

**U.S. Environmental Protection Agency  
Science Advisory Board  
Illegal Competitive Advantage (ICA) Economic Benefit (EB) Advisory Panel**

Summary Minutes of Public Meeting<sup>1</sup>  
August 5 & 6, 2004

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**Committee/Panel:** Illegal Competitive Advantage (ICA) Economic Benefit (EB) Advisory Panel of the U.S. Environmental Protection Agency's Science Advisory Board (SAB). (See Roster - Attachment A.)

**Date and Time:** August 5, 2004, 9:00 a.m. to 5:30 p.m. and August 6, 2004, 8:30 a.m. to adjournment at 12:17p.m. Eastern Time (See Federal Register Notice - Attachment B).

**Location:** U.S. Environmental Protection Agency, Science Advisory Board Headquarters, The Old Woodies Building, 1025 F Street, NW, Conference Room 3705, Washington, DC

**Purpose:** The purpose of this public meeting is to provide advice on the EPA White Paper, entitled "*Identifying and Calculating Economic Benefit that Goes Beyond Avoided and/or Delayed Costs,*" dated May 25, 2003, respond to the charge questions, and prepare an SAB draft advisory on the White Paper and charge (See Meeting Agenda - Attachment C).

**Attendees:** Panel members who were present include the following: Drs. A. Myrick Freeman, Dallas Burtraw, Mark Cohen, Jane Hall (via conference call), Michael Hanemann, Catherine L. Kling, Arik Levinson, Clifford Russell, Michael A. Salinger and David Sunding (See Attachment A); Dr. K. Jack Kooyoomjian (Designated Federal Official - SAB Staff), Dr. Vanessa Vu, SAB Staff Office Director; Dr. Holly Stallworth and Mr. Joseph Greenblott of the SAB Staff; Mr. Robert Kaplan, Director, Special Litigation and Projects Division, Office of Enforcement and Compliance Assurance (OECA) and Mr. Jonathan Libber, Senior Attorney and BEN/ ABEL Coordinator of OECA, were present. Members of the interested public present included Mr. James Conrad and Mr. Robert (Bob) Fuhrman with Seneca Economics and Environment, LLC (representing the American Chemistry Council and the Manufacturers Ad Hoc Group); Mr. John Flatley, Committee on European Economic Cooperation (CEEC)/U.S. Climate Partnership Association (CEEC/USCPA); Mr. Edward (Ed) Herbert, National Ready

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<sup>1</sup> NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by the SAB Panelists during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect definitive consensus advice from the Panelists. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters or reports prepared and transmitted to the EPA Administrator following the public meetings.

Mix Concrete Association, Inc.; Ms. Cheryl Hogue, American Chemical Society, (ACS)/Chemical & Engineering News; Mr. Jonathan S. Shefftz, Industrial Economics, Inc. (IEc - EPA Contractor to OECA); and Mr. Jasbinder Singh, President, Policy, Planning & Evaluation, Inc.

### **Meeting Summary:**

#### **Summary of Day #1 of Meeting:**

The meeting followed the issues and general timing as presented in the meeting Agenda, except where otherwise noted (see Meeting Agenda - Attachment C and marked-up Agenda - Attachment L). There were written and verbal comments submitted to the Panel, and they are summarized below.

**Welcome and Introductions:** Dr. K. Jack Kooyoomjian, Designated Federal Officer (DFO), opened the meeting at approximately 9:15 am with opening remarks (see Attachment M). He introduced himself as the DFO for the ICA EB Advisory Panel, provided background on this SAB review topic, as well as the panel selection process, indicating that this Panel operates under the requirements of the Federal Advisory Committee Act (FACA) and is chartered to conduct business under the SAB Charter. He explained that, consistent with FACA and with EPA policy, the deliberations of the ICA EB Advisory Panel are conducted in public meetings, for which advance notice is given.

He advised that the Panel received written public comments from the Manufacturers Ad Hoc Group (see Attachment H-1), and Mr. Jasbinder Singh (See Attachment H-2). He advised that the Panel may choose to conduct a technical editing session on their Advisory, and that may or may not be open to the public, depending on the logistics involved. He explained that he is present to ensure that the requirements of FACA are met, including the requirements for open meetings, for maintaining records of deliberations of the ICA EB Advisory Panel, and making available the public summaries of meetings, as well as providing opportunities for public comment. Dr. Kooyoomjian also commented on the status of this advisory panel's compliance with Federal ethics and conflict-of-interest laws and following the Panel Formation Process, as well as determinations made by the SAB staff and others pertaining to confidential financial information protected under the Privacy Act, and that each panelist has complied with all these provisions, that there are no conflict-of-interest or appearance issues for any Panel members, nor was any individual needing the granting of waivers or any recusals. He also advised that the biosketches of each Panelist are posted on the SAB website, and hard copies were being provided at this meeting (see Attachment I-5).

Dr. Kooyoomjian highlighted the review and background materials which had been provided to the Panel (see especially Attachments E & G) and noted that a complete set of materials was available for public access at the IEc website ([www.indecon.com](http://www.indecon.com)), and that there is additional background material, including the Federal Register notices pertaining to the invitation for nominations to the Panel and the announcement of the public meetings, as well as

the Panel selection memo on the SAB website. He reminded panelists that contacts with the Agency or public during the Panel's deliberative phase (i.e., prior to production of a consensus draft report) should involve the DFO, and while the Panel members may communicate with one-another, it is advisable to provide copies of all communications to the DFO to keep him in the loop, for communication with the other Panelists and for record-keeping purposes.

Dr. Vanessa Vu, Director of the SAB Staff Office provided brief welcoming remarks at 9:27 am. At 9:30 am, Dr. A. Myrick Freeman, Panel Chair, provided brief introductory remarks, focusing on organization of the day 1 and day 2 activities as outlined on the Agenda (see Attachment C). He highlighted the planned September 22 public conference call that will follow this meeting, and the Quality Review Committee (QRC) Process that will be undertaken by the SAB 's Board following the development of the advisory by this Panel. He then introduced himself and asked that the Panelists do likewise and voluntarily disclose how they relate to the topic under review. Dr. Jane Hall was on the telephone, and also introduced herself. The Panel conducted this exercise, and as earlier stated by the DFO, no party disclosed a conflict of interest or appearance of impartiality relating to the topic. Dr. Freeman also asked the Agency staff and the interested public to introduce themselves.

Mr. Robert Kaplan, Director of EPA's Special Litigation and Projects Division of OECA provided the Panel with a brief background and Overview of the Agency's regulatory needs (see Talking Points, Attachment F-1). He highlighted the Agency's policy on civil penalties from 1984 to the present, noting that the BEN model does an excellent job of capturing avoided or delayed costs. He brought up situations, such as an incinerator in New Orleans, LA which operated without a hazardous waste permit, and how a judge might value the non-competitive compliance activity. Another case cited was between 1984-1996 of a muffler shop that was replacing catalytic converters illegally. Since 1996, there have been a few cases, notably the Dean Dairy case. He felt that the Agency is on the forefront of broaching the issue, and OECA believes that to seek guidance from a peer review panel would be very helpful at this stage of the process. He referred the Panel to the themes in the White Paper (see Attachment E-3) noting that information collection should be simple, accessible, clear and defensible, and should be rigorously tested. He would like to see the development of a standard methodology for the Agency to get its arms around the issues.

A question and answer session followed Mr. Kaplan's presentation, pertaining to the extent of use of BEN. Such questions included the following: How often is the BEN model used? (perhaps 100 times/year by various parties); Do states and foreign governments use it? (yes they do, but its use has not been documented); Do private citizens use BEN? (yes, perhaps from 100's to 1,000's to deal with settlement and penalty situations). Following Mr. Kaplan's presentation, he then introduced Mr. Libber, Senior Attorney and BEN/ABEL Coordinator for OECA for an overview of the methodology issues with respect to the charge and for a more in depth presentation of the case study examples to the Panel.

Mr. Libber (see talking points, Attachment F-2) gave an overview and indicated that in the pre-BEN days, perhaps penalties were in the range of \$6 million/year. The first year of BEN

usage, the penalties were in the range of \$23 million/year. ...and the trend is up by millions of dollars/year. Discussions followed regarding shutting down facilities that operate without a permit or are not in compliance, and the need to develop better assessment tools. Discussions followed on the closure and post-closure issues of plants operating illegally. Examples were used, such as the cost of ash disposal. In some cases, the penalty is determined in avoided costs, or in added delays from government effectiveness. Mr. Libber gave an overview of four cases and related them to the White Paper dealing with three categories of costs (1) the Illegal Competitive Advantage (ICA), (2) Avoided Costs, and (3) Delayed Costs. He cited the inherent difficulties in the BEN revenue streams for the model to pick up. He touched on the charge questions (see Attachments C and E-2 and the text, below) and was concerned if the Agency has missed categories of ICA, and whether any could be combined; could examples or counter-examples be better described, and does the Panel have any suggestions for analytical approaches for each category, especially to avoid double-counting? Mr. Libber wove the case law into the Agency's 1984 penalty policy, citing the first case in 1989. He noted that the Agency has approximately 10 cases as illustrations to give context to the subject. Mr. Libber then presented the four charge questions as follows:

1. *Are there categories of cases that would be useful for the Agency to consider in calculating the ICA economic benefit, other than those that are identified in the White Paper? Should any of these be combined?*
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 regard to whether they are amenable to the BEN model's simplifying paradigm?*
3. *Are there any suggestions for modifying the described analytical approach to calculate the economic benefits, and;*
4. *The Agency's proposed approach strives to avoid double-counting of the benefit by laying out all 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?*

In the case studies, Mr. Libber started with the White Paper example #1 dealing with noncompliance with environmental laws and the competitor wins the bid. There are two types of ICA from that example. In Counter Example #1, the violator is using illegal disposal methods for its operations. A discussion followed and the Panel suggested that this is not a well constructed counter example. Some suggestions and counter examples were offered. The Panel suggested that market structure is more important than behavior (illegal). A discussion followed on the fact that most firms do not have unlimited resources, and that they alter their debt-equity ratios, etc. The Panel observed that issue of discount rate in the calculations of ICA and BEN is not part of the charge, but it could be important.

Additional examples followed in highly competitive environments with easy market entry, the hiring of recent graduates, etc. Also an example of remediating Superfund sites and identifying non-compliant companies who thereby receive an economic advantage was discussed. Examples were offered relating to shifts in market share and changes in profits. After some discussion, it was concluded by the Panel that market share is not as useful a category or measure as a change in profits.

Mr. Libber brought up the Louisiana Pacific case where the settlement penalty was \$11 million. Louisiana Pacific was able to capture 2% of the market, and the total value was \$400 million. Another case brought up by Mr. Libber dealt with the muffler shop, where people had the idea that the cars would run better without the catalytic converter. In this case, the judge based his decision on the ICA analysis. One Panelist posed the question ...”Suppose the muffler shop did its service for free?” A conversation followed and the Agency’s OECA staff observed that rarely does a judge assess net versus gross revenues or profits. Mr. Libber then introduced another case which dealt with a wetland which was converted to farmland, where the judge slapped on extra ICA for the sale of mint oil for \$2,500.

One Panelist brought up the Clean Water Act (CWA) cases which address different issues (e.g, Phoenix Construction). It was observed that judges are very comfortable in using ICA, but that one has to be careful to avoid double-counting, and to recognize relevant changes in cost. It was thought by the Panelists that they should try to make the cases easier, and to look for simpler solutions.

A discussion followed on the issue of civil penalty. The Agency has to show the judge that harm occurred (e.g., dead fish, etc.), and the judges are very receptive to the demonstration that harm actually occurred. Most companies are counting on the fact that they will not get caught (it was discussed that they actually assess the probability of detection in some fashion). A discussion followed on after-the-fact examples. For instance, a discussion followed pertaining to a plant that paid \$2.5 million to a municipality, rather than building a pre-treatment plant to handle the waste situation.

The Panel took a lunch break at 12:15 pm and reconvened at 1:15 pm.

The OECA presentations and Panel discussions on the case studies continued. Mr. Jonathan Shefftz of IEc (the EPA Contractor) presented selected excerpts of case studies, such as the case of cutting back production as a regulated alternative as suggested by the judge in a specific case. A discussion followed by the Panel on what would be a prescription of fairness, or “leveling the playing field.” The Panel discussed the rationale and approach to optimal penalties to achieve deterrence. It was recognized that the problem also lies in the ICA-type cases being different, and in the design of a policy to recapture the benefit achieved by the violator to level the playing field. A discussion followed on whether it was desirable to achieve absolute deterrence. The Panel concluded that they have been asked to critique a policy that has been put in place 20 years ago.

It was observed by the Panel that there is only a very small percentage of cases where we can document actual damage to the environment. In criminal law, there typically should be multiple and conflicting goals, and it was acknowledged that there is a blurry area between science and policy. However, the Panel observed that we can assess the logical implications of alternative policy choices.

A discussion followed on the Garlow & Ryan Paper dealing with the assessment of increased market share in the determination of civil penalty liability for environmental violations where corporations share in the regulatory burden of policing their markets. The Panel, in their discussions, assumes that the company eventually gets caught. It was observed by the Panel that in these cases things go wrong when non-economists get involved. The EPA Penalty Policy is not necessarily the full penalty the violating Company bears, and the full costs may also include other fines or penalties, damage to the firm's reputation, etc. Mr. Libber observed that there is no case law offsetting compliance with the remediation component, and that it is an open legal question what to do in these cases. He discussed the \$50,000 gain versus the \$1,000,000 cleanup issue.

The Panel observed that the question of economic gain needs to be reconsidered. An example was offered of a firm building on wetlands without a permit. While there is a gain, there is also the liability of the previous owners. Discussions followed with various compliance and non-compliance scenarios. The discussions included such topics as proper apportionment with the BEN model, catching people in non-compliance during partial reporting periods, cost allocation, overhead and compliance costs.

### **Public Comments:**

At approximately 2:30 pm, after the panel discussion, Dr. Freeman asked if there were any members of the public who wished to make any public comments. Mr. Robert Fuhrman of Seneca Economics and Environment, LLC, representing the American Chemistry Council (ACC) requested to speak (see Attachment H-1), but requested to defer to Day #2, because he just returned from his travels and was sleep deprived at this time. Also Mr. Jasbinder Singh, President of Policy, Planning & Evaluation, Inc. requested to speak on his own regarding this subject matter (see Attachment H-2). He offered his comments on his own behalf, and he indicated that he has worked on about 40 BEN cases and written 6 articles related to the topic. Mr. Singh has an economic and engineering background, and has visited the plants. He decided to highlight and focus upon 2 cases and has provided in his written comments highlights of over 30 cases. The ICA, in his view, has not been defined as to what it actually is. He is speaking on the point-of-view of the defendants, because he has previously represented such clients.

In the first case (Case #1 - see Attachment H-2), Mr. Singh presented a Plastic Parts Plant in Worthington, Ohio. In the 1980's the plant decided to be a Class I Business Supplier for parts for the automotive industry. As a matter of quality control, they had capacity to produce very high quality parts. Book value of the plant is about \$50 million U.S. dollars. A new plant has

approx \$6 million in expenditures, with approx \$2 million in pollution controls. The plant receives a violation notice pertaining to fewer pollution controls than are required. The Plant went to Chrysler to obtain funds for the pollution controls, and Chrysler said “no” to the higher costs. In this particular case, is there an overlap between ICA and the BEN model? It can’t be both. Can calculate ICA, or BEN, but not both.

Relating to Charge Question #1, is there an increase in the Market Share that has occurred? The answer is, “Yes!” In this case, Chrysler cancelled the contract after it was clear that the smaller contracting company had asked for a price increase to deal with the issue. Mr. Singh is troubled and concerned as to how these calculations will be done. How does EPA separate the reasonable decision factors? Length of the period of the increased market share is also a factor.

In the second case (Case #2), Mr. Singh discussed a paper mill (page 7 of his comments - see Attachment H-2), the company installed pollution control technology for \$1.2 million, even though they had serious doubts as to its effectiveness. The company installed additional new pollution control equipment costing over \$26 million. The background suggests that ICA should be calculated in a BEN-like format. Second issue is ..”What is the period of delay?” Perhaps we should consider how to characterize the “period of delay.” The procedure suggests that the profits are all ill-gotten, and this, in Mr. Singh’s view, is an unwise assumption. Mr. Singh identified issues of concern relating to ICA, namely that:

- 1) ICA should be defined accurately,
- 2) The methodology should be defined accurately,
- 3) It should be possible to implement the methodology in a consistent manner,
- 4) The application of the ICA methods must be applied in a relatively narrow range of estimates in each case,
- 5) The results should be reasonable when compared to cost of controls and penalties in general, and
- 6) The importance and availability of the “gravity” portion of the penalty should not be forgotten. Mr. Singh has no problem with the Agency going after the “gravity” portion.

The Panelists thanked Mr. Singh for a very useful presentation. The Panelists observed that a lot of cases end up with negative or no economic benefits, and then they have to start over again.

Mr. Singh gave another example of turbines, where the company did not go far enough for pollution controls. In retrospect, if they had spent \$200,000 or \$300,000 more, then they would likely have been in compliance. However, they took 10 years in their delays, and the retrofit ultimately ended up costing upwards of \$2 million. The Panel noted that in this case, the \$200,000 or \$300,000 they initially saved is the cost of the benefit, and the \$2 million should not be the relevant measure. The Panelists observed that this is no different than the cleanup costs in another case. Additionally, the gravity portion of the benefit is a relevant component. The firm admitted that they have been out of compliance all these years, because now they are caught.

The \$2 million may be worthwhile to consider. They may make significantly more profits for running the turbine while they are out of compliance. The penalty amount could easily be argued as the cost of cleanup (i.e., \$300,000) as the “status quo.”

Mr. Singh also gave another example relating to a natural resource damage issue. In this case, the range could be from \$5 million to \$10 million, and then we enter the process which he termed .....”*Let’s make a deal!*” The Panelists observed that his point is well taken, and that there is a clear need to tie penalties to profits, as well as to those other items that need to be considered. It clearly is not just the compliance costs.

One Panelist noted in the discussion by way of analogy, that if people created a traffic jam in the Lincoln Tunnel, then the lost income calculation could easily be used in the cost/benefit calculations, and would be considered a normal venue to calculate the costs & benefits. It could turn out in the empirical question that there could be a big range, however. In fact, it would not be unusual that the range can be 2 to 3 orders of magnitude. From the charge questions and from the economic perspective, we are assuming that we are trying to answer the question of ....”*What is the gain?*” The Panel additionally recognized in the discussions that the non-market valuation aspect is much more difficult to assess, but it clearly does not mean that “zero” is the better number, just because there is not a quantitative evaluation. ...and this is particularly true for natural resource damages.

The Panelists reflected on Mr. Singh’s first example of the paint shop being in non-compliance and observed in retrospect that while the figures could be off, the paint shop management could have borrowed the funds to comply with the laws. The point is that they used a technology that is disallowed. Also, it is clear that the main contractor for the paint shop, Chrysler Corp, was clearly benefitting by obtaining a low price for the paint service, but is that all ICA? Background information and the White Paper suggest that it should be.

At this point (3:31 pm, the Panel took a break and reconvened at 3:50 pm).

### **Panel Discussion, Assignments, and Pre-Meeting Materials:**

Dr. Freeman suggested that the Panel needs an open discussion pertaining to organizing the report. Mr. Libber also chimed in that they (OECA) could use help on the BEN questions, as well, if it makes sense for the Panel to address these issues. Dr. Freeman acknowledged that this is a good point for logical screening questions to be formulated for the BEN model.

### **Highlights of Panel Discussions Pertaining to Charge Question #1 (Drs Cathy Kling and Dallas Burtraw were assigned this charge question, and Dr. Kling is lead.):**

Discussion followed on how to address this charge question, namely ...”*Are there categories of cases that would be useful for the Agency to consider in calculating the ICA economic benefit, other than those that are identified in the White Paper? Should any of these be combined?*”

A discussion followed on ex post versus ex ante issues. Examples were discussed of farms using illegal pesticides, and lower yields and lower variances. Without the illegal pesticide, they would have brought crop insurance. At the minimum, the benefit could be saving of the insurance costs, but the farmers could have been self-insured. The Panelists observed that EPA is focused on ex post, because the focus is on fairness, rather than deterrence. With use of the illegal pesticide, the cost per bushel of wheat is lower. Therefore, the cost savings is the savings per bushel of wheat.

The Panelists observed that BEN is simply a spreadsheet model which is designed to calculate change in before-tax profit. There are other costs that non-compliance can generate, including ICA and BEN (especially delayed and avoided costs). One Panelist observed that we could argue that the ex ante is always (almost) the best way to calculate the ICA. Ex post does not recognize the uncertainties in getting the permit, etc. In some cases, there is a co-mingling of the deterrence. An example was offered with endangered species in a wetland setting. It is actually the proper measure to conduct cost/benefit analysis associated with risk, and it is often used, for instance with nuclear power plants. Most of the time we are using ex post measures, and many time we could have ex ante, but ex post may be the only available data set. So, it is generally true that inevitably we will use ex post most of the time.

There are times when we have to do an ex ante calculation, and we can run into a serious “ability to pay” question. The judge applies the “ability to pay” criterion and uses the changes in the cost/revenue stream as a reasonable approximation to the change in profit. If that logic doesn’t hold, then the judge and other parties look at the specific facts of the situation and apply generally accepted techniques. The Panel leaned toward general conceptual acceptance that ex ante would be preferable to ex post. The Panel recognized that conceptually EPA has done ex post, because that has been done in the past. However, there are exceptions to this approach.

One Panelist observed that his experiences with practices on the Sentencing Commission is that you look at what would have happened and do some multiple of that amount for the penalty.

Highlights of Panel Discussions Pertaining to Charge Questions # 2, 3, and 4 (Dr. Hanemann is lead):

Discussion followed on how to address this charge question, namely ...” 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 regard to whether they are amenable to the BEN model’s simplifying paradigm?”* 3. *“Are there any suggestions for modifying the described analytical approach to calculate the economic benefits,”* and 4. *“The Agency’s proposed approach strives to avoid double-counting of the benefit by laying out all 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?”*

One panelist observed that he finds the thinking orthogonal to the charge questions. For instance, pages 3-6 of BEN (see Attachment E-4) are the screening questions, and he suggests that these questions should be different to obtain the objective measures desired. He offered examples of how the questions should be re-worded. The point he was making is that in addition to avoided or delayed costs, BEN could also be used to calculate ICA, if the questions were properly re-worded. This sentiment was shared by most of the other Panelists, and they concurred that different screening questions could make a big difference in this regard.

Highlights of Panel Discussions Pertaining to Category of Cases #2 - Violator Sells Products or Services Prohibited by Law (Dr. Michael Salinger is Lead):

One Panelist suggested that perhaps the Panel should continue the dialogue to arrive at conclusions in this area. It was observed that BEN covers most/many situations which are straight forward calculations. Mr. Libber again stressed that BEN is simply a calculator. The Panel suggested that there are other cases for capturing economic externality issues.

Highlights of Panel Discussions Pertaining to Category of Cases #3 - Violator Initiates Construction or Operation Prior to Government Approval (Dr. Cathy Kling is Lead):

The Panel passed on discussion for this category at the present time.

Highlights of Panel Discussions Pertaining to Category of Cases # 4 - Violator Operates at Higher Capacity Than it Should Have (Dr. Jane Hall (lead) and Dr. Mark Cohen):

Questions were raised that focused on “How do you capture change in net profit?” A discussion followed on gaining more understanding to consider ex ante versus ex post evaluations. The Panel recognized that there currently is modeling capability to actually calculate the change in profits, and that this should be recommended to the Agency as an action item.

Highlights of Panel Discussions Pertaining to Implications of Market Structure for Estimating Economic Gains (Dr. David Sunding (lead), Dr. Michael Salinger, and Dr. Arik Levinson):

Dr. Sunding had nothing to add at the present time. Other Panelists recognized that this write-up addresses monopoly and oligopoly situations, and the cost of compliance, given the actual level of output. It was observed that there is an exception for the oligopoly setting. The BEN approach will overstate the value of markets. The Cornell model ignores response. There is a case to be made on the economic gains that companies get due to market position. Other points raised pertaining to oligopoly may be non-issues, and we may not need the market structure screen. Other screening questions might be helpful in this area, such as “*Did the violator sell prohibited products?*”

A dialogue ensued about different approaches that might be helpful in this area. In some cases, it was recognized that the BEN model will not fit. For instance, we should be asking the

question “*Does regulation affect average costs, or other costs?*” Clearly, delayed costs are not recommended practices for anybody. If the goal is to identify potential violators, then it would be a useful exercise to think this through to see if there are situations where market structure may have implications for estimating economic gains. Changes in the value of an asset, based on illegal activity due to market structure would call for legal follow-up. Assessing past practices, the Panel believes that the Agency has achieved reasonable progress with regulation of point sources, but has not achieved a comparable quality level of compliance for non-point sources.

Highlights of Panel Discussions Pertaining to Consideration of Probability of Detection in Setting Deterrent Penalties (Dr. Clifford Russell (lead) and Dr. Michael Hanemann):

Penalties could be related to other factors, such as intent. If the goal is deterrence, then the BEN calculation is insufficient. The Agency should look at optimal practices, such as the Sentencing Commission guidelines. Other issues, such as intent, gravity, and use of recognized sentencing or other guidelines can provide assistance in assessing deterrent penalties. Penalty linked to harm can be multiples, but if there is no perceivable harm, then some Panelists would be uncomfortable with application of multiples.

It was observed by some panelists that if we are in the “real” ICA world, those violators are going to be detected, because they are grabbing market share and the big ones are likely easier to detect. Fairness, penalties, repatriation and deterrence are points that fit into this discussion, because there is an economic theory relating to deterrence. Further, competitors who observe the non-compliant activity will likely “blow the whistle” on those that are in non-compliance, if they are being adversely affected by such actions. Mr. Libber noted that there are only a hand full of cases in this area, such as Louisiana Pacific, and he noted that in the marine shale case, a competitor complained to the Agency only after the Agency caught the violator. The Panelists observed and acknowledged that this is a vague and not well-defined process. A discussion followed on another example from the Clean Air Act program. Agency enforcement and compliance policy is that guidance is provided and that each program must develop their own administrative policies. Mr. Libber observed that in various applications by the programs, sometimes he observes that it is all benefit related and no gravity, but that it can be a mixture of the two.

A discussion followed on the probability of detection issue, as it might provide another different logic data set. Other inputs that would be helpful to evaluate, include such items as the amount of the sanction and the quickness of applying the penalty as a deterrence. The Panelists that have had experience in this area noted that the Sentencing Commission does look at these sorts of questions.

There being no more issues to bring before the Panel today, Dr. Freeman adjourned the meeting at 5:30 pm

## Summary of Day #2 of Meeting:

The Panel reconvened at 8:42 am. Dr. Freeman took a few minutes to discuss planning of the next steps with the Panel and the likely timing of the first draft, as well as the public draft. It is anticipated that the first public draft should be prepared and available approximately from ten days to a few days prior to the next conference call meeting scheduled for September 22, 2004. Depending how the logistics play out, this may be an internal working draft of the Panel, or if things go exceptionally well it could be a public draft. If the first draft advisory is not a public draft, it is very likely that the Panel will produce an October draft which should be released as a public draft advisory. In keeping with the usual SAB practice, the Chair of the SAB Panel makes that determination if the draft is sufficiently far along to be useful to share with other parties. Drafts at this stage of the process usually undergo substantial edits.

### **Public Comments:**

Dr. Freeman opened the floor to public comments at 8:53 am. Mr. Robert (Bob) Fuhrman of Seneca Economics & Environment, Inc. raised a few issues on behalf of the Manufacturers Ad Hoc Group to reinforce the public written comments submitted (see Attachment H-1, dated July 22, 2004) in the discussion that came up yesterday. For instance, as per the Clean Water Act (CWA) settlement, the court should look at history of the violator, serious and other matters to establish a penalty. According to Mr. Fuhrman, the statutory language does not require ex ante or ex post calculations, and in his view, the literature, the practices by the courts, and the legislative history supports ex post calculations. BEN makes maximum use of information that is available after the event, such as start and end dates, changes in the tax code, etc. In the vast majority of cases, such information is not generally available.

Should cleanup costs be considered in the calculation of Economic Benefit? - Mr. Fuhrman does not believe it is appropriate to do so. His rationale is that economic benefit from non-compliance has nothing to do with defense costs through non-compliance. He has encountered situations where a company tries one approach, and then another approach and finally settles in on a solution. The company can violate the law and spend lots of money to try to seek a solution. The company did not enjoy an environmental benefit in this process, but this is the cost of doing business. He is disturbed by the whole notion of gains and market share. He believes that unless you can come up with an example of gains and market share, then you need something else. He cited the most recent edition of the BEN Users Manual (see Attachment E-4), noting that you don't have to be an economist to use this tool, and that the expertise doesn't exist in OECA. He suggested that the OECA Staff needs to consult with the FTC and the antitrust economists.

A question and answer session followed Mr. Fuhrman's presentation. One Panelist notes that he was talking about land-use cases, such as wetlands damages. He asked if Mr. Fuhrman

could give his opinion in this area. Mr. Fuhrman responded that he would rather see someone else with a specialty to handle this situation. Another Panelist noted that power networks and non-compliance with localized node-specific cost advantages as an issue. Mr. Fuhrman acknowledged this is a special case and, in his opinion, the BEN model is not suited for such a calculation.

One Panelist noted that she was struggling with use of illegal input which demonstrates more output. She was wondering which cases that are or are not amenable to BEN and asked if the Panel could engage with the Agency users of BEN so that the Panel could better understand how to grapple with the issue. Another Panelist opined that you do not have to be an economist to use BEN calculations. He did, however suggest that there is a need for safeguards to put thoughtful and correct inputs into BEN, and suggested that the Agency could change the documentation in BEN to support such judgements.

Another Panelist observed that we see cases that don't make any sense for BEN, and we do need more specific guidance on the BEN scenarios, perhaps moving towards harm and gain. Mr. Fuhrman observed that over time, a body of case law develops and it would help the judges if good guidance is provided. It was his observation that approximately 85% of the BEN cases involve ex post assessments by the courts. He observed that over time, a body of case law develops, and it would help judges if good guidance covering the BEN scenarios existed. Some discussion followed on incorporating cleanup costs, and examples were discussed with situations involving pipelines, wetlands and farmlands cases, including the discussions that were offered the previous day were again discussed briefly.

The public comments ended at 9:22 am.

Proposed outline of report: At 9:22 am, Dr. Freeman presented his proposed outline for the advisory (see Attachment J). The proposed outline was placed on the Proxima projector for everyone in the room to see, and for the Panel and participants to comment on the outline. The Panelists thought that the structure is excellent, and should stress basic economic principles. However, the Panelists offered some suggestions for improvements, touching on such topics as other factors dealing with civil damages, and additional issues such as offering more focused screening questions for BEN and consultation with economists.

The Panelists liked Section III of the proposed outline of the report, entitled "*On Estimating Gains from Noncompliance*," which should be the core of the report. One Panelist noted that there is statutory language that requires the judges to capture economic gain, and we (the Panel) are essentially being asked ... "*When is that appropriate and how should that be judged?*" Another Panelist, while he felt the outline is pretty good, still is not comfortable adding harm and adding gain together. He noted that the law says "*the judge shall consider...*," and that there is essentially complete judicial discretion. As an economist, he prefers guidance that is harm-based, but is concerned with the academic focus toward optimal penalties. He believes that putting these concepts in context is important, and observed that what tends to happen is to ignore the totality of sanctions. His personal feeling is that this should be brought

up front in the report. It was suggested, and the Panel agreed that this issue could be brought up in Section I of the report, entitled “*Background - Principles for Determining Penalties.*” (see Attachment J).

Another Panelist liked the idea of what is being covered in Section I (“*Background - Principles for Determining Penalties*”) and Section II (“*EPA’s Policy*”), noting that the Panel’s report needs to answer the charge questions, as well as the associated issues. She observed that how the Panel tackles this is more of an organizational question. Another Panelist observed that the proposed approach comes across as excessively academic, and that he would not want to put things in the report that are “run away” issues, or that detract from the essential answers to the charge questions. This raised a question as to who is the audience and what is construed to be useful material. In response, Mr. Libber of OECA offered that he did not think the average Regional Enforcement people will be the readership. One Panelist offered that he thinks it makes sense to explain the different approaches to set up penalties, and suggested to lay out and display the theories involved in setting the penalties by providing a number of examples.

One Panelist was concerned that we could do harm and confuse a Judge with recommendations on how to measure penalties and economic benefit. For instance, the statutes say there are five things to consider ..... Another Panelist suggested that perhaps such background information could be provided in future direction in the back (i.e., the Appendices) of the report, and further suggested that any of the Panelists may want to consider publishing an article in the peer-reviewed law journals to engage a broader audience.

Dr. Vanessa Vu suggested that with respect to the audience, it is most important for the Panel to raise major issues and to get the attention of the Administrator in the Letter to the Administrator, as well as in the Executive Summary of the report. One Panelist suggested that we should look at practical, explicit advice that has a chance of implementation. Another Panelist thought that a practical suggestion might be to advise the Agency that they ought to consider fixing the spread sheet on the BEN model to address these other considerations being raised.

Additional suggestions were offered by the Panelists for refinements and on the proposed outline, such as combining Sections I (Statutory Provisions) & II (What EPA Does Now, Including the BEN Model), Section III (Alternative to ICA and First Principles on Estimating Gains Focusing on Profits), Section IV (Any Other Questions that Haven’t Been Dealt with thru Section III), Section V (Additional Issues, Including Market Structure), and Section VI (Future Directions). One Panelist offered that issues related to market structure may be more central, and may need some concerted focus by the Panel. He reminded the Panel that the charge question asks if we are missing anything. Another Panelist, in response offered that the theory of economic benefit and implications for BEN are a topic of interest. Another Panelist cautioned that somehow, we need to organize the Advisory to answer the broader questions, as well as the narrow focus of the four charge questions. He asked... “*when does the approach of avoided or delayed cost not capture economic benefit?*” .... Yet another Panelist offered that she is beginning to think that there are more cases where you can use BEN, and upon reflection,

estimating gains for non-compliance is really a good approach to answer the broader charge.

Break 10:21 am to 10:40 am: The Panel took a break, and reconvened at 10:40 am. The discussion continued on refinements to the proposed outline, and detailed items were assigned to the Panelists. A discussion followed on the wetlands and Clean Water Act (CWA) cases, and the question was raised if there are other classes of cases besides the land-use and wetlands that might be helpful and illustrative of useful concepts. Mr. Libber observed that there are other cases that are different, and are likely applicable, but haven't been tagged as yet in the illegal competitive advantage (ICA) context. For instance, he noted that as non-point source pollution issues come up, they may have some bearing on the ICA issues.

One Panelist noted that with respect to Section III on estimating gains from non-compliance, network technologies are special cases and the general market structure does not suggest a trigger. The Panelists agreed to the assignments and how to team together to write the specific sections. Mr. Libber agreed to email statutory citations related to the revised outline. Dr. Freeman observed that the Panel currently has over 20 separate penalty documents. Mr. Libber clarified that there are 33 separate documents that have been provided to the Panel, and that the listings of the statutes are illustrative.

At 11:24 am, Dr. Freeman went "around the table" to ask each Panelist to provide any highlights in essentially debriefing the Agency OECA Staff. Non-consensus comments were offered from each Panelist in open discussion on the issues. Some of the Panelists passed on providing commentary at this time, but the following briefly summarizes the comments that were offered:

Probability-based penalties: One Panelist offered that the report will provide a fuller notion of the probability-based penalties in the proposed Section II C.

The term, ICA: Another Panelist observed that he felt that the Panel has reached consensus and believes that the term, "Illegal Competitive Advantage" (ICA) is not adequately descriptive, and somewhat misleading. Mr. Libber noted that OECA has apologized up-front for the term not being adequately descriptive, but it was the best they had to offer at the time. The Panel will more fully address the terminology issue in the report.

Case Studies: One Panelist thought that the Panel had made good progress on the case studies, and the Panel will offer a choice of examples and more advice in the report in this area.

The Audience: One Panelist thought that it is important for the Panel to keep in mind who the real audience for this report is. First is the OECA Staff (Jonathan Libber), but second are the attorneys and judges. We need to reduce ambiguities in the writing of the issues and in dealing with our responses to the charge questions, as well as the broader issues. He was concerned that we could inadvertently cost society \$100's of millions with our writing, so we need to be cognizant of this potential impact. He didn't know exactly what this means for the

future details to be contained in Section III dealing with estimating gains from non-compliance, but that we should be careful in our writing the details, as well as how we cast the broader issues.

Terminology: One Panelist thought that we need also to be focused and careful with the terminology, and that it may need the scrutiny by others.

Cases Where BEN Does or Does Not Apply: There are a large number of cases where the BEN approach simply doesn't apply, however we seem to have reached consensus, that some cases have BEN applicability if the current questions being suggested by the Panel have been applied. In the discussion that followed, it was recognized that BEN can be viewed as a two-edged sword, and that where some BEN cases are very modest, in those cases it doesn't make sense to run thru the BEN calculations. The Panelists acknowledged that in the beginning, the BEN was focused on delayed or avoided approaches, but that we currently have some definitional issues, and that it is not obvious that is it just a calculation issue we are dealing with.

The OECA Staff thought that there is a definite potential for working out the issues on BEN, and that it would not be difficult to change the model. The OECA staff acknowledged that Mr. Robert Fuhrman was involved with 100 cases, but it has been over a twenty year (2-decade) time frame. The OECA staff observed that where BEN breaks down is in the complicated cases. One Panelist observed that the weighted cost of capital is one of those complicated and controversial issues. Mr. Libber estimated that over the past 20 years, benefit recapture has perhaps come close to \$1.5 billion. A discussion followed on issues such as the weighted cost of capital, prior cost savings and other cost discussions.

OECA Needs Support from a Staff Economist: In the discussion that followed, the OECA staff was looking forward to a draft report that would be genuinely helpful and one which they would feel comfortable with. The Panel asked if there is an OMB Staff economist OECA could consult with. Mr. Libber mentioned the Thompson Report, that they are on the "radar screen," that OECA thinks some of this is procedural and not substantive, etc. One Panelist asked if there are economists in Al McGartland's shop (EPA/NCEE) that are involved with this issue. Both Jonathan Libber and Jack Kooyoomjian advised that NCEE had an economist that was involved somewhat with the topic earlier, but that lately there were no or very modest inputs to the current review package and Panel activity. One Panelist observed that ... "*we need to engage the NCEE staff on this.*"

Implementation Issues Need to be Addressed: One Panelist observed that we need to focus on implementation issues in the Panel's outline. Perhaps people at the Federal Trade Commission (FTC), and Justice need to be conferred with. At the very least, the Panel thought that Mr. McGartland of NCEE should be cc'd on this activity. Dr. Vanessa Vu weighed in that in terms of how the Agency communicates to other offices is a valid item to be addressed. She also touched on the Quality Review Committee (QRC) activity of the Board, which would likely be by a public conference call. She noted that the QRC activity needs about a 4 to 6 to week lead time.

Implications of This Activity on the EPA Budget & Science Issues: Dr. Vanessa Vu observed that the budget and science issues in Goal 5 which are being discussed by the Board of the SAB may need inputs from this Panel. She noted that Dr. Freeman and Dr. Kling are members of the Board and may wish to provide comments on social science, enforcement and the role of economists in this area.

This has been a pleasant experience: One Panelist offered that this review has been a very pleasant experience. She observed that the public commenters and the Panelists, along with the Program Office staff have been very collegial, and that there has clearly been a value-added experience in this process as the Panel grapples with getting their arms around the subject. She didn't know if it took place because all the Panelists are economists, but the engagement has clearly been enjoyable and largely non-contentious by all parties. She appreciates having taken part in the exercise, and looks forward to participating in the closure process of preparing the report. All the Panelists thanked the Chair, for leading this exercise. In turn, the Chair also thanked the DFO, Dr. Jack Kooyoomjian for his support in preparing the review and coordinating with the OECA staff.

The Devil is in the Details: One Panelist summarized that collectively we have done a good job of identifying the major issues, but cautioned that “the devil is in the details.” At this point, Dr. Freeman lead the Panel on a brief discussion of the schedule. The plan is to paste together the information the week of September 1-7.

Appreciation to Panel: Mr. Libber expressed appreciation to the Panel. He requested that, ... *“to the extent you can, please make the guidance as practical as possible for OECA to implement.”* He also wanted to go on record that he disagreed with Mr. Fuhrman on the ex post versus ex ante issue.

With guidance from the Chair, the Panelists had worked out the details of the writing assignments among and between the individual Panelists. The proposed schedule is captured in the action Items that follow (see below). The scheduled action items generally agreed to after the discussions by the Panelists are summarized as follows:

**Action items: Proposed ICA EB Advisory Panel Schedule**

| <u>DATE</u>             | <u>ITEM</u>                       | <u>COMMENT</u>   |
|-------------------------|-----------------------------------|--|
| 8/23/04<br>(was 9/1/04) | Draft Materials to Panel<br>Chair | Panelists Provide Individual Draft<br>Assignments to Panel Chair<br>[NOTE: If ICA EB Advisory Panel<br>members cannot make the 8/23 date, then<br>Drs. Freeman and Kooyoomjian will re-<br>work the following schedule.] |
| 8/30/04                 | Draft #1 First Assemblage         | First Composite Draft from Panel Chair   |

|  |   |  |
|--|---|--|
|  | of Draft Materials for<br>Comment                                   | Distributed for Comment to the Panel   |
| 9/10/04  | Edits from Panel to Chair   | 1 <sup>st</sup> Round Edits to Panel Chair   |
| 9/17/04  | Draft #2 Revised &<br>E-mailed to Panel                             | This draft will be the subject of<br>the 9/22/04 Conference Call Discussions.<br>Public Draft??? ( <u>Ans:</u> Depends where we<br>are with consensus.)                                  |
| 9/22/04<br>2-4 pm<br>EDT   | Public Conference Call  | To review ICA EB Advisory Panel Draft #2   |
| 10/13/04   | Draft #3 for Closure  | This Should/Will be First/Second (?) Public<br>Draft   |
| [NOTE: The following projections on the schedule beyond the November 4, 2004 date are<br>tentative at this time, depending on timing of deliverables and the schedules of the Panel<br>members.] |   |  |
| 11/04/04   | 2 <sup>nd</sup> Public Conference Call<br>To Reach Closure on Edits | Final Preparation for SAB Board Quality<br>Review Subcommittee (QRS)<br>[NOTE: Need to poll ICA EB Advisory<br>Panel for acceptable date for 2 <sup>nd</sup> public<br>conference call.] |
| 11/15/04   | Draft prepared for QRS  | Schedule QRS Activity  |

There being no additional items to discuss, Dr. Freeman adjourned the Panel at 12:17 pm.  
The Panel will reconvene via conference call as planned on September 22, 2005 from 2 - 4 pm  
EDT.

Respectfully Submitted:

Certified as True:

\_\_\_\_\_  
/Signed /  
K. Jack Kooyoomjian, Ph.D.  
Designated Federal Official

\_\_\_\_\_  
/Signed /  
A. Myrick Freeman, Chair  
ICA EB Advisory Panel

## List of Attachments

- A Roster of ICA EB Advisory Panel
- B Federal Register Notice (Vol 69, No. 122, pages 35599-35600, June 25, 2004)
- C August 5 and 6, 2004 Public Face-to-Face Meeting Agenda (dated July 30, 2004 and contains proposed charge )
- D Meeting Sign-In Sheets for August 5 & 6, 2004
  
- E Panelist Review and Informational Materials: June 17, 2004 Package for Each Panelist which contains the following:
  - E-1 Cover memo to each Panelist from K. Jack Kooyoomjian, dated June 17, 2004
  - E-2 The Proposed Charge
  - E-3 The OECA White Paper entitled “*Identifying and Calculating Economic Benefit That Goes Beyond Avoided and/or Delayed Costs,*” May 25, 2003, US EPA/OECA
  - E-4 BEN User’s Manual, U.S. EPA, September, 1999
  - E-5 Policy on Civil Penalties: EPA General Enforcement Policy #GM - 21, US EPA, dated Feb 16, 1984 and
  - E-6 A FRAMEWORK FOR STATUTE-SPECIFIC APPROACHES TO PENALTY ASSESSMENTS: IMPLEMENTING EPA’S POLICY ON CIVIL PENALTIES, EPA GENERAL ENFORCEMENT POLICY #GM - 22 US EPA, Feb 16, 1984
  - E-7 Shefftz, Jonathan S., “*Wrongful Profits: Setting the Record, and the Concept, Straight,*” Environmental Reporter, Vol. 35, No. 1, 01/02/2004, BNA, Inc. Wash, DC
  
- F OECA TALKING POINTS FOR SAB MEETING OF AUGUST 5, 2004:
  - F-1 Talking Points for Robert Kaplan for SAB Meeting of August 5, 2004
  - F-2 Talking Points for Jonathan Libber for SAB Meeting of August 5, 2004
  
- G CASE STUDIES
  - G-1 Summary of Significant ICA Cases 7/26/04
  - G-2 Andrew A. Ballard, “*N.C. Court Orders Illegal Landfill to Close; Forfeiture of Profits Called New State Tool,*” BNA, Inc Daily Environment, No. 84, Monday, May 3, 2004, ISSN 1521-9402;
  - G-3 J.B. Van Hollen, United States Attorney, Western District of Wisconsin, Press Release announcing that Gerke Excavating, Inc. of Tomah, Wisconsin was assessed a \$55,000 civil penalty for its violations of the Clean Water Act (“CWA”), May 5, 2004;

- G-4 United States of America, Plaintiff, v MAC’S MUFFLER SHOP, INC. AND WINSTON McKINNEY, Defendant Civil Action No. C85-138R UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA, ROME DIVISION, 1986 U.S. Dist. LEXIS 18108; 25 ERC (BNA) 1369, November 4, 1986, Decided and Filed;
- G-5 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY BEFORE THE ADMINISTRATOR IN THE MATTER OF: LAWRENCE JOHN CRESCO, III (also known as John Cresco), Docket No. 5-CWA-98-004, Before Susan L. Biro, Chief Administrative Law Judge, Issued: May 17, 2001;
- G-6 BORDEN RANCH PARTNERSHIP and ANGELO K. TSAKOPOULOS, Plaintiffs, v UNITED STATES ARMY CORPS, OF ENGINEERS AND UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Defendants. And Related Counterclaim, CIV. S-97-0858 GEB JFM, UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF CALIFORNIA, 1999 U.S. Dist. LEXIS 21389, November 8, 1999, Decided, November 8, 1999 Filed Judgement entered imposing the full one million five hundred thousand dollar (\$1,500,000) civil penalty;
- G-7 IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WISCONSIN, UNITED STATES OF AMERICA, Plaintiff, vs. PETER THORSON, MANAGED INVESTMENTS INCORPORATED, CONSTRUCTION MANAGEMENT, INC., and GERKE EXCAVATING, INC., Defendants, Case No. 03-C-0074-C, Madison Wisconsin, May 4, 2004, 3:00 p.m.;
- G-8 IN THE MATTER OF: E.I. DUPONT DE NEMOURS & CO., INC. Respondent, DOCKET NO. FIFRA-95-H-02, United States Environmental Protection Agency, Office of Administrative Law Judges, 1998 EPA ALJ LEXIS 129, April 30, 1998(This is a civic administrative proceeding instituted pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”));
- G-9 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, Boston College Law School, Copyright 1994 Boston College Environmental Affairs Law Review, Fall, 1994, 22 B.C. Env’tl. Aff. L. Rev. 27;
- G-10 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY BEFORE THE ADMINISTRATOR In the Matter of Britton Construction Co., BIC Investments, Inc.; and William and Mary Hammond, Respondents, Docket No. CWA-III-096, U.S. Environmental Protection Agency, Office of Administrative Law Judges, Pursuant to Section 309 (g) of the CWA, the Respondents are jointly and severally assessed a civil penalty in the amount of \$2,000 for discharging pollutants into the waters of the United States, without a permit issued by the United States Army Corps of Engineers, in violation of the CWA, U.S. EPA Region 3, Philadelphia, PA;

- G-11 Agency of Natural Resources v. Richard Deso (2001-532), 2003 VT 36, Filed 27 March, 2003, ENTRY ORDER 2003 VT 36, SUPREME COURT DOCKET NO. 2001-532, JANUARY TERM, 2003, APPEALED FROM: Environmental Court, DOCKET NO. 204-9-00 Vtec, Trial Judge: Meredith Wright, Respondent Richard Deso appeals an order of the environmental court fining him \$200, 474 (reduced to \$100,000 pursuant to 10 V.S.A. Para 8010 (c)) for operating a gas station for eighteen months without installing a Stage II vapor recovery system as required by Vermont's Air Pollution Control Act and Air Pollution Control Regulations
- G-12 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY BEFORE THE ADMINISTRATOR In the Matter of Chempace Corporation, Respondent, Docket No. 5-IFFRA-96-017, Pursuant to Section 14 of the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. Para 136I, the Respondent, Chempace Corporation, is assessed a civil penalty of \$92,193 for selling unregistered or misbranded pesticides on 98 occasions, and producing pesticides in an unregistered establishment, By: Andrew S. Pearlstein, Administrative Law Judge, Dated: February 25, 1999;
- G-13 BORDEN RANCH PARTNERSHIP; ANGELO K. TSAKOPOULOS, Plaintiffs-Appellants v. UNITED STATES ARMY CORPS OF ENGINEERS; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, an agency of the United States, Defendants-Appellees, No. 00-15700, UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT, 261 F. 3d 810; 2001 U.S. App. LEXIS 18364; ERC (bna) 2025; 2001 Cal. Daily Op. Service 7056; 2001 Daily Journal DAR 8683; 32 ELR 20011, July 9, 2001, Argued and Submitted, San Francisco, California, August 15, 2001, Filed, Plaintiff land owner appealed the final order in favor of defendants, the United States Army Corps of Engineers and the United States Environmental Protection Agency, by the United States District Court for the Eastern District of California for the land owner's repeated violations of the Clean Water Act;
- G-14 UNITED STATES OF AMERICA v. THE MUNICIPAL AUTHORITY OF UNION TOWNSHIP; DEAN DAIRY PRODUCTS COMPANY, INC, d/b/a Fairmont Products, Inc.; Dean Dairy Products, Inc. d/b/a Fairmont Products, Appellant, No. 97-7115, UNITED STATES COURT OF APPEALS FOR THE THIRD COURT, 150 F. 3d 259; 1998 U.S. App. LEXIS 16440; 46 ERC (BNA) 1977; ELR 21415, March 19, 1998, Argued, July 20, 1998, Filed, The U.S. District Court for the Middle District of Pennsylvania imposed a civil penalty against defendant company for violations of the Clean Water Act, 33 U.S.C.S. Para 1251 et seq. The company appealed. The district court's order of a civil penalty was affirmed because, under the unusual circumstances. its method of calculation did not constitute an abuse of discretion;

- G-15 UNITED STATES OF AMERICA, Plaintiff v. THE MUNICIPAL AUTHORITY OF UNION TOWNSHIP; and DEAN DAIRY PRODUCTS COMPANY, INC, d/b/a FAIRMONT PRODUCTS, Defendants, CIVIL ACTION NO. 1:CV-94-0621, UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF PENNSYLVANIA, 929 F. Supp. 800; 1996 U.S. Dist. LEXIS 9775; 43 ERC (BNA) 1377. July 10, 1996, Decided. July 10, 1996, FILED, DISPOSITION: Fairmont’s motion in limine to exclude evidence of its IU permit violations after April 1994 denied. Fairmont’s motion in limine to exclude all evidence of damage to the Kishacoquillas Creek denied. Fairmont’s motion in limine to exclude evidence of Dean Food’s financial condition denied. The parties’ motions in limine deemed irrelevant and dismissed;
- G-16 Summary of law Review Article Entitled: Economic Benefit in Environmental Civil Penalties: Is BEN Too Gentle? 77 U. Det. Mercy L. Rev. 543 (Spring 2000)
- H PUBLIC COMMENTS:
- H-1 Comments of the Manufacturers Ad Hoc Group, Before the U.S. Environmental Protection Agency, Science Advisory Board, Illegal Competitive Advantage Economic Benefit Advisory Panel, Prepared by Robert H. Fuhrman, Seneca Economics and Environment, LLC, 15701 Seneca Road, Germantown, MD 20874, July 22, 2004
- H-2 Comments by Jasbinder Singh, An Economic Benefit Expert & President, Policy Planning & Evaluation, Inc., 800 Third Street, Herndon, VA 20170 Before the Illegal Competitive Advantage Economic Benefit Advisory Panel, Science Advisory Board, Environmental Protection Agency, August 5, 2004
- I BACKGROUND MATERIALS:
- I-1 ACTION ITEMS FROM JULY 12, 2004 ICA EB ADVISORY PANEL CONFERENCE CALL;
- I-2 EPA Science Advisory Board Project Sheet 03-07 entitled “Calculating Violator’s Economic Savings from Violating the Law: Determining the Benefit Derived from an Illegal Competitive Advantage (ICA). 03/27/2003;
- I-3 The Proposed Charge;
- I-4 United States Climate Partnership Association (USCPA) Electronic submission to ghregistry.comments @hq.doe.gov, Re: Comments to Department of Energy, Federal Register Notice (68203), 10 CFR Part 300, General Guidelines for Voluntary Greenhouse Gas Reporting; Proposed Rule, Submitted by Kristin B. Zimmerman, Ph.D., USCPA Chair, and John Flatley, USCPA Executive Director (NOTE: This material was provided by Mr. John Flatley as Background Material. He provided it as an attendee from the public, but did not offer formal public comment.)
- I-5 ILLEGAL COMPETITIVE ADVANTAGE ECONOMIC BENEFIT ADVISORY PANEL BIOSKETCHES

- J ILLEGAL COMPETITIVE ADVANTAGE REPORT, REVISED OUTLINE by  
Freeman/Russell, August 6, 2004
- K ICA EB ADVISORY PANEL DRAFT PRE-MEETING AND MEETING  
WORKING NOTES FOR AUGUST 5 &6, 2004 FACE-TO-FACE PUBLIC  
MEETING:
- K-1 Charge Question #1 (Cathy Kling version #1),  
K-2 Charge Question #1 (Cathy Kling version #2),  
K-3 Michael Hanemann,  
K-4 Arik Levinson, July 15, 2004,  
K-5 Salinger 1 (August 4, 2004, with 08/05/04 cover memo to Jack Kooyoomjian),  
K-6 Communication in SAB Staff for Conference Call Hookup for Dr. Jane Hall,  
K-7 Jane Hall Communication to Jack Kooyoomjian Transmitting Action Item #6  
from July 12, 2004 Conference Call - Higher Capacity, Hall & Cohen,  
K-8 Jane Hall Communication to Rick Freeman on Organization of the Proposed  
Outline of the Report, dated 08/06/04,  
K-9 Observations Triggered by Reading the Submissions to the ICA BEN Panel by  
the "Ad Hoc Group." Also includes Addendum Relevant to the Probability of  
Detection Question, 14 July, 2004[Cliff Russell],  
K-10 Memo from A. Myrick Freeman to Cliff Russell entitled "FWD: Re: Deterrence  
and civil penalty policy," dated 08/04/2004
- L Marked-up Agenda for August 5 & 6, 2004 Face-to-Face Public Meeting
- M Jack Kooyoomjian's Opening Remarks for the ICA EB Advisory Panel Meeting  
August 5 & 6, 2004
- N DFO Notes from August 5 & 6, 2004 Public Meeting:  
N-1 DFO Notes for August 5, 2004 (K. J. Kooyoomjian, Ph.D.)  
N-2 DFO Notes for August 6, 2004 (K. J. Kooyoomjian, Ph.D.)

End of Record