

Before the U.S. Environmental Protection Agency
Science Advisory Board
Illegal Competitive Advantage Economic Benefit Advisory Panel

**Comments of the
Manufacturers Ad Hoc Group**

July 22, 2004

Prepared by

Robert H. Fuhrman
Seneca Economics and Environment, LLC
15701 Seneca Road
Germantown, Maryland 20874
301-216-2774
301-216-2769 (Fax)
bob_fuhrman@msn.com

TABLE OF CONTENTS

- I. INTRODUCTION.....3**
- II. GENERAL OBSERVATIONS AND COMMENTS.....7**
 - A. Least-Cost Means of Compliance.....7
 - B. Double-Counting.....7
 - C. Approach to ICA Quantification Techniques.....9
 - D. References to BEN’s Interest Forward Rate Methodology.....10
 - E. Optimal Deterrence Theory 11
 - F. Issuance of a Draft Set of Conclusions and Recommendations.....11
- III. COMMENTS ON THE FOUR ASSIGNMENTS TO THE SAB PANEL.....12**
 - A. Charge # 1: What Categories of Cases Would It Be Useful for EPA to Consider for Calculations of Illegal Competitive Advantage (ICA) Economic Benefit?.....12
 - B. Charge # 2: How Can EPA More Accurately Characterize the Cases That Are Described in the White Paper?.....14
 - C. Charge # 3: Are There Any Suggestions for Modifying the Described Approach to Calculate the Economic Benefits?.....15
 - D. Charge # 4: What Measures Should EPA Put in Place to Avoid Potential Double-Counting?.....17
- IV. COMMENTS ON THE FOUR CATEGORIES OF SITUATIONS THAT MAY GIVE RISE TO ICA IDENTIFIED IN THE WHITE PAPER.....18**
 - A. Violator Gains Additional Market Share.....18
 - B. Violator Sells Products or Services Prohibited by Law.....19
 - C. Violator Initiates Construction or Operation Prior to Obtaining Government Approval.....19
 - D. Violator Operates at Higher Capacity Than It Should.....20
- V. CONCLUDING REMARKS.....22**

I. INTRODUCTION

The Manufacturers Ad Hoc Group¹ welcomes the Science Advisory Board's (SAB's) willingness to provide the U.S. Environmental Protection Agency (EPA) with rigorous thinking about when and how the Agency should consider "illegal competitive advantage" (ICA) in its civil enforcement cases, including whether it is feasible to develop standardized methodologies that could be used on a routine basis to identify and measure ICA. We believe that the Agency, the regulated community, and the public generally will all benefit from the principled application of mainstream economic theory to these questions.

The following comments are organized in three parts: (1) general observations and comments, (2) observations on the four charges to the SAB's Illegal Competitive Advantage Economic Benefit Advisory Panel and (3) comments on the four categories of cases that assertedly could involve illegal competitive advantage, according to the White Paper titled "Identifying and Calculating Economic Benefit that Goes beyond Avoided and/or Delayed Costs." We are particularly pleased with the thoughtfulness of the White Paper, which EPA intends to use to focus the deliberations of the Panel, and agree that it provides a useful frame of reference.

The following brief summary of the history of the issue will help set the panel's charge, and our comments, in context. On February 16, 1984, in EPA General

¹ The Manufacturers Ad Hoc Group comprises the Alliance of Automobile Manufacturers, the American Chemistry Council, the Corporate Environmental Enforcement Council, the National Association of Manufacturers and the National Ready Mixed Concrete Association. A more detailed description of each organization in the Group can be found in Exhibit A, which follows the text of these comments. Most of these organizations or their predecessors belonged to one or both of the "Ad Hoc Group," which responded to EPA's solicitation for public comments on the Agency's program of recovery of economic benefit at 64 Fed. Reg. 32948 (1999), and the "BEN Coalition," which responded to an earlier EPA notice published at 61 Fed. Reg. 53026 (1996).

Enforcement Policy # GM-22,² the Agency identified three types of economic benefit that could result from noncompliance with environmental requirements:

- benefit from delayed costs (i.e., economic benefit that results from the delay in incurring a capital cost or a one-time expense necessary for compliance);
- benefit from avoided costs (i.e., compliance costs completely avoided due to noncompliance, such as savings of operations and maintenance expenses due to the failure to operate pollution control equipment during a period of noncompliance); and
- benefit from improvements in a firm's competitive position ("situations in which noncompliance allows the violator to provide goods or services which are not available elsewhere or are more attractive to the consumer"³).

EPA addressed the first two categories of economic benefit in 1984 when it developed "BEN," an after-tax, discounted cash flow model designed to calculate the present value of delayed and/or avoided compliance costs. The BEN model has become a core element of EPA's civil enforcement program, and is also widely used by states. One key aspect of BEN has been controversial for many years – the use of the corporate "weighted average cost of capital" (WACC) as the single interest factor to use both for discounting all cash flows back to the date of noncompliance and for adjusting calculated economic savings from the past to the present.^{4,5} BEN's other conceptual underpinnings

² EPA, "A Framework of Statute-Specific Approaches to Penalty Assessments: Implementing EPA's Policy on Civil Penalties" (General Enforcement Policy # GM-22)(Feb. 16, 1984), at 10.

³ *Id.* The "Framework" provided five examples of "benefit from competitive advantage": (1) selling banned products; (2) selling products for banned uses; (3) selling products without required labeling or warnings; (4) removing or altering pollution control equipment for a fee (e.g., tampering with automobile emission controls); and (5) selling products without required regulation or premanufacture notice under the Toxic Substances Control Act.

⁴ As discussed in Part II.D below, the Manufacturers Ad Hoc Group believes this issue is outside the Panel's charge. For a succinct summary of the controversy, however, see Robert H. Fuhrman, "The Role of EPA's BEN Model in Establishing Civil Penalties," 21 *Environmental Law Reporter* 10426 (May 1991), and Stewart C. Myers, *et al.*, "The BEN Model and the Calculation of Economic Benefit"(March 1997), a paper submitted to EPA's Public Docket on the Calculation of the Economic Benefit of Noncompliance in EPA's Civil Penalty Enforcement Cases (prepared on behalf of the BEN Coalition and the Synthetic Organic Chemical Manufacturers Association). Dr. Myers is the Gordon Y. Billard Professor of Finance at the Sloan School of Management at the Massachusetts Institute of Technology. Among other distinctions,

have not proven to be similarly controversial. In response to comments from industry groups and others, EPA has made several changes to BEN over the years to bring it more into line with economic theory, to enable greater use of case-specific information and to improve its user-friendliness.

By way of contrast, over the last twenty years EPA has experienced much more difficulty in attempting to expand upon its initial ideas concerning ICA. To date, EPA has not developed adequate guidelines for identifying situations in which ICA may occur, or sound analytic tools for calculating economic benefit related to ICA.⁶

On June 18, 1999, EPA published a notice in the *Federal Register* that, among other things, solicited public comments on EPA's then-current views concerning situations in which noncompliance allegedly might lead to "wrongful profits" and/or "illegal competitive advantages."⁷ The notice provided six scenarios in which EPA argued that ICA could occur and in which BEN would not be adequate to calculate economic benefit.⁸

he is also co-author of the widely used textbook *Principles of Corporate Finance* and a past president of the American Finance Association, a professional association of financial economists.

⁵ The use of WACC as the interest forward rate has been litigated in several cases, with different courts reaching different and inconsistent conclusions. See, e.g., the recent decision in *United States v. Allegheny Ludlum Corporation*, 366 F.3d 164 (3d Cir. 2004), in which the Third Circuit Court of Appeals rejected use of WACC as calculated by the government's expert witness. The court also recognized the "risk-free rate" based on U.S. Treasury bills as a viable option for the district court to consider on remand.

⁶ In an effort to formulate screening criteria for ICA, EPA in 1999 added a button to BEN's input screen that requires the model's users to consider six questions allegedly indicative of ICA. Some of these questions (e.g., "Does the violator sell products that can develop 'brand loyalty' or high switching costs?" and "Has violator developed or sold new products or services while in noncompliance?") are too unfocused to be of much help to EPA staff in identifying cases involving ICA.

⁷ "Calculation of the Economic Benefit of Noncompliance in EPA's Civil Penalty Enforcement Cases," 64 Fed. Reg. 32948 (June 18, 1999). This notice used the terms "wrongful profits" and "illegal competitive advantage" as if they were synonymous. In recent years, Agency officials have simply referred to "illegal competitive advantage."

⁸ Those six scenarios fit into four general categories of situations: (1) violator sells products prohibited by law; (2) violator initiates construction or operation prior to government approval; (3) violator sells products below market price; and (4) violator operates at higher capacity than legally authorized.

On September 30, 1999, the “Ad Hoc Group” (composed of nine trade associations and one other entity representing various important segments of U.S. industry) submitted comments to EPA responding to various aspects of the June 18, 1999 notice. In summary, the Ad Hoc Group found much of the notice’s discussion of ICA to be flawed and inconsistent with mainstream economic and financial theory.⁹ The Ad Hoc Group found that most of the hypothetical situations identified by EPA actually concerned delayed and/or avoided compliance costs, rather than ICA. The Ad Hoc Group concluded in these situations it would be entirely sufficient to use the BEN framework of delayed-and-avoided-costs to calculate economic benefit.¹⁰ Nonetheless, the Ad Hoc Group agreed that EPA had identified a few, limited instances in which ICA might result from noncompliance and for which it would be sensible to perform economic benefit assessments outside of BEN’s analytic paradigm. The Ad Hoc Group noted, however, that these instances were not always susceptible to reliable identification or measurement using standardized methodologies such as BEN.

⁹ To facilitate the Panel’s deliberations, a copy of the Ad Hoc Group’s September 30, 1999 comments is attached as Exhibit B.

¹⁰ According to page 6 of the Ad Hoc Group’s comments:

Those examples fail to conform to, and reveal a basic misunderstanding of, mainstream financial and economic theory. Quite simply, if there is really a “competitive advantage” to be obtained (such as increased market share), rational competitors would make the expenditures necessary to obtain that advantage, regardless of whether they were also undertaking all required pollution control expenditures. Stated another way, if an investment would provide a competitive advantage when a regulated entity is out of compliance, that same advantage can almost always be obtained when the firm is in compliance.

The Ad Hoc Group was not alone in reaching these conclusions. According to the public comments submitted on September 30, 1999 by the Mercatus Center (the Regulatory Studies Program of George Mason University), “We caution that some of the scenarios EPA presents under this heading (‘illegal competitive advantage’) reflect benefits that are already captured by EPA’s existing model. Further, they do not really reflect ‘competitive advantage’ in the standard use of that term because they do not depend on, or necessarily affect, competition.” (This passage is quoted from the summary that appears before page 1 of the Mercatus Center comments.)

EPA's White Paper is better reasoned than the 1999 Federal Register notice. For example, the White Paper states that an analysis of the least-cost means of compliance captures the full economic benefit of noncompliance in all but a few limited circumstances where the violator:

- sells products or services prohibited by law;
- initiates construction or operation prior to government approval; or
- operates at higher capacity than it legally could have.

While we offer comments below on all three of these circumstances, our most significant area of concern is the White Paper's linkage of ICA to gains in a firm's market share during a period of noncompliance.

II. GENERAL OBSERVATIONS AND COMMENTS

A. Least-Cost Means of Compliance

The White Paper correctly concludes that economic benefit should be calculated based on the least-cost means of compliance. That principle was upheld by the U.S. Court of Appeals for the Third Circuit in its April 28, 2004 decision in *United States v. Allegheny Ludlum Corporation*, 366 F.3d 164 (3d Cir. 2004). As stated on page 12 of the White Paper, "*the existence of less economically rational compliance options is universal to all cases, yet irrelevant to economic benefit.*" (Emphasis added.)

B. Double-Counting

The White Paper correctly concludes that penalty amounts should not be based on double-counting; that is, use of both EPA's delayed-and-avoided-cost methodology,

which is incorporated in BEN, and separate methods intended to calculate ICA for identical violations.

On March 3, 1997, the BEN Coalition (a group of eleven trade associations and one other entity representing various important segments of U.S. industry) submitted to EPA's Public Docket on Calculation of Economic Benefit a paper written by Ernest Gellhorn arguing that EPA recovery of both avoided costs and ICA would be contrary to the principles of compensatory damages, would deter socially valuable output, and would raise serious constitutional questions.¹¹

To avoid such double-counting, and to provide fair and equitable treatment to the regulated community,¹² it is proper that the economic benefit component of the penalty reflect the analytic methodology that produces the lowest economic benefit result based on full use of the available facts.¹³ In most cases, this means that EPA should primarily rely on its delayed-and-avoided-cost methodology. It should calculate economic benefit without use of BEN only when an ICA-related methodology is the sole analytic approach adequate for calculating economic benefit in a given situation.¹⁴

¹¹ Mr. Gellhorn is a law professor at George Mason University, and is co-author of *Administrative Law and Process* (4th ed. 1997). To facilitate the Panel's deliberations, a copy of Professor Gellhorn's paper, "Measuring the Economic Benefit of Noncompliance with Environmental Requirements," is attached as Exhibit C.

¹² See page 4 of "EPA's Policy on Civil Penalties" (EPA General Enforcement Policy #GM-21)(Feb. 16, 1984).

¹³ Under EPA penalty policies, a penalty can always be increased due to "gravity component" of the penalty (i.e., the seriousness of the violation, the history of the violations, and/or the recalcitrance of the violator).

¹⁴ A case need not fall exclusively into one or the other of these categories. There may be situations where it is appropriate -- within the same case -- to use BEN to model certain violations, or specific aspects of some violations, but more appropriate to utilize ICA analytic methods for other violations or aspects thereof. Consider, for example, the following hypothetical. Without having to install additional pollution control equipment, Company X's sole manufacturing facility can operate at 80 percent of full capacity each day and comply with all applicable environmental requirements. No control technology exists that would enable the facility to operate at more than 95 percent capacity on any day. For a certain number of days, to meet a surge in market demand, the facility operates at between 80 and 100 percent of full capacity. To calculate economic benefit for the time periods the facility operated between 80 and 94.99 percent capacity, EPA could employ its standard avoided-cost methodology based on daily rental of pollution control

C. Approach to ICA Quantification Techniques

The Manufacturers Ad Hoc Group supports the goals articulated in the White Paper for quantification of ICA: (1) information collection and analysis should be straight-forward, and (2) the analysis should be clear and defensible. In practice, however, these goals may be difficult to accomplish.

The Panel should be aware that EPA enforcement staff members typically have very limited training in economics and/or corporate finance, and hence may misinterpret the Panel's findings and recommendations, or find them difficult to implement. Therefore, it is important that the Panel be precise in its findings and recommendations, and to focus particularly on whether those recommendations are amenable to being implemented by standard methodologies that could routinely be used by EPA enforcement staff.

If the Panel recommends analytic methodologies that require detailed knowledge of economics or corporate finance, it should consider the potentially substantial additional resources that would be required for EPA to implement these methodologies. (Additionally, the Panel should be aware of the burdens it might place on the regulated community.) For example, in the context of discussing ICA allegedly related to “persisting [sic] market share gain,” page 15 of the White Paper states that the 1992 *Horizontal Merger Guidelines* issued by the U.S. Department of Justice and the Federal Trade Commission may provide assistance in examining the economic benefit.¹⁵ Such

equipment, assuming that was the least cost means of compliance that a rational business would undertake to remain in compliance during that time period. Using an alternative approach, EPA would calculate excess net profits on all units produced due to operations in excess of 95 percent of daily capacity.

¹⁵ It goes on to state in parentheses: “Note however that the complete analysis, as well as many anti-trust issues, as outlined in the *Merger Guidelines* are generally irrelevant to economic benefit, e.g., consumer benefits of a price reduction.” *Id.*

advice is not very specific, nor is it particularly useful. On the other hand, if the Panel were to recommend use of a specific economic technique -- say, calculation of Herfindahl-Hirschman Indexes -- that recommendation would be particularly useful when combined with a discussion of the appropriate use and possible misapplication of that technique.

D. References to BEN's Interest Forward Rate Methodology

The Manufacturers Ad Hoc Group disagrees with specific statements concerning BEN's interest forward rate methodology contained on page 13 and elsewhere in the White Paper. BEN's approach to selecting the appropriate interest forward rate is beyond the charge to the Panel, which is clearly limited to ICA. If EPA had intended to ask the SAB to address BEN's use of WACC, given the longstanding controversy attached to this issue, it should have requested a separate panel, or at least proposed a separate charge,¹⁶ and should have provided fair notice of its intent when it first solicited panel member nominations last year. (68 Fed. Reg. 46604 (Aug. 6, 2003)). An instruction to comment on this subject cannot reasonably be read into the third formal charge to the Panel: "Are there any suggestions for modifying the described analytical approach to calculate economic benefits?"¹⁷

¹⁶ In 2001, the last time EPA asked the SAB to look into economic benefit issues, EPA bifurcated its request into two separate proposed projects: (1) SAB Project #01-35, "Changes to the BEN Model," and (2) SAB Project #01-36, "Determining the Benefit Derived from an Illegal Competitive Advantage." (These projects were cancelled before any meetings occurred.) At the time, EPA clearly viewed issues such as use of WACC as analytically distinct and equally momentous as issues of ICA.

¹⁷ Should EPA, the SAB, or the Panel disagree, we would suggest that the Panel consider, at minimum, public comments already provided to EPA on this subject, including the document by Stewart C. Myers *et al.* cited in footnote 4 above; various documents related to EPA's 1988 and 1991 consultations with professors of finance on the "discount rate" question, which were released to the public only in 1997; and various relevant judicial decisions, including the recent Third Circuit decision in *United States v. Allegheny Ludlum Corp.*, 366 F.3d 164 (3d Cir. 2004).

E. Optimal Deterrence Theory

As discussed in the Panel's July 12, 2004 public conference call, in partial fulfillment of the Panel's charter, some Panel members are interested in considering the applicability of certain notions discussed in the literature on optimal deterrence theory. According to that literature, if there is, say, a 50 percent probability that the noncompliance in a given case would go unnoticed and no penalty would be paid, the violator should have to pay twice the economic benefit as a penalty, thereby eliminating potential violators' incentives to disobey the law.

During that conference call, Jonathan Libber, EPA's "BEN model coordinator," discussed several reasons for thinking that this might not be a worthwhile idea, including the reluctance of some courts to impose such penalties and violators' possible perceptions that the less effective government enforcement is, the more harshly they will be punished.

Pages 3 through 5 of Professor Gellhorn's paper (*see* Exhibit C) are particularly relevant to this discussion, and should be reviewed by interested Panel members. We also recommend that interested members review one of the articles referenced in footnote 5 of the Gellhorn paper, an article by Michael Block and George Sidak titled "Why Not Hang a Price Fixer Now and Then?," 68 *Georgia Law Journal* 1131 (1980).

F. Issuance of a Draft Set of Conclusions and Recommendations

The Manufacturers Ad Hoc Group recognizes that a public teleconference is planned for September 22, 2004 "to complete the draft advisory report of the ICA EB Report."¹⁸ It would be useful for the Panel to share its draft views with interested members of the public prior to that teleconference and to solicit further public comments in a timely manner.

¹⁸ 69 Fed. Reg. 35599 (June 25, 2004).

III. COMMENTS ON THE FOUR ASSIGNMENTS TO THE SAB PANEL

A. Charge # 1: “Are there any categories of cases that would be useful for EPA to consider in calculating the ICA economic benefit, other than those that are identified in the White Paper? Should any of these categories be combined?”

We disagree with the assertion that all of the categories of cases discussed in the White Paper should be considered when screening for potential ICA. Based on our review of the White Paper and the document submitted by the Ad Hoc Group to EPA in 1999 (see Exhibit B), credible arguments can be made to justify review of the following categories of cases for possible ICA:

- Situations involving the sale of an illegal or prohibited product;
- Situations in which there is a true “early mover” advantage, such as when no company could legally obtain a permit at a given time but nevertheless one went ahead with commercial operations; and
- Situations in which a company had an enforceable production limit that could not under any condition be modified or removed (or situations in which it was not technologically feasible to manufacture goods above a certain production level and still achieve compliance), and that limit was exceeded.

The White Paper has not provided adequate justification for screening cases for ICA where a company’s sales have increased during the period of noncompliance. According to page 5 of the White Paper: “By underpricing its competitors while in noncompliance, [a violator] can gain additional market share.” However, the White Paper provides scant support for this generalization. In fact, it goes on to undercut that statement, saying:

Specifying in advance the circumstances that would lead to market share gains from noncompliance is extremely difficult. (Page 6.)

and

In most cases, the compliance costs' magnitude is not sufficient to create a significant change in cost structure and pricing. Furthermore, most compliance costs – whether capital investments or annually recurring costs – are of a generally fixed nature, invariant to production levels (with a certain broad range) and hence not affecting variable production costs. Even if cost structure and pricing changes do occur, a violator's compliant competitors may still be able to match its price-reduction strategies. (Page 6.)

Of the six hypothetical examples of potential ICA provided in the White Paper, only Example # 1 seems to relate to gains in market share allegedly attributable to noncompliance. That hypothetical describes a violator that competed for a cost-plus-fixed-fee government contract. The violator has a cost advantage over its competitors due to an episode of noncompliance unknown to the government agency and perhaps even to the company itself. As a result of the compliance costs it failed to incur, the violator is the successful least-cost bidder and wins the contract.

Stated simply, even assuming that being the least-cost provider was the sole criterion for being selected, Example # 1 is so atypical that it is unlikely such a situation would ever arise in an environmental civil penalty case. Rather, the overwhelming majority of cases will not raise any market share concerns. In his remarks to the Panel on the July 12, 2004, EPA's Jonathan Libber stated that he was unaware of any decided cases in which EPA had advanced a market share theory of economic benefit. This is not due simply to the failure of Agency staff to think creatively. As we expect the Panel will recognize: (1) many firms have multiple product lines, thus complicating EPA's ability to identify or prove any nexus between market share gains and ICA; (2) most firms expand their market shares when they can, regardless of their compliance status; (3) most firms do not need savings from noncompliance to finance their competitive behavior in the

market place; and (4) market responses by competitors are likely to remove any significant potential for ICA.

For “increased market share during noncompliance” to be recommended as a category of cases for which EPA should screen for ICA, a more robust, persuasive example -- and a better explanation of its nexus to ICA -- must be provided.¹⁹ Lacking such an example and nexus, this category should be dropped,²⁰ thereby reducing the potential for unproductive and resource-intensive enforcement “fishing expeditions” in which companies might be required to provide highly-confidential market share information.

B. Charge # 2: “How can the Agency more accurately characterize the types of cases that are described in the White Paper? Have any of the examples and counter-examples in the White Paper been misidentified with respect to whether they are amenable to the BEN model’s simplifying paradigm?”

The four categories used in the White Paper are adequate for purposes of guiding the Panel’s deliberations. Assuming that the Panel is going to recommend categories of violations that EPA should screen for ICA, it would be useful for those categories to be

¹⁹ The Manufacturers Ad Hoc Group is aware of two law review articles, both written by people who were at one time government environmental enforcement attorneys, purporting to provide examples linking ICA to gains in market share. The examples provided in those articles are both unpersuasive and inconsistent with mainstream economic and financial theory. Members of the Panel may develop their own conclusions about the articles: (1) Charles Garlow and Jay Ryan, “A Brief Argument for the Inclusion of an Assessment of Increased Market Share in the Determination of Civil Penalty Liability for Environmental Violations: Letting Corporations Share the Regulatory Burden of Policing Their Markets,” 22 *Boston College Environmental Affairs Law Review* 27-28 (Fall 1994); and (2) Lynn M. Dodge, “Economic Benefit in Environmental Civil Penalties: Is BEN Too Gentle?,” 77 *University of Detroit Mercy Law Review* 543-54 (Spring 2000).

²⁰ In considering whether EPA should attempt to calculate and recover ICA associated with gains in market share allegedly attributable to noncompliance, the Panel should bear in mind that federal and state law provide other avenues (*e.g.*, the Federal Trade Commission Act and various state trade commission acts) for penalizing companies that engage in unfair trade practices. These laws are enforced by agencies that have a history of evaluating potential unfair practices through joint efforts of expert economists and enforcement staff.

properly focused. For screening purposes, the Panel should adopt language similar, if not identical, to that provided in the three bullets included under Part III.A above.

Regarding Example # 3, which describes a noncompliance situation involving a telecommunications company, the identified fact pattern does not appear to make sense -- the causal relationship between the date when the specific type of cable came into existence and the impossibility of obtaining the dredging permit “on time” is unclear. Therefore, it is not possible to determine whether BEN would be capable of adequately calculating the economic benefit in that case.

Nonetheless, if for some regulatory, technological, or physical reason, it was clear that *no* company could obtain a permit soon enough to be the first to achieve market penetration, but one company jumped ahead of the others and started to operate without a permit, it may be appropriate to examine the possibility that the company obtain ICA. In such a circumstance, we agree that it might be necessary to use analytic tools other than BEN to place a monetary value on “early mover” ICA. It is, however, unclear whether Example # 3 and, by extension, Example # 4, which builds on the same fact pattern, reflect such circumstances.

C. Charge # 3: “Are there any suggestions for modifying the described analytic approach to calculate the economic benefits?”

We offer the following suggestions regarding the various analytical approaches discussed in the White Paper.

1. Interest forward

As noted in Part II.D above, BEN’s interest forward rate methodology is outside the intended scope of the formal assignments EPA has provided the Panel.

2. Illegal market share

In Part III.A of our comments, we stated that the category “violator gains additional market share” is inappropriate for ICA screening purposes. Thus, we will not comment on the White Paper’s suggestion concerning how ICA might be calculated for the extremely rare fact pattern discussed for Example # 1, and we recommend that the Panel disregard it as well. If the Panel disagrees, it should be very specific about the analytic approach it would recommend for calculating ICA due to “unfair” gains in market share and the circumstances in which such gains might be anticipated to occur.

To the extent the Panel concludes there may be persistent gains in market share due to noncompliance (which we doubt), the Panel should provide EPA with a methodology for quantifying such economic benefit from the appropriate noncompliance date through the foreseeable end of the period in which such gains will be obtained.

3. Higher capacity

The White Paper’s analytic approach concerning the category “violator operates at a higher capacity than it should have” requires refinement to make it consistent with the logic expressed on page 18 of the White Paper. Depending on the fact pattern in a given case, there may be circumstances in which it is appropriate to analyze the economic benefit obtained due to illegally operating at higher capacity solely based on the delayed-and-avoided-cost approach incorporated in BEN (i.e, situations in which installation of additional pollution controls would have enabled the violator to achieve compliance), or solely in terms of excess net profits (i.e., situations not amenable to such an approach), or through a combination of methods (such as in the situation described in footnote 14).

4. Overhead costs

We do not find the White Paper to be helpful in understanding how overhead costs should be treated in the situations it discusses on pages 14 and 16 (i.e., situations involving “gains in market share” and “selling products or services prohibited by law”). The Panel should explicitly address this issue in any relevant findings, recommendations, or guidance it provides to EPA. In particular, the Panel should explain the circumstances in which it is appropriate to consider an apportionment of overhead costs in ICA-related economic benefit analyses and how that apportionment should be determined.²¹

D. Charge # 4: “The Agency’s proposed approach strives to avoid any double counting of the benefit by laying out all the relevant cash flows stemming from the violations, as opposed to simply adding on the additional calculations to a BEN run. What additional measures (if any) should the Agency put in place to avoid such potential double-counting?”

We welcome the White Paper’s sensible approach to this issue. There should be no double-counting of economic benefits. The way to avoid double-counting is to rely on the delayed-and-avoided-cost method with the least-cost means of compliance except in cases where such an approach is not applicable due to the relevant fact pattern.

²¹ According to Jerold L. Zimmerman, *Accounting for Decision Making and Control* (1995) at page 288, “The allocation of overhead has received more attention than any other cost accounting topic and has been a hotly debated problem since accountants have been recording indirect expenses. One commentator (C. Thompson) writing in 1916 described the situation as follows: ‘Indirect expense is one of the most important of all the accounts appearing on the books of the manufacturer. Methods of handling [its allocation] have given rise to more arguments than the problem of the descent of man. It is the rock upon which many a ship of industry has been wrecked.’” At page 313, Dr. Zimmerman also states: “When analyzing joint costs, the fundamental point to remember is that *any joint cost allocated to final products is meaningless for assessing product line profitability.*”

IV. COMMENTS ON THE FOUR CATEGORIES OF SITUATIONS THAT MAY GIVE RISE TO ICA IDENTIFIED IN THE WHITE PAPER

A. Violator Gains Additional Market Share

Page six of the White Paper states that “[t]he Agency presumes that these situations [i.e., ones involving ICA related to increases in market share] do not arise very often.” This is correct.

As stated in Part III.A of these comments, this category should be dropped because it has not been demonstrated that episodes of noncompliance, by themselves, are likely to lead to increases in market share that justifiably should be considered ICA. As discussed there, it is always or almost always unlikely to occur. Furthermore, Example # 1, which supposedly falls in this category, is simplistic and not illustrative of a whole category of circumstances that might lead to ICA. Retention of this category may well lead to unproductive and potentially costly misapplications of the tools of economic analysis.

Counter-Example # 1, in which a noncompliant auto shop could generate the same level of revenues either in a complainant or noncompliant state, is a clear example of a situation in which BEN can correctly calculate the economic benefit obtained due to noncompliance.

The screening questions listed at the bottom of page 7 of the White Paper are not helpful. Those questions do not address the causal nexus between violations and gains in market share during periods of noncompliance.

Should this category be retained, it is incumbent on the Panel to identify screening criteria to assist EPA in identifying cases for possible ICA-related gains in market share.

B. Violator Sells Products or Services Prohibited by Law

Regarding the sale of products or services prohibited by law, it is appropriate to associate this category of cases with situations in which ICA might arise. However, this situation is unlikely to occur on a frequent basis.

We have no particular comments to offer regarding Example # 2 and Counter-Example # 2, except to note that they appear to be sensible.

Page 9 of the White Paper includes statements concerning a developer who fills a protected marsh. The White Paper suggests that “if no other sufficiently comparable shoreline land was available for development, then the case is beyond BEN’s scope.” This scenario, however, is not fully developed. The possibility of creating a new wetland as an offset should be considered when calculating economic benefit in such a case. This remedy is the most common basis for injunctive relief and/or settlement of similar cases when addressed by EPA and the U.S. Department of Justice. This remedy is also perfectly amenable to a delayed and avoided cost analysis -- i.e., the delayed and avoided costs of creating an equivalent wetland at the time the original one was filled.

C. Violator Initiates Construction or Operation Prior to Government Approval

Regarding Example # 3 and Example # 4, we have already pointed out in Part III.B above that we do not understand the relevant fact patterns described in the White Paper. It is very important to identify whether the facts in a given case really demonstrate that the violator has obtained ICA or whether it is simply appropriate to calculate economic benefit based on consideration of delayed and avoided costs. The Panel should attempt to focus EPA’s attention on how to make that determination by providing either better examples or better guidance.

In the context of “early mover advantage,” among other issues, we are concerned about the potential use of post-violation market share information as an indicator of what the market should have been in the absence of such a violation. The Panel should provide guidelines that focus primarily on “wrongful profits” during the period in which compliant competitors could not have legally competed in the relevant market and, if the fact pattern is credible, during a reasonable “catch-up” period during which normal competitive forces eliminate any residual ICA. Attempts to focus on a more long-lasting “illegal market share advantage” based on brand loyalty and switching costs will be difficult to prove and unlikely to occur in foreseeable situations. If the Panel disagrees, it should identify appropriate screening questions and provide a realistic methodology for analyzing such ICA.

We agree with the discussions of Counter-Examples 3 and 4 in the White Paper.

D. Violator Operates at a Higher Capacity Than It Should

If there is a legally-imposed production limitation, avoided compliance costs are not at issue. This is contrary to the formula that appears on page 18 of the White Paper, but consistent with the last paragraph on that page. Instead, the incremental revenue obtained due to the excess production minus the incremental costs associated with that excess production are the only relevant cash flows that should be considered in the ICA benefit analysis.

We generally agree with Example # 5, but it is an incomplete hypothetical. If the excess tonnage produced by the rock crushing facility legally could have been obtained from another facility owned by the same company or if it could have been obtained through purchases from another company, it is arguable that the economic benefit must

be calculated based on the differential costs of obtaining the excess tonnage from alternative sources.

Regarding Counter-Example # 5, which describes a manufacturer whose air emissions could be brought into compliance either by cutting back production or by installing pollution control equipment, we agree that the economic benefit should be calculated based on the least-cost means of compliance. As described in Counter-Example # 5, production curtailment was an inferior option by which that firm could have achieved compliance. It should therefore be disregarded for calculation of economic benefit.

The “extreme counter-example” in the last paragraph on page 19 of the White Paper makes an important point. It reads:

Under an extreme counter-example, the terms of a new permit place a company’s existing production levels in noncompliance. It can comply either by slashing production 50 percent, or by purchasing a replacement part at the local hardware store for a dollar. In this case a company continuing at full production rates has an economic benefit based only on the avoided cost of one dollar. The company has also produced 100 percent more than it would have had it attempted to comply without the one-dollar part, but this is irrelevant, since if the company had purchased the part it still would have been able to continue at the higher production level in a compliant manner.

This counter-example describes a fact pattern very similar to the one in *United States v. Municipal Authority of Union Township and Dean Dairy Products d/b/a Fairmont Products*,²² which resulted in a judicially-imposed civil penalty based on revenues that would have been foregone if production had been cut back to compliant levels, rather than on the delayed and avoided costs of installing additional pollution control equipment on time. In *Dean Dairy*, the production curtailment was clearly the

²² 929 F. Supp. 800 (M.D. Pa. 1996), *aff’d*, 150 F.3d 259 (3d Cir. 1998).

inferior compliance option.²³ Indeed, as EPA and the defendant stipulated in that case, the defendant actually paid more in user fees to the local sewer treatment plant, based on its noncompliant discharges, than it would have paid if it had timely installed and operated the onsite wastewater pretreatment plant that it ultimately installed.

In the interest of promoting clear and consistent thinking – and Agency action – in this important area, it would be helpful if the Panel would:

- confirm the White Paper’s categorization of this fact pattern as an example of delayed and avoided costs, rather than one of illegal competitive advantage, and
- state that, as a matter of economics, the *Dean Dairy* case was wrongly decided.

V. CONCLUDING REMARKS

The Manufacturers Ad Hoc Group appreciates the effort and insights that went into developing the White Paper. We are generally very pleased with its content.

We urge the Panel to carefully consider our comments, and are optimistic that the Panel’s work and any guidance it may provide will be of benefit to EPA, the general public, and the regulated community. We look forward to working with the Agency as it considers how to implement the Panel’s recommendations.

²³ See 150 F.3d at 262. See *also* Kenneth T. Wise and M. Alexis Maniatis, “Government Expands Economic Benefit Concept Using Flawed Theory in ‘U.S. v. Dean Dairy,’” *Toxics Law Reporter* (Feb. 19, 1997), pp. 1046 to 1048.

Exhibit A

Membership of the Manufacturers Ad Hoc Group

Alliance of Automobile Manufacturers

The Alliance of Automobile Manufacturers is a trade association of nine car and light truck manufacturers, including BMW Group, DaimlerChrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota and Volkswagen. One out of every 10 jobs in the U.S. is dependent on the automotive industry. No other industry is linked to so much U.S. manufacturing or generates more retail business and employment. Formed in 1999, the Alliance serves as a leading advocacy group for the automobile industry on a range of public policy issues. Open to all new car and light truck manufacturers, this industry association is especially committed to improving the environment and motor vehicle safety. Through the Alliance, members are able to convey this commitment as well as the industry's accomplishments and its positions on issues to the public, government, media and other interested parties.

American Chemistry Council

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a \$460 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for ten cents out of every dollar in U.S. exports. Chemistry companies invest more in research and development than any other business sector. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.

Corporate Environmental Enforcement Council

The Corporate Environmental Enforcement Council (CEEC) is an organization of corporate counsel and environmental professionals representing over 30 major companies from a wide-range of industrial sectors. CEEC focuses exclusively on civil and criminal environmental enforcement policy issues and activities by providing a forum for review and discussion of such issues and developing constructive recommendations to executive and legislative environmental enforcement policymakers.

National Association of Manufacturers

The National Association of Manufacturers (NAM) is the nation's largest industrial trade association. The NAM represents 14,000 members (including 10,000 small and mid-sized companies) and 350 member associations serving manufacturers and employees in every industrial sector and all 50 states. Headquartered in Washington, D.C., the NAM has 10 additional offices across the country. The NAM's mission is to enhance the competitiveness of manufacturers and to improve American living standards by shaping a legislative and regulatory environment conducive to U.S. economic growth and to increase understanding among policymakers, the media and the public about the importance of manufacturing to America's economic strength.

National Ready Mixed Concrete Association

The mission of the National Ready Mixed Concrete Association (NRMCA) is to provide exceptional value for our members by responsibly representing and serving the entire ready mixed concrete industry through leadership, promotion, education, and partnering to ensure ready mixed concrete is the building material of choice. A recent adaptation in our efforts includes the promotion of ready mixed concrete as environmentally friendly product. Additionally, we promote ready mixed concrete as a sustainable material since it can be reused as aggregate in new concrete. NRMCA actively encourages its members to adopt environmental excellence through our Environmental Short Course and the Environmental Excellence Awards. Goal 1 in the NRMCA Strategic Plan includes the following statement:

*Promote environmental stewardship within
the ready mixed industry that is proactive and
follows a “Good Neighbor” community approach.*

Through the Plant Certification Program, more than 900 plants current hold NRMCA certification, which attests to peak performance and environmental integrity. NRMCA is further developing the plant certification concept through the implementation of an industry wide Environmental Management System and an auditing program.

NRMCA continues to endorse environmental excellence as an integral part of promoting ready mixed concrete as the building material of choice. We continually seek new technologies and methodologies to help our endeavor toward environmental stewardship. Producing, delivering and managing ready mixed concrete in an environmentally friendly manner is an integral part of our business.

Exhibit B

*Comments of the Ad Hoc Group on the
Calculation of Economic Benefit of Noncompliance
in EPA's Civil Penalty Enforcement Cases*

September 30, 1999

Exhibit C

Measuring the Economic Benefit of Noncompliance with Environmental Regulations

March 3, 1997

Ernest Gellhorn
Professor of Law
George Mason University Law School