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# GREAT LAKES WATER QUALITY AGREEMENT
# PUBLIC FORUM

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**GREAT LAKES WATER QUALITY BOARD**

***Vic Shantora, Canadian CoChair, Water Quality Board and***
***Director General, Toxic Pollutant Prevention Directorate, Environment Canada***

My name is Vic Shantora. Thank you very much Commissioner. It is indeed a pleasure for us to have this opportunity to present to you and other guests here today an overview of the Water Quality Board's activities over the last two years.

David Ullrich, on my right, is my CoChair from the United States and he just joined us two weeks ago, so we are using this as a test case for him -- to get up to speed -- and he'll be doing a wrapup at the end. Kelly Burch and Tracy Mehan will do part of the presentation.

If I may, we have a good number of Water Quality Board members here and what I indicated to the Board members up here is that we will answer the easy questions and those folks down there will answer the hard questions. So I would like them to stand up and be acknowledged. I won't go through everybody's name but please stand up so folks can identify you. Thank you.

As you will note in the 1995-97 Priorities Report, the reference to a number of the wide-range of issues that the Water Quality Board [WQB] has been dealing with and what I'll do over the next couple of minutes is just run through some of the highlights and then we are going to pick on two specific areas: contaminated sediments, and beyond compliance, which Tracy and Kelly will pick up on.

In terms of the range of issues, let me give you a sense of what we've been doing:

- **Overcoming Obstacles to Sediment Remediation**. We prepared a white paper wherein we recommended that the IJC needs to take an active role in helping to overcome some of the obstacles, a value-adding role, as we've called it, to help sediment remediation move along. There have been some good news stories and some areas where progress has been slow and we believe that the Commission can add its weight to the debate, to the dialogue, take benefit of some good new stories in some of the RAPs and help impart the message around the basin.
- **Significant Sources, Pathways, Reduction Elimination Strategy for Persistent Toxic Substances.** Here the International Air Quality Advisory Board will cover the substance of that; we cosponsored work with them over the last two years, and Tracy will pick up on the specifics to do with beyond compliance initiatives.
- **Uniform and Fully Protective Fish Consumption Advisories**. As you know, different jurisdictions have different ways of reporting fish consumption advisories. We've pulled it all together and made some recommendations as to how to make this whole process much more uniform.

- **Department of Defense, Sale of Mercury**. This has been a watching brief for the WQB and will continue to be. We are particularly pleased to note Bob Perciasepe's comments yesterday, that the sales of mercury continue to be suspended and as and when the environmental assessment work comes to light, we'll certainly be keeping an eye on that, and be ready to advise Commissioners on future directions.
- **Future of RAPs**. Here, another white paper. A major recommendation was that we should be taking a step-wise and incremental approach to monitoring and tracking RAP progress. It's not good enough to just talk about Stage 1, Stage 2 and Stage 3. That's the bureaucratic way of doing things. In fact, there's lots going on that isn't being reported on, and we need to acknowledge that, and we need to encourage that step-wise approach be followed. Two weeks ago, in Thunder Bay, we held a public meeting with the local RAPs up there, and very shortly we expect to come back to the Commission with some solid recommendations in terms of how we advance that.
- The Board definitely feels that toxic substances are one of our key priorities but not our only priority. We have looked at issues, like **Habitat Loss, Biodiversity, Impact of Exotic Species**, all of these also impact on the Great Lakes ecosystem and we're maintaining a watching brief on that.
- We've had a number of conferences last year in Rochester, a very successful one with the Finger Lakes district, and a report has been published and recently put on the web.
- Two workshops. Again, the information has been summarized and available for public review.

As I mentioned, these are just the highlights. There are two areas that we believe the Commission needs to focus in on, so we've done some indepth work in these area and I'll ask Kelly Burch to talk in the first area, the issue of contaminated sediments. Kelly?

***Kelly Burch, member, WQB and Chief, Pennsylvania Department of Environmental Protection***

Thank you Vic. It is a pleasure to be here today. Before I start, I would like to tell you about an experience I had over a week ago. I was asked to be a guest speaker at Mercy Hurst College in Erie, to an environmental politics class. I was tracing the historical events leading up to the Water Quality Agreement and the Clean Water Act, and I was talking about the Cuyahoga River catching on fire and Johnny Carson in his monologue, speaking about Lake Erie, where fish go to die. When I looked out, there was almost a look of blank-expression on these students' faces. And I realized that they weren't around then and they had to read about this, and apparently not too many of them had, unlike the group of students from Erie we heard from yesterday. I think *they* would have been questioning me on some of the dates I was throwing out there. It brought to mind how far we've have come in such a recent period of time, and how most of the atrocities we've observed in the '60s and '70s have been cleaned up, but what's left behind is the contaminated sediments that remain buried and continue to be a problem in many harbour and river areas in the basin. That's what I will talk to you about this morning.

The Board's priority in identifying the IJC's value-added role in overcoming obstacles to sediment remediation in the Great Lakes basin. Before I begin there's one other thing I would like you to know, and that is that I stand before you today, not just as a WQB member with a lead on this priority, but as a lifelong resident of Erie, Pennsylvania and the Lake Erie basin. I also have the honour of serving as Presque Isle Public Advisory Committee for the Presque Isle Bay RAP. That's a very unique situation that I find myself in being both a government employee, a PAC chairman, and a RAP coordinator for the state. It is an honour to do that and one of the things we are wrestling with is the sediment management decision in Presque Isle Bay. It is based on sound science and the social and economic

will of the people. While we are asked to serve on the Board in our personal and professional capacity, please bear with me if my personal, and occasionally parochial interest sometimes surfaces.

I recognize that my allowed time this morning is brief, but I would be remiss if I failed to take a moment to convey my gratitude to the Commissioners for their foresight in selecting this as a priority. Their continued support of this Sediment Priority Action Committee [SedPAC] in identifying the value-added role of the Commissioners in overcoming the obstacles, leading to sediment management decisions in the remaining 42 AOCs in the U.S. and Canada. I would also like to thank the CoChairs of the SedPAC, David Cowgill of the U.S. EPA's GLNPO who brought with him not only the knowledge gleaned from the ARCs program but a personal dedication to make a difference and he truly has. On the Canadian side, my good friend, the irrepressible and unflappable, Mr. Griff Sherbin of Environment Canada. He retired midway between the Priorities cycle but continues to guide us in our efforts and provide us with the institutional knowledge and wisdom that one can only obtain after 30 years of service to the people and environment of Canada. And a special thanks to my special friend, John Hartig of the IJC who serves as the Secretary to the WQB and the SedPAC and whom without no task great or small could be accomplished. My point was not only to thank those involved in this priority but to express my gratitude to the federal/state/provincial agencies who support the Commission's priorities by providing the personnel and associated costs to actually participate in these efforts. It is important to continue that.

Contaminated sediment is a major cause of environmental problems and a key factor in many impairments to beneficial uses in the Great Lakes. Based on the application of chemical guidelines, all 42 Great Lakes Areas of Concern have contaminated sediments. This universal obstacle to environmental recovery in the AOCs can potentially pose a challenge to restoring 11 of the 14 beneficial use-impairments identified in Annex 2 of the Agreement. The challenge faced by many of the RAPs has been the inability to move from the assessment stage to a sediment-management option. These options can range from source control and natural recovery, to full-scale remediation depending on the severity of the problem. It is critical that some of these concentrated deposits of contaminated sediments be addressed quickly because, over-time these contaminants may be transported from a river or a harbour to the open waters of the Great Lakes and once dispersed into lakes, cleanup is virtually impossible.

Contaminated sediment is a major problem being addressed in RAPs and LaMPs and is an issue in other areas of the Great Lakes. In recognition of this problem and limited progress in addressing it, IJC identified contaminated sediments as a priority for the '95-'97 cycle and directed the WQB to review the magnitude of the problem and make recommendations to overcome obstacles to sediment remediation. The WQB with representatives from the Science Advisory Board, the Council of Great Lakes Research Managers, federal/state/provincial agencies convened a scoping meeting in March of 1996 and laid the ground work for a sediment white paper. The white paper would summarize the contaminated sediment problems, specify key obstacles and identify options to address them. This paper would also serve as a basis for a workshop. The white paper noted that progress has been made in the remediation of contaminated sediments but sediment problems in AOCs have been brought to closure at only, Collingwood Harbour in Ontario, with a special thanks to Dr. Gail Krantzberg for all her efforts there. She has brought to our group, her intellect, her personality that has been a driving force for us. My thanks to you also, Gail.

In most AOCs, progress has been slowed or completely stopped at one or two stages, decisionmaking or implementation. In the sediment white paper, the SedPAC grouped the major obstacles into six categories:

- limited funding and resources;
- regulatory complexity;
- lack of a decisionmaking framework;
- limited corporate involvement;
- insufficient research and technology development; and
- limited public and local support.

In June of this year, a workshop was held in Collingwood Harbour to identify the value-added role of the IJC in overcoming these obstacles. The workshop included 35 individuals representing the various boards, the SedPAC, and Commissioners Chamberlin and Béland.

In general, the workshop participants concurred with the categories of obstacles to sediment remediation and after paring down the list based on high and low priorities and what was doable outside the regulatory framework, the group recommended two very important value-added contributions the IJC could make to address current obstacles to sediment cleanup:

- the IJC could compile and disseminate information on the economic and environmental benefits of sediment remediation; and
- the Parties could come together under the auspices of the IJC to develop guidance for a decisionmaking framework to assist the AOCs in moving beyond the assessment stage to a sediment-management option and thereby sustaining the RAP process altogether in the areas where it is faltering.

The SedPAC will be working with the Northeast Midwest Institute and their economists as part of the Great Lakes Economic Valuation Guidebook currently being developed. The economic benefits of a dredging program are relatively simple to quantify, such as Waukegan Harbor on Lake Michigan, the harbor was last dredged in 1972 and has now silted into almost 18 ft., thereby restricting the draft of commercial vessels calling at the port, with ships only operating at 40 to 50% of capacity. The economic consequences for our community are great.

We will now have the opportunity to go beyond pure economics and begin to quantify the environmental benefits of the cleanup as well. We recognize the fact that a binational framework is probably not within the realm of possibility due to the Superfund cleanup laws in the two countries which are part of the regulatory scheme. We do believe however, that a flexible, risk-based framework can be developed with some common ground that will be of tremendous benefit to more than half of the Areas of Concern which are characterized by wide-spread low levels of contaminants which do not lend themselves to full-scale remediation options. What is required, however, is the means to direct them to a decision whether it is natural attenuation, attenuation in dredging, or somewhere in between that either solves or dissolves the contaminated sediment problem.

This incremental measure of success will not only serve to sustain the RAP process but it will allow these RAPs to focus their efforts in areas such as fishery and wildlife habitat restoration where they can truly make a difference. Thank you.

***Tracy Mehan III, member, WQB and Director, Office of the Great Lakes, Michigan Dept. of Environmental Quality***

Good morning, My name is Tracy Mehan with the Michigan Office of the Great Lakes. Pleasure to be here to talk about the beyond compliance portion of the cooperative effort between the WQB and the IAQAB which to my mind, at least, and I think most of the members of the WQB, does represent a

real breakthrough in a cross-media cooperative effort which given the nature of the challenges, especially in the area of persistent bioaccumulative toxics is really the way we have to go. At least on the U.S. side, we are well below detection level on many parameter. We are hitting the wall in terms of the cost-benefit issues, in terms of end-of-the-pipe control, and we have to look at everything from nonpoint source to sediments to the long-range air deposition, and to the basic use of certain materials or chemicals in industrial processes, generally. So I think this effort is consistent with that realization where we have to go in terms of our policy work and analysis. We hope to continue this cooperative effort -- this ongoing dialogue -- between the two boards, using as the basis for this discussion, the recent Great Waters II report, released by EPA under Section 112 of the Clean Air Act amendments of 1990. We think that will allow us to follow through on these discussions. You will hear more about the air/water linkage in the IAQAB's report.

I would like to comment, listening to Kelly's experience, staring at blank faces of younger kids talking about things, it reminds me of an incident recently where I had inlaws over for Thanksgiving and went to put on some music and my brother-in-law and saw me turning on the system and yelled "Hey kids, have you ever seen a turntable before?" But that was two years ago, I've since, dragged kicking and screaming into the 1990s. Here was a great Girard turntable.

Again, in May of '97 in Romulus, we put on a well-attended workshop with the Air Board. A lot of technical information which you'll hear about from the Air folks and as part of that, there was a beyond compliance section which I'll be talking about. The workshop addressed needs and priorities relative to problem assessment, that is research assessment, monitoring and mass balance modelling, as well as problem response. In other words, the policy and management actions. The WQB, as part of this effort and in preparation for the workshop, commissioned a study by SAIC. a consulting firm out of northern Virginia, who produced a beyond compliance report, authored by Mr. Bob Linett. Complete copies of this report are available and its on the web. I recommend it to you highly. It's titled "Report on Applicability of Voluntary, Beyond Compliance Programs to the Virtual Elimination Strategy." Cooperating with SAIC was Helle Tosine, Gary Gulezian, Peter Wise, of course John Hartig and myself. What you will get is an overview of Ontario, Illinois and Michigan programs that fit this beyond compliance, pollution prevention, innovative incentive-based approaches to toxic reduction, as well as some very provocative, or at least interesting policy recommendation that were discussed at the workshop. Some of which were adopted and I'll discuss today.

Basically some of the areas that we discussed in beyond compliance was obviously pollution prevention as source reduction, or "virtual elimination" in the IJC terminology. ISO 14000 but beyond ISO 14000 to environmental management systems generally, that are being adapted throughout industry. ISO 14000 is a prominent one but not the only one. For instance, there is the total quality environmental management program promoted by the Council of Great Lakes Industries. And of course, effluent trading, and let me say here before -- I know 'trading' is one of those words that sets off very interesting reactions in different people. We are using it here in its broad, generic sense to encompass not just classic trades, like you have under the $SO_2$ provisions of the Clean Air Act but really least-cost options for say, a point source that may be hitting the wall in terms of that cost-benefit study, in terms of end-of-the-pipe treatment, looking at other alternatives that they can pursue that still achieve the goal, reach the strong standards, or even the goal of virtual elimination. We'll be talking about that a bit more.

One thing I forgot to mention, when I mentioned the SAIC report which I highly recommend, I suggest that if you are interested in this topic, read it in conjunction with the WQB's recommendations in the 1993-95 Priorities Report to the IJC which keyed on a March 1995 workshop that the WQB put on, on Pollution Prevention which emphasized things like materials accounting, and technology

development and things that are more internal to industry, like P2 source reduction, industrial ecology, sustainability. These two documents together will give you a wonderful introduction to this whole interesting area that goes under many names, virtual elimination, source reduction, P2, sustainable development.

Looking to the specific recommendations from our workshop in May in the beyond compliance area, the IJC and Parties need to develop an inventory of uses of persistent contaminants of concern and to the extent possible, estimated release rates associated with users, or at a minimum user communities to assess what types of incentives may be appropriate to spur action on the part of user communities. The IJC and Parties should identify which of these contaminants are candidates for reduction through one or more incentive-based programs.

Again, this difficult problem of mercury minimization, first of all we are talking small quantities, instead of tons. You're talking about pounds, you are talking about something that is naturally occurring, not used in many processes per se, or at least as a byproduct of various combustion activities. Minnesota is doing some very interesting work at least trying to look at what the options are, in terms of incenti6e-based approaches. Even something in terms of cross-media trading if POTWs, finding it impossible, the costs are so prohibitive in terms of end-of-the-pipe -- what can they do moving upstream to minimize mercury or maybe control a combustion source.

I've seen interesting stuff out of the City of Duluth and Detroit, alternative compliance programs that lend themselves in this area. The idea of quantifying the use of some materials, an example of what was mentioned ye3terday in Michigan, when we asked the auto industry to look at mercury uses in their processes, their initial reaction was that this was a problem for the power companies, what are you bothering us for? We said "humour us, take a look at it" and they went and did it and found out that they were using 9.8 metric tons of mercury per year just in convenience light switches in hoods and trunks. We would like to pursue the discussion with the auto companies further to do materials accounting for mercury in all aspects of those 25,000 parts that go into an automobile and see what we might get. If you quantify it, you can manage it. So I think there is something to be said, realizing that they are sensitive issues in terms of international competition, proprietary issues, but if we can get at least some targeted and specific focus discussions relating to PBTs, we think it's worthwhile.

We recommend that the IJC and Parties should plan a workshop in which government and industry jointly develop and evaluate contaminant-use trees for particular parameters to identify where reductions are possible and evaluate incent)ves that the Parties/jurisdiction might provide industry in exchange for further reductions.

The IJC should challenge Parties/jurisdictions to lead by example, by reducing the generation of Level 1 and Level 2 substances (that's from the VE strategy) as a result of their activities, products and services. Again, let's get specific, let's look at the use, you've seen these use-trees before in the VE report and mercury reports, chlorine reports. Let's look for the opportunities. Let's not start out with an abstract request but let's get specific and look for the low-hanging fruit, move to the use-tree and move the concept of source reduction along in what hopefully would be a cost-effective manner. Once you get peoples' attention on it, some things jump out in a self-evident way. Other things may be more difficult, more problematic but again, as in the case of autos and switches, once they take a look at it and try to put some quantitative numbers behind that. Governments should lead by example. For instance, energy conservation. We're looking at the energy bank possibility similar to Iowa's. You know, are municipal and school and state facilities and federal facilities operating efficiently in a way that would reduce a number of contaminants coming out of the stack of power plants.

Getting here into the environmental management system area, the IJC and their Parties should provide leadership in helping to ensure that all organizations in the Great Lakes basin seek to achieve ISO 14000 certification. All those seeking that certification, identify persistent bioaccumulative toxic contaminants as "significant environmental aspects" of their activities, products and services. We are not necessarily trying to exclusively focus on ISO 14000; some companies are thrilled with this, but again whether it's TQEM or some EMS system or 14000, the IJC should encourage the incorporation of persistent bioaccumulative toxic (PBTs) concerns into these systems. The fact is, using ISO 14000 as an example, it is a way to optimize your way of operation. It is essentially agnostic as to ends, but it is a good means. The IJC and the Parties would do well to inject into these discussions/processes a greater concern or focus, or sharper focus on PBTs, whether it is ISO 14000, or EMS or TQEM or any of those kinds of things.

The next recommendation, that the Parties and jurisdictions should be encouraged to ensure that sectors using Level 1 and 2 contaminants, processes, activities of concern, are fully evaluated as part of technical assistance programs. Organizations reducing contaminants of concern should be eligible to receive some form of a credit or incentive or whatever, it could be regulatory flexibility. I think again, the auto projects something that we are very involved with in Michigan, its initial focus was on 65 Great Lakes persistent toxics. Now they brought in a lot of different things, everything from recycling, to energy conservation, energy efficiency but again, we need to encourage the federal and state agencies to put this as a priority, give it a focus. There are so many things that industry has to deal with and we can provide some guidance, some leadership, some focus by bringing these existing programs, many of which are outlined in the SAIC report, injecting them with a priority concern with these persistent toxics.

The Parties and the IJC should explore the market-based incentive programs to encourage -- this is a mis-statement -- encourage remediation of contaminated sediments is a big example of where we think we could look at these opportunities but it's not the only one. I mentioned mercury as another one. So contaminated sediments here are a for instance, not the sum total of the recommendation. But exploring use of these incentive-based programs to encourage remediation, for example, and this is in the SAIC report, an industry could adopt an orphan site for remediation in exchange for longer permit terms, extended compliance schedules, or other form of regulatory flexibility. Again, at least under the U.S. system of liability, nobody is going to touch that site in the absence of some incentive or public works project and the last time I looked, I'm not seeing any big public works project on the horizon. One could argue about that opinion. But nonetheless, we think these are worth exploring. Again, the least-cost option to of achieving equivalent reductions to different approaches.

Also, the Parties and jurisdictions should explore providing regulatory flexibility in exchange for an organizational commitment to conduct research and development to reduce the generation of Level 1 and 2 contaminants that are incidental byproducts, such as PAHs, of production and waste-management processes.

*[Beginning of next tape -- some dialogue lost?]*

***David Ullrich, U.S. CoChair, Water Quality Board***

Even though I'm the rookie, Vic was nice enough to let me back cleanup today and I guess that's an appropriate theme for a lot of things we are doing. I *think* that I successfully passed my initiation rights that Griff arranged up in Thunder Bay with an October snow storm. I hope you will have patience in terms of my getting up to speed. I don't know how many of you have had to follow a presidential candidate in your job, but it's not an easy act to follow but nevertheless, here we go.

I think that the Water Quality Board is working on the right issues and doing the right issues with them. We feel that we have been responsive to both the Commission and to the broader public concerns. It appears that report cards are popular these days, and although we don't have the grades here, maybe this is a pass/fail system, I think we have done a lot of good things in addressing these issues.

First of all, this critical issue of sediments as Kelly presented, a lot of good work on that, that will provide a foundation for future activities.

Dealing with the PTSs and the loading sources and pathways. Some excellent work on that. Providing advice on the future of RAPs and how better to manage or monitor progress under those.

The public outreach meetings, both in Rochester, and I was personally at Thunder Bay and was very impressed with the involvement there.

Continuing to deal with the federal sale of mercury and that still is not sold, so that's the most important thing.

Then, dealing with the tough issue of uniform and fully-protective fish consumption advisories, a continuing issue but some good progress on that as well.

The importance of habitat, biodiversity and exotic species. Very important to be looking at this. We do not have the luxury of only looking and focusing on one issue, there are too many priority issues and this is one of them. And, the methods of rehabilitating and conserving habitat.

I think we had a very productive time period and I am looking forward to working with this outstanding group of people on these tough issues and making progress in the future.

Thanks very much, Vic.

***Vic Shantora*** (as above)

I think we still have some time for questions and answers. Please identify yourself into the microphone, please.

**Q:** My name is ***Ian Brindle***. My question is concerning the future of potential contaminants, and I'm surprised that nobody has mentioned Clinton's Green Chemistry Challenge which seeks to replace persistent toxins with more benign products. I wonder if we could hear some comments about that.

**R:** ***(Shantora)*** Is there anyone in our Water Quality Group that could address that? I don't see anyone volunteering right now. I think that green chemistry is just one of the many strategies that we have undertaken in order to try to deal with the whole issues of persistent toxics and with the time period we had this morning, there was not a whole lot of opportunity to get into all of the individual parts of the strategies, but it's a very clear part of the strategy on the U.S. side to deal with that persistent toxic issue and to find reasonable substitutes in advance of them getting out loose into commerce and ultimately the environment. So it is a key part of our strategy, but it's not something that we are in a position to report on specifically today.

**Q:** ***Edith Chase***, Ohio. I just had a suggestion. In your spare time, could you begin to explore the relations between water quality and water quantity, that is the use -- another option in addressing some of these issues is water conservation and efficient use.

**R:** ***(Shantora)*** We don't have a whole lot of spare time, but in the little bit we do, I think that's a good suggestion. We will add that to our list of things.

**Q:** My name is ***Emily Green*** with the ***Sierra Club***. I want to ask about your contaminated sediments discussion. One of the major barriers in dealing with contaminated sediments, obviously it is almost more a lack of funding, than information, and I want to know if IJC addressed that at all in the workshop and if there's any recommendations you had in terms of pursuing funding in different countries for the RAPs?

**R:** ***(Shantora)*** I'll ask Kelly to start on that.

**R:** ***(Kelly Burch)*** At first we thought that funding was going to be the major obstacle and then as we began to look down through the 42 Areas of Concern, we found that there were very few that are ready to undertake a full-scale remediation project at this time. The reason was not due to lack of funding, it certainly was in a few cases, don't get me wrong, but it's that transition from moving from the assessment stage to making that sediment management option, whether they are opting for natural recovery or the end result will be a full scale dredging project. We found very few that they were just waiting for millions of dollars to come their way. This is not viewed as a panacea for all the AOCs, don't get me wrong, but we think we could make a big difference in maybe half of the AOCs out there and if we can move them over this hurdle, I think we can go a long ways in sustaining the RAP process altogether.

**R:** ***(Ullrich)*** I didn't participate in the workshops myself, but this has been a major issue -- the Ashtabula partnership situation is one where they have formed a foundation to try to be able to attract tax deductible contributions to the cleanup. I'm working on the Fox River. Early estimates are in the $500-million to $1-billion cleanup level, and we're trying to look at combined federal/state/local/corporate -- a joint enterprise effort. The Grand Calumet River/Indiana Harbour Ship Canal has used a unique combination of enforcement authorities and supplemental environmental projects as a result of enforcement actions, plus corporate funds. Again, this is characteristic that we are going to have to look at the unique circumstances in the individual Areas of Concern and try to come up with creative funding mechanisms. It is clearly a major, major problem, particularly with the bigger cleanups.

**Q:** ***(Green)*** I hope that you all can take that into consideration. Thanks.

**Q:** My name is ***Robin McClellan***. I serve on the ***Massena Remedial Advisory Committee*** at Massena/Cornwall/Akwesasne AOC and I notice that your summary of accomplishments were primarily papers, meetings ... and I'm thinking of the basin in general. What did you accomplish in the water, not on paper?

**R:** ***(Ullrich)*** If you are speaking in the basin in general, I'm not familiar with the specifics about the Area of Concern that you have mentioned. I think Waukegan Harbour is one of the best examples, where over a million pounds of PCBs were removed from the sediments and within three to four years we were able to lift the particularly tight fish advisory in Waukegan Harbor resulting in a cut-back in the amount of PCBs going out into the open lake. That's hard to measure over the short term. Manistique Harbor, roughly 60,000 cubic yards removed from there as well. Again, it takes some time in terms of when that shows up in fish and in the ambient water quality levels, but clearly there is some progress being made, although there's a full recognition that this process is long and difficult because of the complexity of the problems, the amount of money to solve the problems, the number of people we have involved, but clearly progress is being made. We would all like it to be faster.

**Q:** ***(McClellan)*** I just would encourage you to look at your accomplishments in terms of what happens in the water and not what happens on paper. It seems like so much of the work that I do in working with the Remedial Action Committee revolves around paper and the remediation happens independently of that. If you are going to be truly effective, the accomplishment isn't on paper, it's in the water.

**R:** ***(Ullrich)*** I think that is a very valid and important point and in fact, I think we are trying to do a much better job in terms of those real bottom-line indicators of getting to where we need to be. Thank you, good point.

**Q:** ( -- ) I wanted to address my remarks to the gentleman talking about sediment remediation. I heard you both in your original presentation just a moment ago refer to natural regeneration. I wonder whether you could enlarge on that for a moment in terms of what you mean by that and how you feel that might play a role in sediment remediation.

**R:** ***(Kelly Burch)*** Any time I speak about natural recovery, it's always going to be in combination with source controls, to prevent future pollutants from entering the system and it's also got to be attached to a long-term monitoring program to make sure that you are reaching to goals you have set forth. My vision of natural recovery of a system may be completely different from someone elses, because I look at Presque Isle Bay and tend to focus on that system. If I believe that conditions can return to normal levels or somewhat near normal levels within 10 to 15 years or 20 tops, I think that's something we can live with. We are looking at a 3,200 acre bay. This is not something we are going to go in and dredge or cap; it's all widespread, low-levels of contamination and I think in an area such as Presque Isle Bay, it's the appropriate measure to take and we have been wrestling with this problem for years. We have spent hundred of thousands of dollars on it to study it, to analyze it, and we are no further along in reaching a decision that we were two years ago. I hope by next year we can reach a decision that we can all live with and it's going to be the best for Presque Isle. In other systems, it may take much longer -- 50 to 100 years perhaps -- for natural attenuation to occur but when you look at the time it took for these systems to become degraded, 100 to 200 years, you can't expect any type of improvement immediately. I think that's what people fail to recognize in the RAP process. For most, these were named Areas of Concern in the late '80s, Presque Isle in '91; people are asking why haven't you done anything yet? Why haven't the problems been fixed? That six to 10 years to cure 50 to a hundred years of problems. I think we need more realistic goals and I think this is one way to move us forward and keep the RAP process going.

**R** ***(Ullrich)*** In the interest of time and fairness to the other groups, we are going to have limit the questions to just those standing.

**Q:** ( -- ) Just a comment on the last response, we all know that Pennsylvania worked very strong and assiduously to keep Presque Bay out of designation as a Remedial Action Area of Concern, for decades very successfully. The 1991 date is not a very relevant date, but I want to complement you. I am not here to throw rocks. How are you relating to the First Nations as a tribe? I know that Val Adamkus was strongly involved with the tribes on the U.S. side. Is there any prospect that there will be tribal representation on your Board?

**R:** ***(Ullrich)*** On the Board itself, I can't speak to that issue, but Val Adamkus was very committed as was our whole region to working with tribes and I have spent a good portion of the first four months of being on the job, working with the tribes across the board on all environmental matters. I think Patty O'Donnell is here from the group in Michigan and I met with all of the environmental leaders

from the tribes in Michigan. I've met with two of her regional tribal operations committees, so there is a full commitment in our region to continue to work with the 34 tribal nations in the Region 5 area.

**Q:** ( -- ) What about formal representation on the Board? Is that a prospect?

**R:** ***(Ullrich)*** I am not in a position to speak to that issue, Thank you.

**Q:** Good afternoon gentlemen. My name is ***Sally Billups***. I am with the ***Michigan Environmental Council***. A number of my colleagues are exploring the potential to have a mercury cap and trade program, particularly in Wisconsin and Minnesota. We are also looking at that in Michigan as a potential opportunity to have an economic and regulatory regime that works towards virtual elimination of the tier 1 pollutants. Given the regional and even international nature of the air transport of mercury, is this something that the Water Quality Board is exploring? It's really helpful to get candid advice because we are trying to strategically guide our own research and advocacy efforts.

**R:** ***(Ullrich)*** I believe the Air Board is going to address that issue so ...

**Q:** ***(Billups)*** Okay, I guess I see Mr. Mehan mentioned how there is coordination between the air and water programs and this is one area that obviously, the mercury is coming out of the air and landing in the water, polluting. All of Michigan's inland lakes are under advisory from mercury, so it's a water problem.

**R:** ***(Ullrich)*** There is no question, I think it is a very high priority for us to deal with, and I think we are going ...

**R:** ***(Tracy Mehan)*** We are very much involved in following the Minnesota effort and we supported them when they went to GLNPO for a grant and GLNPO is to be congratulated for giving them a quarter-million dollars. I think everybody is looking at this. Again, trading in its generic form. I don't want to get locked into any particular style, and Minnesota is to be congratulated looking at a variety of innovative non-traditional approaches and I think that the recommendations and beyond-com0liance portion of the WQB submission to the Commission is something the Commission ought to take a look at and play in that game.

**Q:** ***(Billups)*** So, to put it to a closure, is this something that as an environmental organization, the Michigan Environmental Council, it should be pursuing in Michigan?

**R:** ***(Mehan)*** You mean MEC in particular? Yes and we're following it, and Minnesota is the lead and we are very interested in it, so I think engaging in that dialogue is well worth the time and effort.

**Q:** ***(Billups)*** Thank you very much.

**R:** ***(Ullrich)*** I think we are going to have to discontinue the questions at this point. We would be very happy to get with you individually in back of the room but in fairness to the other Boards, we need to move on to them. We'll make ourselves available in the back.

***L.H. Legault, Chairman, Canadian Section, IJC***

Thank you very much. We really do owe a debt of gratitude to the Water Quality Board, not just for its presentation this morning, but for its very effective work during the past year.

I am reminded by the way that the Declaration of Independence was an accomplishment on paper, but led to a number of other accomplishments. We are now going to hear from the Council of Great Lakes Research Managers, Jeffrey Reutter and Harvey Shear, if they will come to the podium.