPY of emissions from a single unit as long as [the facility doesn't] go over 5 tons a year overall for all the sources that are subject to Subpart TT. Documenting the fugitive emissions "is a big issue". Tr. at 80-81. Mr. Anderson and Toyal sought upfront IEPA approval to apply an emission factor that Toyal would itself produce, since there were no emission factors available from USEPA or other published sources.

Mr. Anderson measured all the square foot openings of the fugitive VOM sources to determine an emissions factor. Tr. 12/11/08 at 81. Toyal's Research and Development department measured how much VOM came off of several beakers of their different solvents over a period of time," which resulted in a pound per hour per square foot area emission factor that applied to all fugitive emissions sources. *Id.* at 81-82. Mr. Jones requested that Mr. Anderson discuss this estimate with IEPA's Mr. Mattison, which he did on several occasions, along with other compliance issues at this facility; this was the highest level of interaction with IEPA that Mr. Anderson has ever been involved in for a permit. *Id.* at 82.

For these reasons, the construction permit application was based on engineering estimates because there were no measurements available at that time. Tr. 12/11/08 at 83. Mr. Anderson recommended that Toyal first determine what the worst case emissions would be. To estimate that, they had to get the saturation rate for the solvent Toyal was using from Chemstress. Using that number, they estimated the airflows and found that a lot of emissions units had "a lot of dilution air," which seemed unnecessary to Mr. Anderson. *Id.* at 83. So he directed Toyal to work with Chemstress to design or modify the emission units. At that time, Toyal had already purchased the skid van unit recommended by Chemstress. *Id.* at 84. In response to a question about when Toyal was able to move away from use of engineering estimates due to the availability of engineering data, Mr. Anderson noted that Toyal needed to be able to adjust the airflow rates, so a part of the construction permit was installing a valve system into each emission point "so that [Toyal] could adjust how much [air] was being drawn off from each of [the emission] units. Id. at 84-85. It was only after Dennis Debrodt installed the FID on the inlet to the oxidizer that Toyal able to "get useful data that would describe what's actually going on in the different emission units." *Id.* at 85.

Mr. Anderson testified as to the differences between a PTE, which are required to demonstrate the capture efficiency for Subpart TT, and a TTE. A PTE is a permanent device installed to capture the total emissions from a particular unit. Tr. 12/11/08 at 85. The PTE must meet certain standards and is allowed to have a particular number of "natural draft openings," which must be a certain distance away from the emission source. A PTE also requires a certain flow rate. *Id.* at 85-86. A TTE "is used when you cannot capture all of the emissions from a source." These are unusual because they require a temporary device to be built around the emission unit and they have similar but different restrictions to a PTE. Certification of a temporary total enclosure is complicated, as Mr. Mattison of IEPA is "really the only one that understands fully what goes on." *Id.* at 86-87. A temporary total enclosure is required to test exhaust rates; TTEs are designed to simulate the condition of what fugitive emissions would be from the source being tested. ARI estimated that it would take the building of temporary total

enclosures, 15 days worth of testing time over and $100,000 to create a compliance test, which Mr. Anderson found to be a reasonable estimate. Id. at 87-88.

Mr. Anderson air permits issued to Toyal competitors (obtained through Freedom of Information Act requests) to see how the competitors captured emissions. This was of no avail. The Silberline facilities were located in VOM attainment areas, so they did not have VOM controls. Tr. 12/11/08 at 88-89. While another competitor's facility was located in New Jersey in a non-attainment VOM area, Toyal learned that facility was in violation and eventually shut down without VOM controls. Looking to other facilities is a standard procedure for an engineering consultant. *Id.* at 89-90.

After that, Mr. Anderson recommended that Toyal either install PTE or seek relief from the regulations. Tr. 12/11/08 at 90. Toyal, Mr. Anderson, and Chemstress focused on large emissions points and Mr. Anderson emphasized that they would need to get relief if they could not control each point. Screeners were a particular challenge because it is difficult to permanently and totally enclose them "and still allow the operators to do what they needed to do." *Id*. at 91. This was also true for the filter presses; each of the operations has a filter press. A filter press needs a lot of air to push materials through leaf filters, and that air has a high VOC concentration which poses a "major hurdle" for control. Toyal's filter presses were vented to the tank farm, and the tank farm was not tied into a control device. *Id.* Because those emissions would exceed five TPY, Mr. Anderson and Toyal told Chemstress if they could not control the blowdown from the filter presses, compliance with subpart TT could not be demonstrated. Mr. Anderson described the process as identifying "drop-dead type conditions. If [Toyal] can't control these, then [Toyal] can't demonstrate compliance." *Id.* at 92.

By the time Dennis Debrodt arrived in 2002, the work with Chemstress was winding down and Toyal was starting the work for which it had been given the May 31, 2001 construction permit. Tr. 12/11/08 at 92. Worrying about the lapse of "the six-month time window for the construction permit," Mr. Anderson stressed to Toyal that if they came upon an unattainable condition in the construction permit, they should let him know so he could approach IEPA and discuss the issue. *Id.* at 93. (Admiral was not involved in the actual design of the PTEs.) At Toyal's request, Mr. Anderson ended up asking IEPA for the permit extension, which were the result of "several issues going on that prevented [Toyal] from providing the full support [from staff to focus on compliance issues] that they thought they could provide and that had to do with the fires they had." *Id.* at 93-94. Mr. Anderson contacted IEPA's Mr. Jones, who requested additional information that Toyal provided in February 2002. *Id.* at 94, and Resp. Exh. 9, 10. IEPA issued the requested revised construction permit. *Id.* at 94-95, and Resp. Exh. 11.

Mr. Anderson related that, because "the tough [compliance issues] to tackle were left toward the end," Toyal needed a second extension. Tr. 12/11/08 at 95. Mr. Jones "expressed his concern that [IEPA] couldn't go on forever doing these extensions." *Id.* at 96. Toyal and Mr. Anderson responded that they "could outline exactly what was going on . . . and explain to him exactly what had happened and what [they thought would] happen in the future." They did this, through additional information submitted to Mr. Jones. *Id.* at 96, and Resp. Exh. 13. IEPA issued the second construction permit extension November 18, 2002. *Id.* at 96-97, and Resp. Exh. 14.

Because of the "unusual engineering" involved in installing the "required capture" so that Toyal could conduct a stack test, Toyal met with IEPA's Mr. Mattison. Tr. 12/11/08 at 97. Mr. Anderson explained that he

> knew that we needed to get [Mr. Mattison] on board ahead of the stack testing schedule just so he would buy off on . . . the myriad of issues that [Mr. Mattison] had to use his discretion on how to go forth and do that. *Id.*

One of those issues is how the stack testing company should be directed in conducting their tests and reporting emissions. "[U]ltimately, Kevin [Mattison] was invited in, looked at what [Toyal] had, gave them a thumbs up on it and the stack test was scheduled and performed." *Id.* at 98.

Toyal passed the stack test. But, the stack test results both did and did not meet with Toyal's emissions projections. Tr. 12/11/08 at 98. Before passing the stack test in 2003, Toyal had advised IEPA that the RCO did not need to be replaced by an RTO. *Id.* In the FESOP application, Toyal had "said that the control device was going to operate at a 95 percent destruction efficiency and that the maximum VOM concentration would be at the saturation level which happened to be 4500 parts per million in the air stream." *Id.* at 98-99. The stack test revealed that in fact the destruction efficiency was 93.7 percent, but that the intake of the RCO was only 2500 to 3000 parts per million, which meant that it was not at saturation level. Thus, the pounds-per-hour did not exceed what was in the permit application. *Id.* at 99.

Mr. Anderson informed Mr. Jones of how the FESOP operating permit application would be different than the construction permit application because of the above differences in the stack test results. He also advised that Toyal would not be using the vacuum skid unit. Tr. 12/11/08 at 99-100. IEPA granted the FESOP on November 25, 2003. *Id.* at 100, and Resp. Exh. 19.

Toyal's 2003 FESOP application makes a provision for RCO malfunction and breakdown. Tr. 12/11/08 at 102. Mr. Anderson proved to Mr. Jones that there were safety concerns that required the permit to allow for such breakdowns. Any emissions resulting from a malfunction and breakdown are covered in the paste and flake emission allowances in the permit. *Id.* When the RCO malfunctions, Toyal can shut it down and have emissions up to a certain point, after which Toyal is in violation of their permit. The shutdown emissions must be reported to IEPA. *Id.* at 103.

In June, 2005, Toyal was granted a construction permit to replace the RCO with a CRO, as well as replacement of other emission units. Tr. 12/11/08 at 104, and Resp. Exh. 19. Once the CRO replaced the RCO, another stack test was done by Clean Air Engineering, which had satisfactory results. Toyal then applied to IEPA to incorporate the conditions of the construction permit into the FESOP. *Id.* at 104. At the time of Mr. Anderson's testimony, Toyal's FESOP was up for renewal, and a renewal request was under review by IEPA. IEPA had issued a draft FESOP renewal, and sent it out for public comments. *Id.* at 105.

Regarding the plans for the vacuum skid in 2001, Mr. Anderson stated that the vacuum skid included a condenser. Tr. 12/11/08 at 104-106. This could be considered a control device.

One of the emission data types that Toyal had during initial permitting was from 3 vacuum pumps. One had high emission, while the others were low. *Id.* at 106. If all the vacuum pumps operated at the worst case emission level, Toyal would require controls additional to that in condenser, which is why Toyal was advised to think about putting the vacuum pump skid exhaust to the oxidizer. *Id.*

Asked to assess the competence of some of the outside sources Toyal had retained, Mr. Anderson stated that ARI and Clean Air Engineering "are easily one (sic) of the foremost stack testing companies in Illinois. [Admiral uses] them all the time." Tr. 12/11/08 at 107. Mr. Anderson's first encounter with Chemstress was during his work with Toyal, and "they seemed to be competent, at least the engineer that was involved in the Toyal facility." *Id.* Both Woodward-Clyde and Montgomery Watson (now bought out by URS or another company) were both well-known, nationwide consulting firms specializing in environmental consulting and Admiral's competitors for Title V permit application work. *Id.* at 108. Mr. Anderson believes that it was reasonable for Toyal to do the process engineering internally for the capture system improvements and installation of the PTE because "Toyal people knew best their facility, the hazards involved [with] their facility and ultimately how to comply or how to do the things that were needed to be done to show compliance." *Id.* at 108-109.

The People's Cross Examination. Mr. Anderson reiterated that he was not hired as a design engineer, but as a consultant on how to come into compliance with environmental regulations. Tr. 12/11/08 at 111. The decision of whether Toyal used its existing RCO or changed to an RTO was up to Toyal. *Id.* Turning to the 2001 construction permit for the RTO and vacuum skid condenser, Mr. Anderson read the units which were to be controlled by the vacuum skid condenser and the control devise. *Id.* at 112-114, reviewing Resp. Exh. 17. Mr. Anderson stated his inability at that time to correlate that permit with the CAAPP permit. *Id.* at 115-116.

Mr. Anderson agreed that 35 Ill. Adm. Code 218.986(a) did not by its terms require a FESOP permit, as opposed to a CAAPP permit. In order to obtain a FESOP, a source must prove that it emits less than 25 TPY. Tr. 12/11/08 at 119. As part of the FESOP application, an applicant must name all sources, even those that would be eligible for a state exemption. *Id.* at 121. When Toyal applied for the construction permit in January 2001, the RTO had not been purchased. *Id.* at 122. Construction permits require that compliance testing be done within 180 days. The two extensions Toyal asked for on the construction permit were not to delay start of construction, but to delay when compliance test needed to be completed. *Id.* at 122-123.

Mr. Anderson explained that

> You take out the innards of an RCO and put in something different and it makes it an RTO. So . . . basically the shell is there, but you take out the innards, you put different innards and then it becomes an RTO. Tr. 12/11/08 at 123.

At the time of the requested extensions, the RTO had not been purchased. *Id.* at 123-124. Toyal did purchase, but never installed, the vacuum skid condenser. When Toyal finally complied with 35 Ill. Adm. Code Section 218.986, Mr. Anderson agreed that Toyal "did so with the same

RCO unit that it had installed in 1998." *Id.* at 124. "The emissions from the units that were to be controlled by the skid condenser were routed to the [RCO]." *Id.* at 124-125.

Toyal's Re-direct Examination. Mr. Anderson stated that the FESOP emissions limit has now been raised to 100 tons. Tr. 12/11/08 at 125. Mr. Anderson believes that all of the improvements to the capture and control systems are necessary to demonstrate compliance with the operating rule of reducing emissions by 81 percent. *Id.* at 126. Mr. Anderson believes that the PTEs are needed to demonstrate compliance due to the problems of a stack testing company's installation of TTEs. All of Toyal's efforts to know the flow rates, loadings, and reliability would be necessary even if Toyal were to properly size and order the "new innards" or RTO. *Id.* at 127-128. Mr. Anderson deferred to Mr. Debrodt as the better person to answer the question of whether the same information allowed Toyal to determine to stay with the RCO, but stated that was his understanding. Mr. Anderson's answer was similar to a similar question about Toyal's choice of the existing system over the single vacuum chiller system. Mr. Jones asked for and Toyal submitted the appropriate forms to show changes being made to the construction permit, including decision not to install the vacuum skid system or RTO. A revised construction permit was never issued except for the extension of the testing deadlines. But, the changes were incorporated into the FESOP. *Id.* at 128.

Navigant Consulting's Christopher McClure

Christopher McClure's Economic Benefit Analysis: Respondent's Exhibit 222 A-B. Respondent Toyal's witness for economic analysis issues was Christopher McClure. Respondent's Exhibit 21 (Resp. Ex. 21) was his resume and Respondent's Exhibit 22 A and B (Resp. Exh. 22 A-B) was his August 20, 2008 2-volume economic analysis.

Christopher McClure has worked since 2004 for Navigant Consulting as director of disputes and investigations, focusing on a variety of forensic accounting investigations and client assistance with different types of litigation. Tr. 12/11/08 at 130 and Resp. Exh. 21. He has a Bachelor of Science degree in Business Administration from Trinity University, a Masters in Business Administration from Kellogg School at Northwestern University. *Id.* at 131. Mr. McClure is a Certified Public Accountant and Certified Fraud Examiner. Previous employers included LECQ, and international consulting firm, and Arthur Anderson.

Navigant Consulting is an international firm that works in a variety of industries and has worked on economic benefit (or BEN) cases, as has Mr. McClure personally. In "a couple different cases where he has been responsible for calculating the amount of economic benefit that a client might see as part of the penalty from USEPA." Tr. 12/11/08 at 132.

Respondent's Exh. 22A & 22B does not contain a succinct summary, as did Mr. Styzens' document. The only summary of Mr. McClure's work is that contained in Respondent's Exhibit 24. This is the December 1, 2008 revised analysis that sought to offset the economic benefits Toyal received from non-compliance with the capital costs $1.056 million expended for the unused vacuum chiller. This revised analysis was admitted as an offer of proof, but the Board rejected for consideration earlier in this

opinion. *See supra,* pp. 14-15. The testimony below alludes to some of Mr. McClure's findings.

Toyal's Direct Examination.

Mr. McClure stated that his analysis of the potential economic penalty that Toyal might face consists of a few major components, as specifically outlined in the USEPA's guidance regarding how to calculate an economic benefit penalty. Tr. 12/11/08 at 132. He remarked USEPA's "BEN user manual primarily specifically gives guidance to a practitioner as to how to calculate an economic benefit penalty." *Id.* at 133. The analysis consists of two main components. The first is the benefit of delayed capital expenditures where "the company was able to essentially hold onto their funds for a period of time and would therefore enjoy an economic benefit retaining those funds for that period." *Id.* at 134. The second is the avoided monthly costs that result from operating the compliance system during the time in which the company was out of compliance. *Id.* Mr. McClure obtained the necessary information for his analysis from Toyal personnel, but the methodology comes directly from the USEPA BEN Manual. *Id.* at 135.

Mr. McClure, in response to a question as to whether he agreed with IEPA's Mr. Styzens' report, said that he did not, finding it to be incomplete. Tr. 12/11/08 at 135. Mr. McClure finds "generally correct" Mr. Styzens' report concerning delayed capital expenditures and portions of the avoided costs, and finds "somewhat correct" some of Mr. Styzens' methodology. Mr. McClure's major concerns and the issues he takes with Mr. Styzens' report concern the failure

> to consider other aspects of the methodology or the approach that would potentially reduce Toyal's economic benefit penalty.
>
> And there are other components and other considerations that are very specifically outlined in the [US]EPA's BEN user manual that direct the professional who's conducting the analysis to consider the specific facts and circumstances of the case to see if these certain issues are present and I find that Mr. Styzens' report falls short of doing that. *Id.* at 136.

Mr. McClure reviewed the documents on which Mr. Styzens testified he relied. Tr. 12/11/08 at 137. Mr. Styzens' believes that Mr. Styzens' reliance on the various documents did not support his assertions and conditions regarding adjustments to the economic benefit for foregone costs. *Id.* Instead, Mr. McClure states these documents refer back to the BEN manual's statements that the professional should "consider the fact that when a company installs a compliance system, there's a potential that that compliance system could also generate some process efficiencies such as improved by-product recovery." *Id.* at 138.

Mr. McClure provided sponsoring testimony for his August 20, 2008 analysis of the potential economic benefit penalty that Toyal would experience, and the two ring binders containing supporting documents for his analysis. Tr. 12/11/08 at 139-140 and Resp. Exh. 22, 22A (including a tabbed copy of the BEN Manual) and 22B. Mr. McClure cited to the BEN

Manual's discussion regarding annual recurring costs that "the recurring costs may be negative if compliance increases efficiency." *Id.* at 141 and Resp. Exh. 22A, BEN Manual at p. 3-11. Citing to another page of the BEN Manual, Mr. McClure stated that the manual gives specific direction to the practitioner to consider a fact pattern in which the violator comes into compliance and finds that it is saving money due to installation of new technology. *Id.* at 142 and Resp. Exh. 22A, BEN Manual at p.4-6.

Mr. McClure took into consideration Toyal's delayed capital expenditures and avoided costs. Tr. 12/11/08 at 142. Toyal discovered that the compliance system had the specific side effect of increasing the reliability of Toyal's recovery of solvents, which resulted in a cost savings since Toyal need not purchase as much solvent. In proving this to Mr. McClure, Toyal was "able to provide some very specific data regarding their recapture and also the pricing of the solvents and we were able to include in our analysis an estimate of the dollar amounts that represented the cost savings that Toyal would have enjoyed had they had their compliant system in place at an earlier date . . . calculating an amount of just more than a million dollars in potential cost savings that Toyal would have enjoyed." *Id.* at.143-144. Mr. McClure concluded that all supporting documentation from Toyal was reliable. *Id*. at 144-145.

At the outset of his report, Mr. McClure "reserved the right" to supplement his report if additional information became available. Tr. 12/11/08 at 148 and Resp. Exh.22A at p. 3. Mr. McClure did issue a revised report on December 1, 2008, based on additional information. *Id.* at 149-151 and Exh. 23, 24, 25 (admitted as offer of proof rejected by the Board). Mr. McClure noted that if a company spends money on a capital project, "whether [the purchased equipment] is used or not used," the company does not have the money available for further investment purposes. *Id.* at 151-152. The USEPA BEN manual

> indicates that [the issue is] if the company spent the dollars in an effort to reach compliance. If they relied upon a consultant in good faith to try to reach compliance, even though they didn't, they've still lost the economic value of those dollars. So that should be considered when [the professional is] conducting the analysis." *Id.* at 152.

Mr. McClure asserted that Mr. Styzens' report did not contain such analysis. Mr. McClure disagreed with Mr. Styzens' reasons for not doing so. Mr. McClure stated that USEPA's penalty policy is actually made up of two components, the economic benefit penalty, and the "separate and distinct" gravity component; "the methods for calculating them are separate and should not be mixed". *Id*. at 152-153. Mr. McClure believes that the economic benefit penalty requires consideration of

> the variables and the facts of the case as they're presented and you have to consider all of them and you have to understand the delayed costs, you have to understand the avoided costs, you need to consider whether any of these efficiencies were available and you need to consider whether any other expenditures were made in good faith, but not necessarily required. And what you need to come to is an analysis of purely the financial aspects of this situation. *Id.* at 153.

Mr. Styzens, in Mr. McClure's understanding, did not include foregone benefits because he was focused on whether Toyal made good management decisions, the time Toyal took to make decisions, and other qualitative measurements. Tr. 12/11/08 at 153. Mr. McClure believes that these are "gravity components that are inappropriate to apply to a purely economic benefit." *Id.* at 154. In Mr. McClure's view, that Toyal took a certain number of years to comply is a variable that affects only the timing of the discount and the inflating of costs. Mr. McClure believes that regulators may factor this into discussions about gravity. *Id.* at 154.

Mr. McClure clarified that he used the BEN user manual, and not the user model. The model is a still-developing software program that USEPA has put out for comments "a number of times." Tr. 12/11/08 at 156. Mr. McClure believes that the BEN user manual is the "appropriate approach that should be utilized in analyzing the economic benefit which is one component of the penalty the Board is to assess pursuant to Section 42 of the Illinois Environmental Protection Act." *Id.* Noting Mr. Styzens' comments about the use of the BEN Manual in settlements, Mr. McClure stated he also believes that the BEN manual is appropriate methodology to use for contested trial proceedings and not just settlements. *Id.* at 157.

Mr. McClure disagrees with Mr. Styzens' interpretation about the sentence that starts, "Beware of such negative results"[15] at page 4-6 of the BEN Manual. Tr. 12/11/08 at 157. Mr. McClure takes this

> as an indication that [the expert] should be aware of the facts and the potential for abuse in this area, but it goes on to specifically talk about legal competitive advantage and other types of issues that aren't in play in this case. And it's a warning to the practitioners to be aware of the types of things that they might see . . . that certain people might try to fit under this provision. But it doesn't negate this provision in any way. It simply says when you're analyzing this area, as you should with every area of the penalty analysis, you should be aware of all the facts and makes sure you've considered them." *Id.* at 158.

As to analysis of the impact of Toyal's expenditure of the $1.1 million on the vacuum chiller unit, Mr. McClure included found that "the overall impact is that it reduces the portion of the penalty that relates to delayed capital expenditures." Tr. 12/11/08 158-159. This resulted in a difference of $107,000 between his first and second report, and that brought the negative number down a little further. *Id.* at 159. Mr. McClure does, however, agree with the overall bottom line figure was generally similar to that reached by Mr. Styzens. *Id.* at 159.

The People's Cross Examination. Mr. McClure was paid by Toyal at a rate of $450 per hour to give testimony. Tr. 12/11/08 at160. Mr. McClure worked with Navigant's Pat McGrath on this analysis. *Id*. at 160-161. Mr. McClure was unable to give an estimate of how much Navigant has been paid by Toyal so far for its work over the last three years. *Id*. at 163. Mr. McClure believed that it took him more than twenty hours to prepare the first report and possibly

[15] *See, infra* at 13, discussing Mr. Styzens' testimony at Tr. 12/10/08 at 177-181.

more than ten hours to prepare the second report, but was uncertain of time spent beyond that. Id. at 165.

Toyal's Mr. Stevens was Mr. McClure's primary source of information about the cost of the equipment. Tr. 12/11/08 at165. To estimate the delayed capital expenditures, of two possible rates, Mr. McClure used the risk-free rate, "which would be the value of bringing the dollars forward in time." *Id.* at 166. Mr. McClure stated that, depending on the circumstances, companies may be able to borrow money at this rate, though he could not estimate the number of businesses that he had worked with that had done so. *Id.*

As to whether it is more appropriate to use the risk-free rate or a weighted average to estimate the cost of capital, Mr. McClure stated that there exists a lot of literature and court cases on both sides of that issue. Tr. 12/11/08 at 167. The support for using the risk-free is based on two facts.

> [First,] we're talking about past cash flows that don't have uncertainty around them. And, secondly, that when you use a weighted average cost of capital, you have to build up the cost of equity in there and one of the components that you use is a risk weighted adjustment that would apply for a risky investment. *Id.* at 167-168.

In Mr. McClure's opinion, that does not apply to Toyal. But, since Mr. Styzens' used a bond rate "very similar to the risk-free rates," the net impact is minimal. *Id.* at 168.

Mr. McClure noted that the money Toyal actually spent is listed in his report and its schedules. But literature supports use of a risk-free rate "because when you look at a company's weighted average cost of capital, you're imputing risk and other items that do not apply to past expenditures for environmental compliance." Tr. 12/11/08 at 170. McClure did not obtain Toyal's bank records to show the actual interest Toyal paid as they were not relevant to him, nor did he impute any additional labor cost for maintenance of the RCO because he did not believe it was required. *Id.*

Mr. McClure was unaware of any government regulation requiring Toyal to maximize solvent recovery or minimize solvent cost. Tr. 12/11/08 at 174. All of the information provided about the foregone benefit calculations was provided by Toyal since Mr. McClure is not an engineer. *Id.* at 174-175. Mr. McClure admitted that he did not know that, under the Act, the penalties of non-compliance for Toyal were $10,000 per day and he did not take that fact into account when considering the reliability of the information provided by Toyal. *Id.* at 176-177. Mr. McClure accepted Toyal's assertion that "the solvent recovery system was linked to control of emissions" and he did not conduct any independent investigation to determine that they were so linked because Navigant is not an engineering firm. *Id.* at 177-178. Mr. McClure conceded that if there in fact is no such link, then he "would have to reassess the facts of the situation." *Id.* at 178. He has not worked on a case where a court has allowed a claimed foregone benefit to reduce a proven economic benefit from noncompliance, though it has been discussed in settlement. *Id.* at179.

Mr. McClure reiterated that the BEN Manual, "prescribes for considering the fact that there are offsets to the costs." Tr. 12/11/08 at 180. He cannot point to other literature that says that "foregone benefits can be reduced from proven economic non-compliance", other than documents that refer back to the BEN Manual. *Id.* at 181-183. Discussing the differences between the USEPA model and Manual, Mr. McClure related that USEPA states that BEN *model* does not need to be used so long as the expert follows the BEN *Manual*. While the manual is not mandatory, it gives guidance that experts should follow as best they can to complete their analysis. *Id.* at 185.

Mr. McClure declined to answer whether the US EPA mandates that the BEN manual be used in a case brought by the IEPA because he thought it required a legal opinion. However, he did note that whether it was legally required, "the documents indicate that the US EPA strongly encourages … the state to utilize that guidance because it creates some sense of uniformity." Tr. 12/11/08 at 185-187. There is nothing in the BEN manual that says that Illinois EPA must use the US EPA's methods. *Id.* at 187. McClure is unaware of any instance where Navigant has presented support for the theory of foregone benefits. *Id*. at 187-188.

The foregone benefit that Mr. McClure calculates is just over $1 million and is offset by the penalties of delayed capital expenditures and avoided costs. Tr. 12/11/08 at 189. Mr. McClure asserted that, even assuming knowledge by Toyal that it would be able to offset a penalty by a foregone benefit, such knowledge did not mean that Toyal would not prioritize environmental compliance. *Id.* at 189-190. Mr. McClure believes that

> [i]n Toyal's case, we're coming after the fact that they've had all these huge expenditures over a very difficult time frame to get into compliance. And once they reach compliance, as we're looking at the state of their costs and their expenditures, then we realize that there's a solvent recovery aspect to this. *Id.* at 190.

Mr. McClure described the overall concept of foregone economic benefit as being

> that in an effort to reach compliance, you were delayed in doing so, [thus] you have delayed capital expenditures, [and] avoided costs. And then as you look back, you realize, oh, we would have saved certain dollars in solvent recovery.
>
> . . . [T]here's a gravity component that's separate that looks at the time frame and it's considered separately. *Id.* at 191.

Mr. McClure was unaware that companies affiliated with Toyal in France and Japan were operating a solvent recovery system prior to such use in Lockport. Tr. 12/11/08 at 192. Mr. McClure stated that if it were true that Toyal could have complied by hooking up emission sources to a control device without ever having a solvent reclamation system, then he would have to reevaluate such facts and circumstances. *Id.* at 193.

Toyal's Re-direct Examination. Mr. McClure agreed that Navigant's estimates of the delayed capital costs and the avoided annual O & M costs were "in the immediate ballpark" of Mr. Styzens' calculations. Tr. 12/11/08 at 194-195. If, rather than using a risk-free interest rate, Mr. McClure used a rate similar to Mr. Styzens' rate, the impact would be "very, very minimal": he used a 5 percent rate, while Mr. Styzens used a rate averaging between 4 and 5 percent, "probably" resulting in a difference of $5,000 to 10,000. *Id.* at 195.

Mr. McClure and Navigant's opinion is that the BEN Manual "is an appropriate means of guidance to calculate economic benefit. Tr. 12/11/08 at 196. Reading from the BEN Manual at page 3-11, Mr. McClure noted that

> O&M offsetting credits should also be considered in determining the incremental annual costs. Such credits might represent actual O&M cost savings, heat recovery product or by-product recovery and so forth. *Id.* at 196-197.

Referencing the same source at page 4-6, Mr. McClure further notes the example where a

> violator comes into compliance late and finds that it's been saving money since it installed the new technology. This may occur because the compliant technology allows the violator to recover materials and/or reduce operation and maintenance costs. BEN produces a negative result. *Id.* at 197.

There is no requirement listed in the BEN manual that the recovery of solvents must be directly related to the requirement to achieve compliance. *Id.* at 197-198. Mr. McClure is not aware of a policy written by IEPA on how to calculate an economic benefit penalty, and Mr. McClure recalled that Mr. Styzens had so testified as well. *Id.* at 198.

In conclusion, Mc Clure noted that he had requested and received information on solvent recovery from Toyal, as he will include in his analysis only conclusions the documentation will support. There was nothing in the documentation from Toyal that he thought was untrue or inaccurate. Mr. McClure recalled testimony from Mr. Styzens stating that Mr. Styzens had not reviewed that information. *Id.* at 199.

FINDINGS OF VIOLATION

In summary, based on the uncontested facts, the Board finds that Toyal has committed the violations alleged in the complaint. Comp. Exh. 17. Count I of the complaint alleges that the Board's VOM rules at 35 Ill. Adm. Code 218. Subpart TT required Toyal and others in its industry to achieve VOM reductions of at least 81% no later than March 15, 1995, and that Toyal failed to do so. *See* 35 Ill. Adm. Code 218.986. Count II alleges that, by failing to control sources accordingly to industry standards, Toyal caused, allowed, or threatened air pollution in violation of Section 9(a) of the Act. 415 ILCS 5/9(a) (2008). The duration of the violations was from March 15, 1995 to April 30, 2003.

Having made this finding, the Board must turn to the appropriate remedies.

REMEDIES, INCLUDING PENALTY

The Board considers the factors set forth in Sections 33(c) and 42(h) of the Act in determining the appropriate remedy and civil penalty, if any. In making its orders, the Board is required to consider any matters of record concerning the reasonableness of the alleged pollution, including those factors identified in Section 33(c). The Board is also required by the Act to consider any matters of record concerning the mitigation or aggravation of any penalty, including those matters specified in Section 42(h). *See*, People v. Bernice Kershaw and Darwin Kale Kershaw d/b/a Kershaw Mobil Home Park, PCB 92-164 (April 20, 1994).

Complainant here requests, in summary, that the Board order respondent to cease and desist from future violations of the Act and Board regulations. Additionally, the People request a total civil penalty of $716, 440, consisting of $316, 440 in costs to be recovered for the economic benefits Toyal received through non-compliance, and an additional $400,000 ($50,000 per year of violation). The People waive any award of attorney fees, asking the Board to take that fact into account in assessing a penalty. Comp. Br. at 2, 35-40, Comp. Reply at 14. Complainant also requests entry of an order directing Toyal to "cease and desist" from violating the Act and Board rules.

Toyal, in response, maintains that a substantial penalty is not warranted, and that only "a modest penalty, if any should be assessed." Resp. Am. Br. at 2. Toyal claims that its "unique circumstances" impeded its ability to demonstrate compliance with Subpart TT after it installed the RCO in 1998, due to its need to work through "many extremely challenging technical and operational issues." *Id*. at 1. Toyal maintains that it was diligent in its compliance efforts, and has not been cited for non-compliance since its completion of the PTE strategy and 2003 compliance demonstration. Toyal also notes its replacement of the RCO with the more efficient CRO.

Toyal maintains that its non-compliance "resulted in a negative cost" to Toyal, in that it lost the opportunity to obtain savings that would have inured to it had earlier compliance been achieved. Resp. Am. Br. at 2. Moreover, Toyal asserts that any "theoretical" economic benefits should be offset by the $1 million expenditure for the vacuum system, even though this unit "was not utilized as part of Toyal's eventual compliance strategy". *Id.* at 2-3. (The Board previously determined that it would not consider the evidence on which the theory is based. *See, supra* at pp. 14-15.)

The Board will discuss the factors from Sections 33(c) and 42(h) of the Act (415 ILCS 5/33(c) and 42(h) (2008) which the Board must consider when determining the appropriate remedy and penalty, if any. The Board will recount the parties' arguments concerning each factor; the People replied to Toyal's arguments on only a few Section 42(h) factors, as noted below.[16] After presentation of the parties' arguments, the Board will then present the Board's analysis. Finally, the Board will assess the appropriate penalty and explain the Board's reasons.

Section 33(c) Factors

[16] These factors are due diligence/delay in compliance expenditures, economic benefit, and request for SEP credit. *See, infra*, at pp. 56, 58, and 61

The Character and Degree of Injury to, or Interference with the Protection of the Health, General Welfare and Physical Property of the People

The People's Arguments. In summary, the People contend that the character and degree of injury caused by Toyal's eight-year period of non-compliance was great. The People remind that the Board adopted the amended Part 218 rules to improve ozone air quality in the greater Chicago area, by expanding the existing RACT requirement to all sources which emit or have a potential to emit 25 TPY of VOM. 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 and 218, R93-14, slip op. at 1 (Jan. 6. 1994). In the adopting opinion, the Board stated that IEPA had identified 88 major sources of VOM Chicago in the Chicago non-attainment area which qualified as "other [VOM] emission sources" that would be considered "major" VOM sources under the new regulations. *Id.*, slip op. at 4. Of these 88 sources, 45 had actual VOM emissions greater than 10 TPY, and the basis for achieving RACT was determined on the basis of these 45 sources. *Id.*

The People repeat that Toyal had actual VOM emissions of 33 tons in 1990 and 28 tons in 1992, while Toyal's 1996 CAAPP Permit application reported VOM emissions in excess of 80 TPY. Comp. Br. at 6. "VOM is an air contaminant that can result in ozone formation, causing a threat to human health." *Id.* at. 9 The People assert that Toyal's VOM

> emissions adversely affected the ozone non-attainment area and air quality in Will County. The greater the increase in excess emissions to the atmosphere in this area, the greater potential threat is posed to the NAAQS [National Ambient Air Quality Standards]. Toyal's increased VOM emissions must be considered in conjunction with the cumulative effects of increased emissions elsewhere in the non-attainment area. The cumulative impacts on air quality could be severe if each source in the nonattainment area violated these Board emission standards for VOM.
>
> Toyal's noncompliance for eight years impeded federal and state efforts to reduce the sources of VOM levels, and thereby seriously interfered with the *"protection* of the of the health, general welfare and physical property of the people." 415 ILCS 5/33(c)(i) (2006) (emphasis added). Comp. Br. at 8-9.

Toyal's Arguments. Toyal suggests that the People "misconstrue" this factor. Toyal reminds that it was in fact operating a control device (the RCO) since 1998, and that Toyal needed to continue operating to be able to design a method of attaining compliance. Resp. Br. at 32. Toyal also argues that it has been in compliance since compliance was achieved in 2003.

Toyal distinguishes its situation from penalty cases where non-compliance has future effects (People v. Waste Hauling Landfill, PCB 95-51(May 21, 1998)), and where compliance had not been achieved at the time the Board imposed the penalty (Panhandle, PCB 99-151.) Comp. Br. at 33.

Board Analysis. The Board finds that this factor weighs against Toyal. Toyal has not successfully controverted the People's arguments about the harmful effect on human health and the environment from long term VOM exceedances. It is true, as Toyal argues, that respondent achieved some VOM reduction once it began operating the RCO in 1998. It is also true that the future effects of a source's VOM emissions' contribution to ozone formation is not as readily quantifiable as is the future effect of a landfill source's overheight, overfill, or groundwater contamination. But, the fact is that Will County remains an ozone non-attainment area, albeit one that has been downgraded from "severe" to "moderate". [17]

The Social and Economic Value of the Pollution Source

The People's Arguments. The People do not contend that Toyal has no social or economic value. Complainant concedes that it has such value,

> since a business entity which employs people and supplies products on the open market has a certain degree of social and economic value. However, a facility that operates in violation of regulations is a social and economic detriment.
>
> The Board has previously found that a pollution source typically possesses a "social and economic value" that is to be weighed against its actual or potential environmental impact. People v. Waste Hauling Landfill, Inc., and Waste Hauling, Inc., PCB No. 95-91 (May 21, 1998). Toyal's failure to reduce its VOM emissions in an area of severe non-attainment for ozone for an extended period of time was a detriment to the site and surrounding area, which therefore, would diminish the social and economic value of the source. Comp. Br. at 10.

Toyal's Arguments. Toyal argues this factor weighs in its favor, even under Waste Hauling Landfill, PCB 95-91. Toyal remarks that "in these trying economic times, it is important that companies remain viable," and penalties for long-cured fractions should not be levied to jeopardize that viability. Resp. Am. Br. at 33. Toyal distinguishes Waste Hauling Landfill on the grounds that it has had no compliance problems since 2003.

The Board's Analysis. The Board finds that Toyal has economic and social value. But, that economic and social value was considerably undercut during the eight-year period of VOM non-compliance by a business located in what was, at all pertinent times, a severe ozone non-attainment area. *See, e.g.* People v. Community Landfill, Inc. et al, PCB 97-193 and PCB 04-207 (Aug. 20, 2009)(assessing $250,000 violation for financial assurance violations, finding inter alia"poorly maintained landfill does not have a social or economic value").

[17] The Board takes administrative notice of the ozone classification of Will County as detailed in one of its recent RACT for VOM rulemakings: Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8 slip op. at 3-5, esp. n.2 (06/17/10).

The Suitability or Unsuitability of the Pollution Source to the Area in Which it is Located, Including the Question of Priority of Location in the Area Involved

The People's Arguments. The People state that Toyal's facility is suitable for the site and surrounding area provided it is operated in compliance with the Act and Board air pollution regulations. Conversely, the People believe that Toyal's facility was not suitable during the non-compliance period. Comp. Br. at 10.

Toyal's Arguments. Toyal characterizes the People's position as illogical and invalid, since "a facility would always be unsuitable for its location when non-compliant, under Complainant's argument." Resp. Am. Br. at 35. Toyal lists the geographical details of its location as proof of the Lockport plant's suitability. *Id.* at 35; supra, p. 5 for the listing of these geographical details.

The Board's Analysis. The Board finds that Toyal is suitable for its location, so this factor weighs slightly in Toyal's favor. But, the Board also finds that non-compliance undercuts the degree of weight that can be afforded this factor during any period of non-compliance.

The Technical Practicability and Economic Reasonableness of Reducing or Eliminating the Emissions, Discharges or Deposits Resulting from Such Pollution Source

The People's Arguments. The complainant believes this factor weighs in its favor. The People point out that, in adopting the rules at 35 Ill. Adm. Code 218.Subpart TT rules, and concluding that RACT for a source with a potential to emit of 25 tons was 81% control at each source, the Board expressly concluded that "these requirements are technically feasible and economically reasonable." Resp. Br. at 11 and n. 24, citing R 93-14, *slip op.* at 4. The People ask the Board to "note that when Toyal replaced its VOM control system in 2005, it was able to arrange for permitting, construction, and operation of the new control device within one year. *Id.* and n. 25.

Toyal's Arguments. Toyal believes that the People's argument is "clearly flawed", and that this factor favors Toyal. Comp. Br. at 35. Toyal repeats that

> While the 'technology' may have been available, and even in place at a certain point, the successful application of that technology to the Toyal facility was anything but standard. In fact, most of the work done at the facility to show compliance with the Subpart TT rules had to be custom designed and fitted for the facility. *Id.*

Toyal states that it is the only facility of its kind in Illinois subject to Subpart TT, and so it had no model or example in developing its own compliance program, down to certain emission factors. Toyal again notes that, unique in its consultant Mr. Anderson's experience, there were no emission factors available from USEPA or other published sources for use "to determine what the fugitive emissions were from its sources that were not feasible to be enclosed or captured". Resp. Am. Br. at 36-37, citing Tr. 12/11/08 at 81. Consequently, Toyal had to develop its own. Toyal believes that this is one of the circumstances distinguishing its situation from that in Panhandle, PCB 99-191.

The Board's Analysis. This factor weighs against Toyal. The Board finds that Toyal has persuasively demonstrated that, at the time the 81% VOM control rules became applicable to it, Toyal had virtually no idea of the magnitude of the compliance effort it needed to undertake, as it did not fully understand its own system. Toyal could have, but did not, appeal the Subpart TT rules. Toyal could have, but did not, make a demonstration to the Board that an adjustment of the RACT requirement was necessary for its plant.

This record demonstrates that Toyal eventually did achieve compliance working over an eight year period, for a not unreasonable expenditure using no novel technology. Phase I expenditures, which were completed in 1998, totaled $781, 129. Phase 2 expenditures, which were made between 2001 and 2003, totaled $470, 887. Total costs for the control system were $1,252,016. Comp. Br. at 20.

Any Subsequent Compliance.

The People's Arguments. The People acknowledge that Toyal has been in compliance since 2003. Comp. Br. at 12. But, the People also remind that Toyal did not demonstrate compliance until 3 years after this enforcement action was filed. The People argue that this delayed compliance does not mitigate against a "stiff penalty", citing ESG Watts, Inc. v. Pollution Control Board, 282 Ill. App. 3d 43, 53 (4th Dist 1996).

Toyal's Arguments. Toyal argues that, since it has been compliant since 2003, this factor weighs in its favor. Resp. Am. Br. at 38-39. Toyal suggests that this position is supported by the Board's ruling on this factor in People v. Blue Ridge Construction Corp., PCB 02-115, *slip op.* at 13 (Oct. 7, 2004) (Blue Ridge, PCB 02-115). Toyal points out that it has been in compliance over 10 years since it first received its NOV in June 1998. Toyal urges the Board to discount the People's argument that its demonstration of compliance after the filing of this action should weigh against it. Toyal contends that:

> This is a case unlike many other enforcement actions, because Toyal was diligent but, unfortunately, a combination of several factors (i.e., fires, working with consultants who didn't understand the Subpart TT rules as they applied to the Toyal facility, implementation of measures to better understand how facility (sic) could demonstrate compliance with Subpart TT, creation of an emission standard, one-by-one analysis of 200 emission sources, customization of hoods amongst other activities) resulted in Toyal's delayed compliance. Resp. Am. Br. at 39.

The Board's Analysis. The Board finds that this factor weighs in Toyal's favor, as Toyal did achieve compliance in 2003.

The Board's Remedy Conclusions

In summary, the Board finds that the analysis of the Section 33 (c) factors warrants imposition of a remedy, including a penalty, for Toyal's eight year period of non-compliance.

The character and degree of injury to the People's health, safety, and welfare was great, and of long duration. While Toyal certainly has social and economic value as a business and employer, that is undercut during the period of its emission of excess VOM emissions in a non-attainment area. Likewise, the suitability of its location is slightly undercut during the period of non-compliance. It was technically feasible and economically reasonable for Toyal to achieve compliance. To the extent Toyal may have had unusual difficulties, it was free to seek regulatory relief but did not avail itself of the opportunity to do so. The fact that Toyal has continued to be in compliance since 2003, following its eight year non-compliance period, definitely weighs in Toyal's favor.

Cease and Desist Order Will Issue. As requested by the People, the Board will issue its customary directive that respondent cease and desist from all violations of the Act and Board rules. Toyal has not argued against this customary practice.

Penalty. Under the facts and circumstances here, the Board believes that a penalty is necessary to aid enforcement of the Act. The Board considers the Section 42(h) penalty factors below.

Section 42(h) Factors

Duration and Gravity of the Violation.

The People's Arguments. The People contend that Toyal's offenses have a high degree of gravity. The eight year period of non-compliance is lengthy, and has resulted in Board penalties in other such cases. Comp. Br. at 15, citing Panhandle, PCB 99-191, *slip op.* at 29 (long period of violations was an aggravating factor for purpose of penalty); and United States v. Marine Shale Processors, 81 F3d 1329 (5th Cir. 1996) ($2,500,000 penalty for twenty-nine unpermitted minor sources occurred over approximately eleven-year period).

The People also remind that Toyal is located in an ozone non-attainment area, and this fact must be considered in conjunction with the cumulative effects of increased emissions elsewhere in the area. Moreover, the People state, "the greater the increase in excess emissions to the atmosphere, the greater potential threat is posed to the NAAQS". Comp. Br. at 15, citing Blue Ridge, PCB 02-115 (harmful nature of asbestos an aggravating factor).

Toyal's Arguments. Toyal argues that the duration of its non-compliance was not due to disregard for rules, but rather due to the challenges it faced in demonstrating compliance. Toyal argues that it did in fact operate a control device beginning in December 2008. Toyal argues this distinguishes it from Panhandle, where no control technology was installed and 33,441.67 tons of NOx were emitted into the air during the 10-year non-compliance period. Resp. Am. Br. at 41, citing Panhandle, PCB 99-191, *slip op.* at 29

The Board's Analysis. Toyal's violations were ongoing for eight years. During the first three of these years, from March 15, 1995 through December 1, 1998, Toyal operated no control equipment to reduce its VOM emissions into an ozone non-compliance area. While there may have been some emission reductions once the RCO was installed, the record is clear that

uncontrolled VOM emissions continued as Toyal completed the process of hooking some sources into the RCO and completing its PTE efforts as to other sources. At no time did Toyal cease operations to control VOM emissions, or seek regulatory relief to lawfully delay compliance or excuse non-compliance. The Board finds that this factor aggravates the violation, and warrants a substantial penalty.

Due Diligence.

The People's Arguments. The People argue that Toyal's demonstrated absence of due diligence should be considered as a serious aggravating factor. Comp. Br. at 16-20. The People argue that Toyal showed lack of due diligence in three areas: identifying violations, installing the RCO control equipment, and completing VOM control.

As to identification of violations, the People believe that Toyal should have known of VOM violations as early as 1992, pointing to Toyal's testimony that it first learned of its VOM issues in February 1995 as indicia of lack of due diligence. Comp. Br. at 16. The People state that, as Toyal admits early in 1992, IEPA asked Toyal for information regarding applicability of Subpart TT. Toyal provided that information in May 1992. The Subpart TT rules were promulgated on January 6, 1994. The People calculate that Toyal had 14 months in which to learn of the 81% VOM requirements and to install controls before the March 15, 1995 effective date of 35 Ill. Adm. Code 218.986. The People believe that Toyal had sufficient time to install compliance controls. But, even assuming Toyal believed it could not timely demonstrate compliance by the rule's effective date, the People argue Toyal had ample time to seek relieve by way of variance or adjusted standard. The People remind that Toyal never did so. *Id.* at 17.

The People posit that, as a major source of VOM emissions in a non-attainment area, that Toyal had an affirmative duty to apprise itself of the air pollution regulations applicable to it. The People remark that, if in fact Toyal did not learn of the March 15, 1995 applicability of the Subpart TT rules until February 1995, "Toyal demonstrated a serious lack of diligence". Comp. Br. at 17.

As to installation of compliance equipment, the People describe Toyal's compliance efforts as "snail-paced" between 1995 and 1998. The People again relate that Toyal's March 1996 CAAPP application confessed noncompliance with Subpart TT, and stated that Toyal would install compliance equipment and demonstrate compliance by November 1998. Comp. Br. at 17. Toyal did not start its capital approval process for control equipment expenditures until February 1997, and did not submit a permit application for a VOM control device until May 1998. The RCO was installed in September and began operation December 1, 2008, after a 45-month period of non-compliance.

In regards to completion of VOM control, the People reiterate that installation of the RCO did not result in compliance with the 81% control requirements of Subpart TT. Noting that Toyal cancelled the February 1999 compliance stack test, the People characterize as "astonishing" what it calls "Toyal's lack of action in addressing the VOM control problem thereafter (*i.e.* from the end of 1998 through April 2003.)" The People calculate that Toyal

continued in non-compliant operation for more than 50 months after cancelling the stack test. Comp. Br. at 18.

The People claim that "Toyal's supposed compliance 'efforts' at this point were confused and misdirected" (Comp. Br. at 18), noting the installation of the RCO in 1998, the request for permit to install an RTO to replace it in 2001 and 2002, and Toyal's ultimate abandonment of the RTO approach in 2002. *Id.* at 19. The People note that Toyal finally hooked up all emissions sources and controlled VOM emissions using the RCO installed in 1998, demonstrating compliance in 2003. *Id.*

The People opine that these "lax efforts" were "likely due to misplaced priorities". Toyal continued to purse upgrading of its production facility between 2000 and 2003 at a cost of $5-6 million, while it made VOM compliance expenditures of only $470,887. Comp. Br. at 19. The People suggest that the time and resources expended on obtaining a FESOP were also a diversion of resources, since obtaining the FESOP was an election by Toyal, and not a Subpart TT requirement. *Id.* at 20.

Toyal's Arguments. Toyal counters that the People's "assertions and mischaracterizations of the evidence are blatantly inconsistent with all the facts before the Board," and argues that this factor too should weigh in its favor. Resp. Am. Br. at 41. Toyal believes that it "was as diligent as could be, given the circumstances, and spent years and appreciable sums of money in pursuing compliance" [at the same time] it was responsible and diligent with respect to assuring that the inherent dangers of its business were minimized." Toyal distinguishes its situation from other cases in which the respondent failed to perform any work to correct non-compliance, or where respondent relied on the Agency to determine compliance with permit limitations. *Id.* at 41-42.

Later in its brief, Toyal suggests that in opting for a FESOP rather than a CAAPP permit, Toyal did more than was required, since it had to demonstrate and achieve emissions of less than 25 TPY. Resp. Br. at 44 and n. 9.

The People's Reply. In their reply brief, the People argue that Toyal's failure to seek regulatory relief at any time exemplifies a lack of diligence. Comp. Reply at 3-5. The People caution the Board against granting what amounts to a request for a "retroactive variance", particularly a request made 14 years after the rules' 1995 compliance date. Comp. Reply at 4-5.

The People reiterate that "instead of addressing its failure to control VOM emissions in 1998, Toyal again delayed serious work on VOM control until 2001, when it began working on its FESOP project which was "a voluntary undertaking". Comp. Reply at 4-5. The People aver that the voluntary FESOP work and continued permit extensions caused Toyal to continue delaying compliance. Id. at 5-6.

The Board's Analysis. The Board finds that this factor weighs against Toyal. Toyal was not diligent in keeping current with the regulatory climate in which it was operating in the mid-1990's. It was Toyal's obligation to determine what VOM requirements applied to it, and to timely achieve compliance or seek regulatory relief. Toyal did neither.

As complainant suggests, during the non-compliance period between 1995 and 2003, Toyal appeared to have both shifting and conflicting priorities. The Board believes that, as Toyal suggests, an overarching concern was for Toyal to gain better understanding of its processes, the sources of its VOM emissions, and cost-efficient means of controlling them. But, it also appears that Toyal was attempting to integrate its major plant expansion and fire suppression efforts with its VOM control obligations on a timetable of its own choice, following changing management pressures and consulting advice. The facts here lead to the conclusion that VOM compliance took a back seat to other business considerations. But, once the Board has set a compliance timetable through passage of RACT rules, and a source has determined that it cannot timely comply, due diligence requires the source to seek regulatory relief or suffer the consequences of non-compliance.

The Board finds that this factor aggravates the violation, and warrants a substantial penalty.

Economic Benefits Accrued.

The People's Arguments. The People begin by quoting the mandate of Section 42 requiring, in pertinent part, that the Board

> 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 hardship. Comp. Br. at 20, citing 415 ILCS 5/42 (2008)

The People contend that Toyal is part of a large international company with sales in the billions of dollars, and that "it is neither arbitrary nor unreasonable to recover all of the economic benefit accruing to Toyal over the eight-year period of violation." *Id.* at 21.

The People recount the findings of IEPA's Mr. Styzens in his report (Comp. Exh. 20) and testimony itemizing Toyal's economic benefit. Mr. Styzens' analysis was based on the time value of money, including evaluations of on-time and delayed compliance. The focus of the analysis was Toyal's failure to timely install the RCO, which was the ultimate compliance vehicle.

Mr. Styzens based his reports on expenditures reported by Toyal. Phase I expenditures, which were completed in 1998, totaled $781, 129. Phase 2 expenditures, which were made between 2001 and 2003, totaled $470, 887. Total costs for the control system were $1,252,016. Comp. Br. at 20.

Mr. Styzens calculated the total economic benefit to Toyal to be $316, 440 as of December 31, 2005. This figure is the sum of benefit from delayed Phase I expenditures, delayed Phase II expenditures, avoided operating and maintenance costs from March 15, 1995 through February 23, 2003, and bank prime rate interest from that date until December 15, 2005. Comp. Br. at 25.

The People compared Mr. Styzens' economic benefit figure of $316, 440 with the $292, 371 economic benefit figure arrived at by Navigant's Mr. McClure, calling them "very close". The People explained that the difference between the two is that Toyal did not add any additional labor cost to its avoided costs, and because Mr. McClure used a "risk free" rate of interest for borrowing (*i.e.* the US Treasury Bond rate). Comp. Br. at 27.

The People argue that Mr. Styzens' choices were well supported and credible. The People argue that some provision for labor costs should have been added

> [f]irst, because it is a principle of incremental cost analysis, and second because the facts in this case indicate that difficulties with the [RCO] control system's operation would necessarily mean that additional labor and maintenance would be required. Comp. Br. at 27.

The People additionally believe that the "risk free" rate is not an appropriate measurement of the time value of Toyal's money, since "the only entity that operates 'risk free', and therefore should borrow 'risk free' is the federal government. Comp. Br. at 27. In complainant's view, it is logical to assume that Toyal's competitors would borrow at interest rates, so that using the Treasury rate in these calculations would give the non-compliant Toyal an advantage over competitors. *Id.* at 27-28

The balance of the People's argument concerns the claim of "forgone benefit" based on Toyal's 2003 upgrading if its 1996 solvent reclamation process. The People's arguments are not repeated here, as the Board previously determined that it would not consider the evidence on which the theory is based. *See, supra* at p. 14-15.

Toyal's Arguments. In its economic argument, Toyal agrees that Mr. Styzens and Mr. McClure "derived a very similar calculation regarding delay and avoided expenditures". Comp. Br. at 48. But, argues Toyal, the Styzens report is incomplete in that it did not take into account Toyal's expenditure of the $1 million vacuum chiller unit. But, these Toyal arguments are not recounted here as the Board previously determined that it would not consider the evidence on which the theory is based. *See, supra* at p. 14-15.

Toyal does not appear to have addressed the People's arguments concerning Mr. McClure's failure to include additional labor costs. As to Mr. McClure's use of the risk-free discount rate, Toyal remarks that Mr. McClure's 5% rate is actually higher than that used by Mr. Styzens, and would result in a larger penalty in the absence of a solvent offset. But, while noting that Mr. McClure's use of the risk-free rate is supported in case law and the relevant literature, Toyal states that, although based on different theories, the discount rates used "are so close as to make any difference immaterial." Comp. Br. at 55.

The Board's Analysis. Based on this record, the Board finds that the $316, 440 economic benefit calculated by IEPA's Mr. Styzens is a credible estimate of the

economic benefit accrued by Toyal through non-compliance. The Board notes that Toyal has all but admitted the credibility of Mr. Styzens' figures as far as his analysis goes: the only serious challenge posed involves the "foregone benefit" theory. To the extent the theory relates to the $1 million Toyal spent on new oil because of failure to fully avail itself of solvent recovery due to its own compliance delays, the Board again rejects the theory. As the Board stated in Panhandle, to do so

> could encourage companies to put off compliance or at least not be as diligent as they should be in monitoring compliance [where] any penalty that a company might facie if it get caughe in violation could be diminished because the company did not spend money to comply when it should have. The deterrent effect of civil penalties is compromised if the violator gets "credit" for ignoring its legal obligations. Panhandle, PCB 99-191, slip op. at 34.

To the extent that Toyal seeks credit for the $1million chiller it purchased but never installed, the Board previously determined that it would not consider the evidence on which the theory is based. *See, supra* at p. 14-15.

Penalty Which Will Serve to Deter Further Violations

The People's Arguments. The complainant advocates imposition of a substantial penalty to deter corporate managements systems from attempting to mirror Toyal's environmental programs as they existed during the 1990's, and to "provide an incentive for major source permitees to comply with their VOM control requirements." Comp. Br. at 34. The People point out that even though Toyal's violations have ceased, they were committed knowingly over an eight-year period. The People reference various cases in which the Board levied civil penalties to deter not only respondent but future violators. *Id.* at 33, citing inter alia People v. State Oil Co. *et al.*, PCB 97-103 (Mar. 20, 2003)(award of remediation costs and penalties against various respondents, including $20, 200 penalty against 2 respondents who delayed compliance while attempting to sell property that was the site of a gasoline leak causing water pollution) and ESG. Watts Inc. v. Pollution Control Board, 282 Ill. App. 3d 43, 52, 668 N.E.2d 1015, 1021 (4th Dist. 1996) (affirming $60,000 penalty in PCB 94-127 (May 4, 1965) against landfill operator who failed to timely pay solid waste fees and submit various reports).

Toyal's Arguments. Toyal advocate that this penalty should be weighed in its favor. Toyal. Resp. Am. Br. at 42-45. Toyal again distinguishes its situation from that in Panhandle, PCB 99-191, stating that Toyal disclosed its non-compliance and submitted a compliance plan in its 1996 CAAPP permit application, that Toyal expended significant effort and money to come into compliance, and that it had come into compliance by 2003.

Toyal propounds that deterrence is no longer an issue in this case, as to either Toyal or other entities. Toyal relates that there has been no violation of Subpart TT or its permit since 2003. Toyal voices the theory that there are no other similarly-situated entities to deter, since "none of Toyal's competitors were required to have VOM controls." Resp. Am. Br. at 43.

Toyal maintains that "[t]he model behavior shown by Toyal in terms of its due diligence and good faith efforts should be encouraged rather than discouraged." Resp. Am. Br. at 43. Toyal points out that non-compliance was not due to lack of finances for compliance purposes, pointing out the $1 million expenditure for the vacuum chiller after installation of the RCO. Toyal also references its 2005 replacement of the RCO with the CRO in 2005 "which improved its emissions control and avoided the problematic shutdowns it experienced with the RCO." *Id.* at 44.

The Board's Analysis. The Board finds that this factor weighs against Toyal, and is an aggravating factor. While the particular VOM emissions complained of here have ceased, VOM standards are being tightened for various sources of VOM emissions at both the state and federal level in the effort to reach ozone attainment. The Board takes administrative notice that, during the last fiscal year alone, the Board has been involved in rulemaking to establish RACT for VOM emissions for three consumer and commercial source product categories.[18]

Sources who become newly-subject to RACT requirements for VOM must be deterred from relying on the Agency to notify them that they are subject to the rules, and from determining that regulatory relief from requirements is not necessary as long as they are involved in an Agency permitting process of some kind.

The Number, Proximity in Time, and Gravity of Previously Adjudicated Violations

The People's Arguments. The People convey that the only violation against Toyal involves the five RCRA violations which were originally part of this complaint, and which were the subject of the June 2001 stipulation. The People stated that while Toyal did not admit the violations, "the parties agreed that the Stipulation could be used as evidence of a previous adjudication of violation. Comp. Br. at 34.

Toyal's Arguments. Also referencing the June 2001 stipulation, Toyal notes that it paid a penalty in the amount of $31,500 for the RCRA claims. Consequently, Toyal believes this factor should mitigate any penalty against it, citing People v. State Oil Co. *et al.*, PCB 97-103. Resp. Am. Br. at 43.

The Board's Analysis. The Board is not considering the RCRA violations as an aggravating factor, as these occurred concurrently with the VOM violations and were settled as a

[18] *See* Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-8 (June 17, 2010); Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group III Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-10 (Mar. 18, 2010); and See Reasonably Available Control Technology (RACT) for Volatile Organic Material Emissions from Group II Consumer & Commercial Products: Proposed Amendments to 35 Ill. Adm. Code 211, 218, and 219, R10-20 (second notice order due for adoption Jul. 15, 2010 under fast track procedures of 415 ILCS 5/28/5 (2008)).

part of this action. Accordingly, the Board finds that this factor slightly mitigates the violation.

Whether the Respondent Voluntarily Self-Disclosed the Non-Compliance.

The People's Arguments. In the People's view, Toyal did not voluntarily self-disclose non-compliance during the eight-year non-compliance period. Comp. Br. at 35.

Toyal's Arguments. Toyal looks at its 2006 CAAPP application as a self-disclosure of non-compliance, but suggests that this factor weighs neither for nor against it. Resp. Am. Br. at 46.

The Board's Analysis. The Board agrees with Toyal that, in one sense, it voluntarily self-disclosed the non-compliance in its CAAPP application. The Board further agrees with Toyal, though, that this weighs neither for nor against it.

Whether the Respondent Has Agreed to Undertake a Supplemental Environmental Project (SEP) in this Case.

The People's Arguments. The People contend this factor is not applicable, as the IEPA did not agree to Toyal's undertaking of a SEP. Comp. Br. at 35.

Toyal's Arguments. Toyal agrees that no SEP was formally proposed to or accepted by IEPA. However, it contends that its replacement of the RCO with a CRO in July 2005 for a cost of $674,000 should be considered as a mitigating factor. Resp. Am. Br. at 46. Toyal remarks that it was under no legal obligation to make this expenditure, which resulted in reduction of VOM emissions from 20 TPY to about 12 TPY. *Id.* at 47.

The People's Reply. In reply, the People vigorously contest Toyal's attempt to obtain favorable consideration for its replacement of the RCO with the CRO. The People remind that Section 42(h)(7) of the Act by its terms authorizes consideration of a SEP only "in settlement of an enforcement action". Comp. Reply at 11-12. Moreover, the People argue that the RCO was a capital expenditure Toyal made to improve its own operations, and that Toyal's request of SEP credit "for a capital expenditure made in the ordinary course of Toyal's business is improper." *Id.*

The Board's Analysis. As the parties did not agree to a SEP in the context of the settlement of an enforcement action within the meaning of Section 42(h)(7) of the Act (415 ILCS 5/42(h)(7), the Board finds that this factor is inapplicable. The Board additionally observes that Toyal's post-compliance replacement of the RCO with the more efficient CRO served Toyal's operational interests as much or more than environmental ones. Installation of the CRO resulted, in Toyal's words, in "elimination of the periodic RCO high temperature-induces shutdowns." Resp. Am. Br. at 46.

The Parties' Suggested Penalties

The People request a total civil penalty of $716, 440, consisting of $316, 440 in costs to be recovered for the economic benefits Toyal received through non-compliance, and an additional $400,000 ($50,000 per year of violation). The People waive any award of attorney fees, asking the Board to take that fact into account in assessing a penalty. Comp. Br. at 20.

Toyal does not suggest an alternate penalty amount, praying only that the Board not impose a "substantial penalty".

The Penalty Floor: Recapture of Economic Benefit under Section 42(h)(7)--$316, 440

Section 42(h)(7) of the Act requires that any penalty be "at least as great as the economic benefits, if any, accrued by the respondent as a result of the violations, unless the Board finds that imposition of such penalty would result in an arbitrary or unreasonable financial hardship." 415 ILCS 5/42(h)(7) (2008). As previously determined, a conservative estimate of Toyal's economic benefits, largely agreed to by the parties ("foregone benefit" considerations aside), is $316, 440. *See, supra* at 59. The Board will, in its order, assess this penalty amount, plus any other penalty amount supported by this record.

Statutory Maximum Penalty Calculation under Section 42(a)

The Board has stated that the statutory maximum penalty "is a natural or logical benchmark from which to begin considering factors in aggravation and mitigation of the penalty amounts." Gilmer, PCB 99-27, slip. op. at 8, citing IEPA v. Allen Barry, individually and d/b/a Allen Barry Livestock, PCB 88-71 (May 10, 1990), slip. op. at 72.

Section 42(a) of the Act provides that persons found in violation of the Act are liable for "a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues". 415 ILCS 5/42(a) (2008). The People calculate the period of violation to be 2,986 days, for which the maximum daily penalty for each count would be $29, 860,000. Adding to this $50,000 for violation of each of two Counts of the complaint, adds $100,000 for a total possible penalty of $59, 820,000 exclusive of any economic benefit. Comp. Br. at 20.

The Board notes that complainant has not provided any rationale for its recommendation that the Board assess "only" a penalty of $ 25,000 per year, per violation, as opposed to any other figure.

The Board's General Penalty Authority

The Board has broad discretionary powers to assess civil penalties under the statutory authority vested by the Act. Southern Illinois Asphalt Company v. Pollution Control Board, 60 Ill.2d 104, 326 N.E. 2d 406 (1975). Courts have traditionally upheld the imposition of civil penalties where it will "aid in the enforcement of the Act," but not where it is shown to be merely "punitive." Southern Illinois Asphalt Company, 326 N.E.2d at 412; see also, City of

Monmouth v. Pollution Control Board, 57 Ill. 2d 482, 313 N.E. 2d 161 (1974) (punitive considerations for civil penalties are secondary).

The Board reviewed the history of penalties levied during the first 20 years of the Board's existence in IEPA v. Allen Barry, PCB 88-71 (May 10, 1990). The Board has not itself published a comprehensive review of the penalties it has assessed during the past 20 years, nor have the parties in this action provided one. A recent Board opinion quoted with approval a brief history of penalty decisions before the Board and courts:

> In the last thirty years of enforcement under the Act, civil penalties assessed by the Board or Illinois courts have fallen between two ends of a spectrum. On the one end, little or no civil penalties have been deemed necessary because of pertinent facts that weighed heavily upon the nature of the violations or the extent of the alleged pollution. Technical or paperwork violations, such as the failure to obtain permits or submit reports, have frequently been afforded this treatment. *See*, Park Crematory, Inc. v. Pollution Control Board, 201 Ill. Dec. 931, 637 N.E.2d 520 (1st Dist. 1994); Trilla Steel Drum Corporation v. Pollution Control Board, 180 Ill.App.3d 1010, 536 N.E.2d 788 (1st Dist. 1989). Similarly, the inadvertence of the defendant, Southern Illinois Asphalt Company, supra, the good faith efforts of a defendant to bring about compliance prior to the filing of a complaint, Park Crematory, Inc., *supra*; Bressler Ice Cream Company v. Pollution Control Board, 21 Ill.App.3d 560, 315 N.E.2d 619 (1st Dist. 1974), and lack of any economic benefit from noncompliance, Park Crematory, Inc., supra, have figured prominently in cases involving low or nominal civil penalties. Again, amendments to Section 33 of the Act, 415 ILCS 5/33 (2006) and Section 42 of the Act, 415 ILCS 5/42 (2006), all of which were subsequent to the aforementioned cases and all of which increased the penalty amounts subsequent to the aforementioned cases, make it clear that the Board has the power and authority to assess a penalty in this matter.
>
> On the other end of the spectrum, some enforcement actions brought under the authority of the Act have resulted in substantial monetary penalties. In these cases, circumstances showing the unreasonableness of the defendant's conduct or its lack of good faith, ESG Watts, Inc., v. Pollution Control Board, 282 Ill. App. 3d 43, 668 N.E.2d 1015 (4th Dist. 1996), the seriousness and lengthy duration attributed to the violations, People v. John Prior and Industrial Salvage, Inc., PCB No. 97-1 11 (November 20, 1997); People v. Panhandle Eastern Pipeline Company, PCB No. 99-191 (November 15, 2001), the need for deterrence, People v. Waste Hauling Landfill, Inc and Waste Hauling, Inc., PCB No. 95-91 (May 21, 1998), or the accrual of a significant economic benefit, Panhandle, *supra*, have been important considerations in the penalty determination.
>
> Of course, most litigated cases fall somewhere in the middle of the aforementioned spectrum. The determination as the amount of the penalty is dependent on the unique facts of each case, as no exact "formula" for arriving at a penalty exists, People v. Bernice Kershaw and Darwin Dale Kershaw, PCB No. 92-1 64 (April

20, 1995); People v. ESG Watts, Inc., PCB No. 96-233 (February 5, 1998). Comp. Br. at 37-39. People v. Gary Simmons and Lawrence County Disposal Centre, Inc., PCB 06-159, slip op. at 14-15, July 23, 2009.

The Act authorizes the Board to assess civil penalties amounting to several million dollars against the respondent, because the Lockport facility was in violation of VOM control requirements in an ozone non-attainment area for eight years. The violations unreasonably interfered with public health and welfare, and the RACT requirements for control of VOM emissions for this source are technically practicable and economically reasonable. The Board notes that aggravating factors, specifically, the duration and gravity of the violation, the absence of due diligence on behalf of the respondent, the economic benefit to the respondents by not complying, and the need for deterrence, support an imposition of a substantial penalty under Section 42(h). As previously stated, sources of VOM emissions must be encouraged to be aware of the requirements of the regulatory climate in which they operate, and must be deterred from believing that they can operate with impunity under a compliance timetable not approved by Board rule or other site-specific order.

Under the unique facts of this case, the Board finds that the People have justified imposition of the full $400,000 penalty amount requested. This conclusion, takes into account the People's waiver of attorney fees, in addition to the $316, 440 economic benefit recapture.

The case most often cited to the Board by the parties as instructive concerning penalty issues here is Panhandle, PCB 99-191. There, the Board assessed a total civil penalty on Panhandle of $850,000 and awarded the People costs and attorney fees of $115,750.25, finding Panhandle repeatedly and knowingly violated the Act and Board rules for Prevention of Significant Deterioration (PSD) for some 10 years, without ever achieving compliance.[19] Toyal has successfully distinguished Panhandle, to the extent that compliance here has been achieved. Toyal did, unlike Panhandle, pursue compliance. And, compliance here was complicated by technical issues not present in the Panhandle record.

However, the Board cautions against any attempt to compare the penalty issued here against that in Panhandle "dollar for dollar". In the eight or so years since Panhandle, and within the last year alone, Board penalties have taken into account passage of time as well as other factors including the Section 42(h) mandatory recapture of economic benefit. *See, e.g.* People v. Community Landfill Company, Inc. and City of Morris, PCB 03-191, (June 18, 2009) (imposing for financial assurance violations civil penalty of $1,059,534.70 against corporate respondent and $399,308.98 against municipal respondent), People v. Community Landfill, Inc. et al, PCB 97-193 and PCB 04-207 (Aug. 20, 2009)(assessing $250,000 for some six years of landfill violations), People v. Gary Simmons and Lawrence County Disposal Centre, Inc., PCB 06-159 (July 23, 2009) (assessing $1,000 against individual, and $10,000 against corporate respondent plus $32,164 to recoup economic benefit from eight-year failure to cure landfill violations).

[19] Panhandle was decided in 1991, prior to the amendment of Section 42(h) to require the Board to recapture economic benefit. The Board calculated that the economic benefit to Panhandle was approximately one half million dollars. Panhandle, PCB 99-191, slip op. at 31

Remedy Summary

The Board orders Toyal to cease and desist from violations of the Act and Board rules. The Board assesses a total civil penalty of $716, 440, consisting of $316, 440 in costs to be recovered for the economic benefits Toyal received through non-compliance, and an additional $400,000 to aid in enforcement of the Act and to enhance timely, voluntary compliance with VOM rules.

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

ORDER

1. The Board finds that the respondent Toyal America, Inc. (Toyal) violated the Act and Board regulations as alleged in the complaint.

2. Toyal must pay a civil penalty of $716, 440 no later than August 16, 2010, which is the first business day following the 30th day after the date of this order. Toyal must pay the civil penalty by certified check or money order payable to the Illinois Environmental Protection Agency for deposit into the Environmental Protection Trust Fund. The case name, case number, and Toyal's federal tax identification number must appear on the face of the certified check or money order.

3. Toyal must submit payment of the civil penalty to:

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

   Toyal must send a copy of the certified check or money order and any transmittal letter to:

   Christopher Grant
   Assistant Attorney General
   Environmental Bureau
   Illinois Attorney General's Office
   69 W. Washington Street, Suite 1800
   Chicago, Illinois 60602

4. Penalties unpaid within the time prescribed will accrue interest under Section 42(g) of the Environmental Protection Act (415 ILCS 5/42(g) (2008)) at the rate set forth in Section 1003(a) of the Illinois Income Tax Act (35 ILCS 5/1003(a) (2008)).

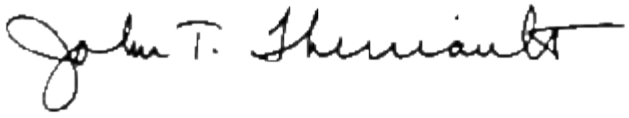
5. Toyal must cease and desist from future violations of the Environmental Protection Act and Board regulations that were the subject of the complaint.

IT IS SO ORDERED.

Member Johnson dissented.

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) (2008); *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, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on July 15, 2010, by a vote of 4-1 .



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John Therriault, Assistant Clerk
Illinois Pollution Control Board