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Thursday 17 February 2005

## Standing committee on public accounts

2004 Annual Report, Provincial Auditor: Ministry of the Environment

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#### LEGISLATIVE ASSEMBLY OF ONTARIO

#### ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

#### STANDING COMMITTEE ON PUBLIC ACCOUNTS

Thursday 17 February 2005

#### COMITÉ PERMANENT DES COMPTES PUBLICS

Jeudi 17 février 2005

The committee met at 0938 in room 1, following a closed session.

#### 2004 ANNUAL REPORT, PROVINCIAL AUDITOR MINISTRY OF THE ENVIRONMENT

Consideration of section 3.04, air quality program.

The Chair (Mr. Norman W. Sterling): Good morning. My name is Norm Sterling. I'm the Chair of the public accounts committee. If any ministry staff who were there in 1999 don't know that, you're fired, as Donald Trump would say.

Anyway, welcome, Ms. West. You're the deputy minister there. Perhaps you'd like to introduce the people who are sitting with you at the table. I notice you have a number of people behind you, and I guess the best thing would be to introduce them if they come forward to assist.

**Ms. Virginia West:** Thank you, Mr. Chair. I have sitting at the table with me Carl Griffith, who is the assistant deputy minister of the environmental sciences and standards division, and Joan Andrew, who is the assistant deputy minister of the integrated environmental planning division.

You're right, Mr. Chair; we do have other staff—assistant deputy ministers and others—here to assist in answering any questions that you may have. They'll introduce themselves as they come to the table to respond.

I do have some opening remarks that I think have been passed around to the committee members, and if I may, I'll just start with those.

Again, thank you for the opportunity to discuss the Ontario Provincial Auditor's report on the Ministry of the Environment's air protection program.

Providing safeguards for Ontario's air is an important part of the ministry's mandate to restore, protect and improve the environment. It ties in directly to our goals of ensuring public health and the vitality of our communities. We see these sessions before the standing committee on public accounts as an important way to fine-tune our efforts. The feedback we receive during this process helps us do a better job on behalf of the people of Ontario

We recognize that, despite our best efforts and intentions, there will always be room for improvement. We welcome the valuable comments that have been made by the Provincial Auditor. They provide constructive advice that can serve as the basis for effective action on the part of the ministry. I can assure you that the Ministry of the Environment takes the auditor's report very seriously and we are taking steps to deal with all of his concerns. This morning, I will take you through a selection of the auditor's comments and how the ministry is responding to them. Following my remarks, I and the ministry staff here today will be happy to answer any questions that you may have.

As I noted, with me here are Joan Andrew, assistant deputy minister of the integrated environmental planning division; Allan Gunn, assistant deputy minister of our corporate management division, who is sitting behind me; Carl Griffith, assistant deputy minister of the environmental sciences and standards division; and Debra Sikora, who's here on behalf of Michael Williams, who is the assistant deputy minister of our operations division. We're supported as well by additional senior staff who will be able to provide more detailed responses if necessary.

Ministry actions and improvements being undertaken as a result of the auditor's report fall within three categories: program and policy planning, air quality monitoring and compliance with legislation and policy.

I'll begin with program and policy planning. The auditor has noted that, based on ministry projections, the province will not be able to meet its air quality targets. The auditor further observes that no new action has been taken by the ministry to meet its target for volatile organic compounds. The auditor also notes the lack of a formal target for Ontario for greenhouse gas emissions reductions.

The auditor has observed that the ministry's current air standards and guidelines are outdated. He points out that, since 1996, standards for only 18 of 76 high-priority air pollutants have been developed, updated or reaffirmed. Since 2001, no air quality standards have been created or revised. Staff here today can provide the context for and the details on how the ministry is responding to each of these observations, but perhaps I can offer some initial observations. The minister has acknowledged that further efforts are needed to improve air quality. Ministry projections indicate more reductions are needed to meet emission reduction targets. The Ministry of the Environment continues to strengthen existing programs and analyze options for new programs to improve air quality

and meet our targets. For example, a major new initiative, a five-point plan for cleaner air, was announced by the government in June 2004. It will set annual limits of smog-causing emissions from industrial sectors that have never had such limits before.

Earlier this month, our ministry posted a draft regulation setting out limits of two key smog-causing pollutants for 31 large facilities in seven industrial sectors. Their allowable emissions limits will decrease in 2007, 2010 and 2015. The ministry's five-point plan would also set new standards for emissions of 29 harmful air pollutants. Many of these standards are related to specific volatile organic compounds. The ministry has also strengthened the Drive Clean program, which helps reduce volatile organic compound emissions.

Ontario has signed a memorandum of understanding with the federal government on climate change and is working with the federal government to design programs and requirements to reduce greenhouse gases. In June 2004, the minister released Ontario's first implementation plan for meeting Canada-wide standards for ozone and particulate matter. The report reviews actions underway to reduce nitrogen oxide, volatile organic compounds, sulphur dioxide and particulate matter, and reviews new programs being considered. The government's commitment to develop clean energy sources and to close coal-fired generating stations will help reduce emissions of nitrogen oxide, sulphur dioxide and particulate matter.

Public consultations are ongoing on actions to reduce ozone-depleting substances in line with Canada's national action plan.

Ontario is also working with more than 15 industrial sectors on options for reducing volatile organic compounds. Ministry staff continue to work with the federal government on actions to reduce volatile organic compounds from consumer and commercial products sold in Canada.

Since announcing the five-point plan for cleaner air in June 2004, the Ministry of the Environment has been consulting with the public and stakeholders on proposals to introduce new air standards, new air dispersion models and a risk-based decision-making process. Our approach seeks to balance the protection of local communities from the effects of air pollution with factors including timing, technology and economics.

We also had a pilot project with five large emitters. We have used it as the basis for a proposed risk-based, decision-making process now undergoing public consultation.

The Provincial Auditor's report finds that there are no periodic renewal requirements for certificates of approval issued to companies; there is no process to assess risks posed by outdated certificates; and tracking of existing certificates needs to be improved.

The auditor also points to delays in processing of applications for certificates of approval.

The ministry is committed to, and will be developing, a risk-based performance management approach to

issuing approvals, building on the risk-based performance management approach for inspections. This will result in categorizing the regulated community into different risk categories. The ministry will then establish an approvals process that will allow the focusing of its review function on high-risk sectors. Improvement to information systems will likely be a critical component of this change.

The ministry agrees that the development of a checklist can assist its reviewers, and this will be developed to ensure that certificates of approval include relevant provisions for compliance with regulations, guidelines, and government policies, as required.

With a move to risk-based performance management, there is a potential for a reduction in application processing time by focusing on high-risk applications. However, as with the current approach, it should be recognized that complex applications may continue to take an extended time for review.

Turning to air quality monitoring, the Provincial Auditor has noted that the air quality index does not consider the combined health effects of monitored pollutants. Although Ontario's current AQI represents the state of science, monitoring and reporting of key air contaminants, the ministry is in the process of reviewing its descriptive ratings. We will address the issue of poor thresholds and their relationship to ministry and/or federal air quality standards.

Ontario is participating in the development of a new health-based national air quality index, which will include cumulative health impacts associated with multiple pollutant exposure. This initiative is being led by the federal government and involves Health Canada, Environment Canada, the provinces, municipalities, environmental groups and other stakeholders.

With respect to our emissions reduction trading program, the auditor states that it is ineffective in reducing sulphur dioxide emissions and that the emission limit for sulphur dioxide exceeds current total emissions from the electrical sector. The auditor also notes that sulphur dioxide limits are applied to the electricity sector only.

The ministry will continue to review the opportunities to improve Ontario's emissions trading program to ensure strict environmental protection through emissions caps and incentives to all emitters to reduce emissions.

The regulation reduces sulphur dioxide emission caps to 131 kilotonnes in 2007, down from the 2002 limit of 157 kilotonnes. This will ensure action is taken to reduce emissions, and these limits will be reviewed as new programs are introduced.

To help ensure that the use of credits is not excessive, the current regulation limits the use of credits to 33% and 10% of the allowance use for nitrogen oxide and sulphur dioxide respectively. These limits will also be reconsidered as experience is gained with the program.

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The ministry continues to assess programs to reduce emissions. In June 2004, the ministry proposed extension of emissions caps regulations to capture seven industrial sectors, including major sulphur dioxide emitters. As I mentioned earlier, a draft regulation has been posted that lays out these emissions limits.

Moving on to Drive Clean, several issues were raised by the auditor. Among these issues were: The oldest vehicles can have a 50% failure rate; exempting vehicles 20 years old or more is inconsistent with other jurisdictions; there are incidents of non-compliance with program rules at facilities; more than 1,400 Drive Clean facilities have been engaged in temporary off-line testing, exposing the program to risk because data can and has been lost; and one certificate number had been presented more than 400 times. Duplicate certificates were accepted even when the duplication was flagged by the computer. Ministry estimates indicate that almost 40,000 emission certificates not in the system had been presented at licence renewal offices.

Drive Clean is having a positive effect on the environment and on the health of Ontarians. Indeed, by the tests and measures completed, the Drive Clean program is responsible for the removal of hundreds of thousands of tonnes of poisonous gases, greenhouse gases and smog-causing pollutants, including particulate matter from our air.

In keeping with the program's commitment to continuous improvement, the ministry has initiated a program review that will report back to the minister by summer 2005. The program review will examine future options for the program from a science-based perspective, taking into consideration improvements in vehicle emissions control technology, fuels, public transit usage, Drive Clean results and overall air quality. As part of the program review, an independent consultant is conducting an evaluation of the Drive Clean program that includes a review of air quality and related issues in Ontario based on the ministry's air story; a review of best practices in other jurisdictions with vehicle inspection and maintenance programs; an evaluation of the program's costs and benefits to date and in the future; and an evaluation of the program's effectiveness in achieving its goals and objectives, including the strengths and weaknesses of the program's existing design features and parameters. The evaluation will examine model years subject to testing. the use of conditional passes and the compliance program. Current information suggests that older vehicles are generally driven about one third the total distance of newer vehicles and account for fewer than 1% of all cars driven in Ontario.

As of July 2004, the repair cost limit that was first set at \$200 became \$450 throughout the program area. It allows vehicle owners to defer emissions system repairs that raise their repair costs over that limit and obtain a conditional pass to renew their vehicle registrations. The repair cost limit ensures that a vehicle's emissions system faults are diagnosed and that at least some emissions-related repairs are performed for the benefit of our air quality. It is expected that implementation of the increased repair cost limit throughout the program area will result in a larger number of vehicles being fully repaired.

In situations where only partial repairs are made to the vehicle, the emissions control system will continue to malfunction, and fluctuations in emissions can be expected.

Effective August 2004, the ministry reminded all facilities of the standard procedures related to the two methods of emissions testing and the consequences of non-compliance. The ministry has also implemented a daily exception reporting and follow-up process to identify facilities whose test records show suspect uses of improper testing procedures.

In 2003, test and repair complaints were received at an average rate of one for every 5,000 tests conducted. That is a very positive indication of customer service. Variations in test results are typically a function of intermittent control system problems. A variety of quality assurance procedures are in place to ensure ongoing test consistency, including facility audits based on relative incidence and risk of test anomalies. The current guideline provided to inspectors helps identify vehicles that cannot be safely tested on the dynamometer, but cannot be all-inclusive since any vehicle can be customized.

The ministry has identified the issue of duplicate certificates as a serious concern and has been working with the Ministry of Transportation to address this issue. In July 2004, the ministry and the Ministry of Transportation implemented a system to prevent the use of illegitimate certificates. As of December 1, 2004, illegitimate duplicates are no longer accepted at MTO driver and licence-issuing offices. Where duplicate certificates are identified, the certificate is refused at the licensing office and the customer is directed to call the Drive Clean call centre. All incidents are then reported to the Drive Clean call centre and to the ministry's investigations and enforcement branch for follow-up. The ministry has provided the OPP with information about illegitimate certificates. These matters are now being investigated by both the OPP and the ministry.

Finally, I would like to turn to the Provincial Auditor's concerns about compliance with environmental legislation and policy. I will focus on inspections by the environmental SWAT team, and close with comments on issues the auditor raised around air inspections.

The auditor notes that the ministry could not determine the status of 30% of corrective actions required as a result of SWAT inspections. More than 20% of the auditor's sample of ratings recorded in the inspection database did not match the ratings that SWAT inspectors had assigned in their inspection reports. The SWAT team measures its effectiveness by numbers of sectors selected for inspections and the number of facility inspections performed. Effectiveness has not been measured by assessing the inspections' impact on the environment.

The environmental SWAT team's standard operating procedure concerning compliance with provincial officer orders is to require confirmation by the facility owner that the work ordered has been undertaken and completed. SWAT monitors report-backs by facility owners to assess compliance progress. SWAT will undertake a

review of its existing standard operating procedures as well as its current inspection files to ensure that procedures are being followed and compliance follow-up is happening as required.

SWAT will assess the data input into the information system to ensure data quality, accuracy and integrity. Deficiencies identified by SWAT staff will be addressed for correction. With system enhancements to be completed by March 2005, as well as close monitoring of data quality through existing business practices, SWAT will be able to better monitor compliance progress and ensure the accuracy of data input.

The ministry agrees that the development and implementation of outcome-based performance measures can be used to assess and enhance the effectiveness of ministry inspection programs, including SWAT. The ministry is currently developing such measures.

The auditor raised a number of issues around air inspections: He raised that the ministry did not have a formal risk-based approach for selecting which facilities to inspect; he noted that the ministry had not inspected one of the largest benzene-emitting facilities in the province since 2002; and he expressed concern about the number of air inspections performed annually.

During the 2003-04 fiscal year, the ministry conducted a risk-based inspection pilot program focusing on generators of hazardous waste. More than 400 inspections, covering all 15 district offices, were conducted as part of this initiative. Based on lessons learned from this successful initiative and on the SWAT's risk-based sector inspection process, the ministry introduced a formal risk-based approach to inspections for 2004-05, and will continue to refine that approach over the next few years.

Candidate facilities being assessed for inspection are identified using a risk-based selection process that categorizes facilities based on their compliance history and environmental and health-based risks. Over the past four years, the Ministry of the Environment has more than doubled its proactive inspections. In the 2004-05 fiscal year, MOE expanded the use of risk assessment for all SWAT and district inspection activities. The Ministry of the Environment's operations division has steadily increased proactive inspections. In 1998-99, the ministry conducted 4,552 proactive inspections. By 2002-03, that figure was 11,750 inspections and, last year, the division completed 15,036 inspections.

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I want to thank the members of the standing committee on public accounts for the opportunity to address the Provincial Auditor's report on our air management system. We are working to meet the recommendations contained in the report. A lot of work remains, but we value this exercise, as well as an opportunity to improve our ability to protect human health and the environment.

My staff and I will now answer any questions you may have.

The Chair: Thank you very much. Our plan is to go from now until 1 o'clock, if that's what's required, and then we will continue after question period, if that is

necessary as well. It's my hope that that won't be necessary.

I understand as well that around 12 or 1 o'clock, we'll have some lunch next door. We'll try to inform the members of the committee. I understand the ministry has provided some sustenance for their people as well in the next room. So we'll try to tie that in, and perhaps some members of the committee will have a little bit of a sandwich during the time when the questioning takes place as well. We're pretty fluid on that.

We'll start with questions now.

Mr. John Wilkinson (Perth–Middlesex): Good morning, Virginia. Thanks for coming in. And to the whole team, good morning.

I just wanted to ask you about the status—I know you mentioned two areas where we're working with the federal government, particularly the memorandum of understanding on climate change, but also on the idea of developing a new health-based national air quality index. Could you just give us a status update on how those negotiations are going?

**Ms.** West: That's obviously quite timely, certainly with respect to climate change. Perhaps I can ask Joan Andrew to speak to the issue of climate change, with some assistance, and Carl Griffith will speak to the air standards question.

Ms. Joan Andrew: Last spring, the minister signed an overall memorandum of understanding with the federal government on co-operation on climate change, with some specific opportunities to negotiate sub-agreements, I guess they would be, as things come up. We've been working closely with the federal government at a staff level on a variety of issues on climate change, particularly related to helping the federal government understand some of the issues related to Ontario's electricity-generating sector and the forecasts they had made about that.

We have also been working with the federal government and are anticipating hearing from them relatively shortly on participating. We've coordinated across the Ontario government an initiative that pertains to attempting pilot projects, looking at ways to encourage reductions of greenhouse gases, both within the government and in partnership with some of the broader public sector and private sector stakeholders that ministries work with.

I think we are waiting now to see what the federal government's final decisions are with regard to their climate change plan, to decide whether there'd be formal agreements between the two governments.

Mr. Wilkinson: As a follow-up then, the other thing I noticed about our need to—since we're all the same airshed with our friends in the Ohio Valley, my understanding is that about 50% of our pollution is actually just trans-border. The work that we're trying to do so we use the same standards and we're measuring the same things—I believe we have an initiative on that. It's almost like they were on imperial and we were on metric. So we weren't kind of talking the same language about being able to monitor these things. Are we working on

that as well so that when we get into these air dispersion models and we're going to a risk-based system, we have to make sure that we're monitoring and working with, I suppose, our American colleagues to make sure we're getting the same data that we're looking at so we can get a handle on that.

Ms. Andrew: There are some international agreements about how you gather and collect data. Environment Canada actually negotiates the international agreements and we participate with them in that. But there is a pilot project right now looking at the airshed of southwestern Ontario. Actually, I'll turn it over to Carl.

Mr. Carl Griffith: Thank you, Joan. If I could first get back to your question on the air quality index, let me begin by saying that we are currently looking at Ontario's air quality index and looking for better ways to make that more informative in terms of the ratings that we use. Secondly, we are working with several federal departments on a national health-based air quality index, which will bring into play the cumulative impacts of various substances. But if you would like up-to-date negotiations or where we are with the federal government and the other stakeholders on that, I would ask one of my colleagues to come up, if you'd like.

**Mr. Wilkinson:** Yes, because we have to understand that in Ontario we're not just doing this in a vacuum. The airshed is everywhere, so there's a federal aspect to it and there's also an international aspect to it.

**Mr. Griffith:** Yes, and we are involved, both working with the federal level as well as when we're talking with the international community.

Mr. Wilkinson: Just following up on an earlier question we had with the auditor—of course, his recommendation, just in a generic sense, is the need for us to move to a more risk-based system, from an auditing function, about how the ministry is doing. The auditor was telling me that, of course, it's not up to the auditor to tell our ministry, which is very technical, how to assess that.

You have a number of pilot projects that you're using to try to create these new risk-based systems to improve our efficiency. Can you give us an update on how that process is working? One day we'll be held to account on that, I'm sure—two years from now, when we look at this and whether we've got it right.

**Ms.** West: I think, as we look at risk-based methodologies, obviously we can learn from different sources and different areas as to how that actually can be improved. I think we've developed some very sophisticated approaches. Are you talking in terms of inspections, Mr. Wilkinson, or just in terms of the general impact?

Mr. Wilkinson: Yes. The auditor was saying, for example, on certificates of approval, that there are 30,000 and we can't do them all, so we really need to look at risk-based. But I noticed that throughout your presentation, Deputy Minister, you were saying that there's an agreement, or there's a new focus throughout the whole ministry on risk-based. So it's an approach that's been recommended by the Auditor General. You've said you're doing that. I'm just trying to get an idea for this

committee, because I think this will be an issue a couple of years from now as we revisit this, how that approach is being implemented throughout the ministry; I realize there are a lot of files, not just this one.

Ms. West: Absolutely. I agree with you in terms of working our way through this and gaining more and more experience and being able to measure the value of that risk-based approach in terms of auditing and improving the outcomes on the environment—we're going to learn as we go through it. I think we've had an opportunity through a number of pilots that I reference and through the SWAT team's efforts as well that started to inform that process. So certainly starting on the inspection side, we have a fair amount of experience, and I'll ask Debra to speak to some of that. We're also looking at dealing with that on the approval side as well, as we look to apply whatever limited resources we have to the best effect possible. Debra, maybe you want to introduce yourself.

**Ms. Debra Sikora:** I'm Debra Sikora. I'm a director with the Ministry of the Environment. I'm actually here representing Michael Williams, who is the assistant deputy minister of the operations division. I'm glad to be here before the committee.

I can talk to you a little bit about how we have implemented a number of risk-based approaches to our compliance efforts within the ministry and, as the deputy noted, we would start with our SWAT team.

Our SWAT team is comprised of two units within the environmental SWAT team. One of them is the sector inspection and enforcement unit. They are noted for a business model that conducts particularly high-risk, sector-focused inspections with an emphasis on flagrant or repeat violators. I can just give you an example of some of the sectors that we have inspected: the electroplating and metal finishing, auto body and auto repair shops and, most recently, of course, some of the petrochemical industries in Sarnia. Building on that risk-based approach with the SWAT team, we have actually introduced into our district inspection regime the same risk-based approach. That was introduced in the 2004-05 fiscal year, and we will continue to build on that as we analyze the outcomes of those inspections.

As well, the deputy commented in her remarks that we are also moving toward a risk-based approach for the issuance of certificates of approval, and we have done a number of updates to that process to move us along that path.

Mr. Wilkinson: Thanks, Debra. 1010

The Vice-Chair (Mrs. Julia Munro): We'll move to Mr. Sterling.

Mr. Norman W. Sterling (Lanark–Carleton): I have two questions which are somewhat supplementary to Mr. Wilkinson's. Number one is, have you agreed to any number in terms of reduction of carbon emissions regarding Kyoto?

**Ms. West:** Sorry, with respect to Kyoto?

Mr. Sterling: Yes.

Ms. Andrew: The short answer would be, no, we haven't.

**Mr. Sterling:** That's good, very good, and I hope you never do. I think that it's important to know that the province of Ontario never agreed to a negative 6% overall carbon reduction in 1997 at Kyoto, nor did any other province. The federal government struck this number out of the air with no plan for implementation with regard to how they were going to reach negative 6%.

It's interesting to note that Australia went around the world and made arguments to various countries that they couldn't meet their 1990 levels in terms of greenhouse gas emissions. They came out of Kyoto with a plus 8%. When I asked Mr. Goodale, who was there representing Canada—I happened to be in Kyoto in 1997 on behalf of the Ontario government—how he struck negative 6%, he answered, "The United States said that they would reduce theirs by negative 7%, so we took negative 6%." That's the response that we had from the federal government at that time. So there was no science-based implementation plan by the federal government when they agreed to this level

My belief is that the federal government should bear the financial and regulatory responsibility for providing this reduction. Now, we have to co-operate, and our Ministry of the Environment is probably the most skilled organ of government to assist in reaching that goal. We've heard in the House recently the Premier and the Minister of Finance saying that the federal government is collecting more taxes than it needs and that some of these monies should be transferred to the province of Ontario. I think the number is \$5 billion. I think that it's in Ontario's interest that you keep the heat on the federal government to assume the financial responsibility—and it's going to be great—to reach the targets in the Kyoto Protocol.

At any rate, I'm glad you haven't made a commitment on the number, because I'm not certain that you should ever make that commitment. I think we should try our very, very hardest to reduce our gas emissions, but on the other hand, I don't think that by agreeing to a number you're going to do anything but take the obligation that is now at the federal level and bring it down to the provincial level. Because if you agree to reduce X number of tonnes of carbon emissions, what you're going to do is then start to assume the financial responsibility and the regulatory responsibility to reach that goal.

What was the other matter you were talking about, Mr. Wilkinson? Oh, the airshed. Could you provide us with an estimate of the improvement of air quality that will occur in Ontario when we close all of our coal-fired generation plants?

**Ms. West:** Perhaps I can invite Tony Rockingham, who's our director of climate change and air quality, to speak to that.

**Dr. Tony Rockingham:** My name's Tony Rockingham. I'm the director of air policy and climate change. I guess I'd start with providing some context for your question. Coal-fired power stations are one of the largest

sources of a number of emissions in the province. They are major emitters of nitrogen oxides, which are known as a precursor to smog, so they're directly linked to the creation of smog. They are also one of the major sources of SO<sub>2</sub> emissions, which are implicated both for smog and also for acid rain. They are major sources of mercury emissions, and they are also major sources of CO<sub>2</sub>, which is a greenhouse gas.

In terms of your question—what is the implication for air quality associated with the closure of those stations?—there's no question that Ontario air quality will improve. Quantifying the impact is exceedingly difficult. We are carrying out studies that look at the implication, but as yet we have no definitive numerical answer to how will the air quality improve. There's no question it will improve, because, for example, nitrogen oxides account for some 15% of the total  $NO_x$  emissions in the province, the  $SO_2$  emissions are a larger percentage of total provincial emissions and, as I say, they are a major source of mercury.

Mr. Sterling: Mr. Wilkinson raised the fact of our airshed of 250 miles. As I understand it, in the Ohio Valley, within that airshed, there are 200 coal-fired generation plants. We have five in Ontario. As I understand it, most dispersion of our airshed is such that it generally moves west-east, and most of the benefit that will be reaped from closing our coal-fired generation plants will in fact be to New York state and the province of Quebec. I've heard estimates as low as under 1% improvement in our air quality on the closure of our coal-fired generation plants. Am I in the ballpark there? Are you talking 1% or 2%, or are you talking 20% or 30%?

**Dr. Rockingham:** Maybe I can provide some context again on the situation with air quality in Ontario. We look at air quality in terms of basically three areas. We note that there are local air-quality issues, and that would be where you can tie a particular facility to a particular air quality issue. So in a community where there is a large emitter of particulates, for example, you might find that outside the facility your car gets dust on it, and you can attribute that to that particular facility. We take action on those facilities.

As well, we look at regional air issues. That would be where the problem that a community faces is not necessarily associated with one or two facilities that are in that community, but the problem is because of a large number of emitters and the transportation of pollutants across larger distances. We take action on those. That's where one, instead of looking at a particular limit on a particular facility, might consider the whole set of facilities in the airshed, and you might impose regulations that affect all of those emitters. So we take action on that.

Then there's the larger set of issues associated with global air issues. That's where the benefits to the people of Ontario may not flow directly from actions on Ontario emitters, but they depend very much on global action. So you look at climate change; you look at ozone-depleting substances to see examples of those sorts of issues.

In answer to your question—are coal-fired power stations important for local air quality issues?—the

answer is, yes, there are pollutants emitted by coal-fired power stations that affect the immediate community. So power stations are encouraged to put on particulate traps and mechanisms to reduce particulates. It's why we have regulations that govern the opacity of the plume that comes out of a power station, whether it's coal-fired or any other fossil-fuel station. That's why we have developed regulations that cap the total emissions from the electricity sector, whether it's from coal-fired power stations, natural-gas-fired power stations or woodburning stations, because we recognize that for some pollutants, such as NO<sub>x</sub> and SO<sub>2</sub>, it's not a particular power station but a group of power stations.

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In answer to your question—how important are coalfired power stations to air quality?—they are very important to air quality. On a local basis, closing the coalfired power stations can improve local air quality. On a regional basis, as we work in conjunction with the United States to reduce the total emissions from coal-fired power stations, they will have an impact on regional air quality. Of course, on a global basis, coal-fired power stations are an important source of CO<sub>2</sub>. As facilities reduce those CO<sub>2</sub> emissions or if there's fuel switching so that CO<sub>2</sub> emissions are minimized, that will have important implications.

Mr. Sterling: We talked—and Mr. Wilkinson talked—about risk-based allocation of resources in the ministry. I would really like to see Ontario make some of our energy decisions and our environmental decisions on a risk base as well. I really hope for that. I request this from you: that you provide the committee with an estimate of the improvement of air quality on the closing of our coal-fired generation plants. You may do that in a single number or you may do that in terms of how it assists the greater Toronto area or whatever.

We are going through a very critical period with regard to the investment in our energy sector, and I think we should know what we're going to reap in benefit as a result of closure of those plants.

**Ms.** West: We can provide further information for the committee.

**The Vice-Chair:** Thank you very much. We'll move on to Ms. Churley.

Ms. Marilyn Churley (Toronto-Danforth): Thank you very much. I'll try not to lose my voice throughout this.

First of all, I have a different take on the whole Kyoto situation than Mr. Sterling, but of course you're not the politicians. You're here to answer questions about just what your overall direction is within the ministry, so I'll stick to that instead of giving you my political opinions today.

On that basis, I have a couple of questions. I believe Ontario actually has a climate change office. Are you from that office?

**Ms. West:** Tony is the director of climate change and air policy for the ministry. So from a policy standpoint, yes.

**Ms.** Churley: Right. Ontario is actually one of the places that is ahead. It's one of the few jurisdictions that does require mandatory reporting of greenhouse gas emissions. Is that correct?

**Dr. Rockingham:** That's correct. Ontario has a regulation in place, and that regulation has been in place for several years. Starting this year, however, there is a requirement for reporting of GHG emissions across Canada, and that is the result of federal action under their program, known as the National Pollutant Release Inventory. But you're correct: Ontario has had that regulation in place and has been in advance of other provinces.

**Ms.** Churley: But Ontario doesn't have any regulations at this time to place a cap on greenhouse gas emissions.

Dr. Rockingham: No, it doesn't.

**Ms. Churley:** Is that something that is under consideration? It is an issue I brought up yesterday. I presume the answer would be that we're waiting for the feds, which I believe Mr. Sterling would agree with, to come down with changes to the Canadian Environmental Protection Act. I'm not so sure that's forthcoming. So my question would be, is that something that's under consideration, actually bringing in regulations to cap greenhouse gas emissions?

**Ms. West:** Maybe I could invite Joan Andrew to respond to that. I assume the question is with respect to Ontario's intent.

Ms. Churley: Yes.

**Ms.** West: As you know, it's difficult for us to speak to intent per se, but perhaps Joan can speak to the relationship with the federal representatives with respect to greenhouse gases.

Ms. Churley: Before you answer, if you could hold your thought, my next question is actually related to that, because it's around your negotiations and discussions with the federal government. Of course, the province doesn't have any specific obligations under the Kyoto Protocol at this time. As I understand it, you have been negotiating with the government on a plan, and it's more about how to make a plan, but there's no blueprint for specifics or targets in general that we will meet through those means. My question is also around that, besides the caps.

This plan's lifetime is up 2009, right? But Canada is supposed to meet its first set of targets under Kyoto in 2008. My question is related to the other question around the caps. Since there is no plan yet—and there is a possibility that we could be in the planning stage up until 2009—my question is general around how that's all going to unfold, given that there are no caps, there are no commitments at this point in Ontario. Do you get my drift here?

**Dr. Rockingham:** Sure. Maybe I can provide some context again. As Mr. Sterling indicated, Ontario was at Kyoto as part of the Canadian delegation on climate change, and has been part of the Canadian delegation at a number of the international conferences where the imple-

mentation details of Kyoto have been discussed. So we have been working with the federal government on a wide range of aspects associated with climate change.

There was indeed a national process, and Ontario was very active in that, to try to establish what would be the best plan for meeting Kyoto obligations. As a result of that national process, a number of documents were produced and a number of ideas were put forward. The federal government did, in 2002, bring those ideas together. There was some controversy about whether they had considered all the provinces' input, but a plan was produced and tabled in Ottawa that was Canada's plan for meeting its Kyoto obligations.

We are still in discussions with the federal government because some of the details of that plan have yet to be explained adequately for emitters to actually know what their obligations are. So Ontario continues in discussions, as do all provinces, on the best mechanism for implementing Canada's obligations under the Kyoto Protocol.

I think the answer to your question is: There is a national plan that was published in 2002, there are many details of that plan yet to be ironed out and those discussions continue.

**Ms. Churley:** OK. Basically, you've confirmed what I thought is where we're at in Ontario in terms of the plan.

Just one other question on Kyoto. Instead of waiting for the federal government to move on some of the other things—because once again we heard yesterday there is still no plan—Manitoba, for instance, and some municipalities, like the city of Toronto, have taken actions on their own in terms of trying to make progress with some other things—I mentioned setting the caps—like a large retrofit program for public buildings and all those kinds of things.

Are there plans afoot within your office, working with the Ministry of Energy, to really improve and increase those kinds of programs, beyond the capping—retrofitting of buildings, conservation and efficiency—beyond the program that the Minister of Energy has announced, to build on that?

#### 1030

**Dr. Rockingham:** Indeed, Ontario is taking action to reduce GHG emissions. We have several initiatives that have been underway for a number of years. As you indicated earlier, Ontario was one of the leaders in requiring facilities to report greenhouse gas emissions, and certainly some of the thinking behind that was that if you're not measuring it, you can't manage it. So one of the first steps is to require people to measure their emissions so that facility owners and managers understand what their emissions are and then can take actions to reduce those emissions.

The government has committed to closing the coalfired power stations. By moving to cleaner energy sources, there will be major greenhouse gas emission reductions associated with that. As an example, the Ministry of Energy has released a request for proposals for 300 megawatts of renewable energy—

**Ms.** Churley: I'm sorry to interrupt you. I'm very familiar with that and I don't mean to be rude, but we

don't have a whole lot of time. Perhaps I wasn't clear enough in my question. Beyond what the Minister of Energy has announced in these areas, are there other things and plans being made about building on those, bringing in a province-wide retrofit energy efficiency plan beyond what the minister announced, that you're aware of?

**Dr. Rockingham:** Certainly one of the programs that goes beyond what was announced by the Minister of Energy would the ethanol initiative of the Ontario government, where the government has committed to ensuring that at least 5% of the gasoline mixture sold in Ontario is composed of ethanol. Ethanol has major benefits in reducing greenhouse gas emissions, because it's replacing fossil fuels with fuels that are made from biological sources. As those sources grow, they capture carbon dioxide from the atmosphere.

Ontario has also signed an MOU with the steel sector, as one of the parties, the Steel Association of Canada and the federal government, to encourage the steel sector to find the mechanisms it can use to reduce its greenhouse gas emissions.

Another initiative that goes beyond what the Minister of Energy has announced would be Ontario's five-point plan, which acts on some 30 large emitting sources. It primarily drives them to reductions in smog-causing emissions, but, as part of the targets for that, we are expecting energy conservation efforts to be accelerated, and those will have major benefits for greenhouse gas emissions

**Ms.** Churley: Thank you. Those are ones that I'm also aware of. Again, I guess it's more of a political question, so I'll move on. Given what we know about the drastic situation we're in around greenhouse gas emissions, Ontario has got to put in a lot more aggressive programs, because we're the second-largest emitters of greenhouse gases. Those are the kinds of things I'll be raising, obviously, more on a political level.

**The Chair:** Ms. Churley, as you're moving to another area—I know you're not a regular member of the committee—we try to rotate from time to time on points so that—

**Ms.** Churley: That's fine. I was going to move on to another area, but if people want to jump in here—

The Chair: OK, sure. Ms. Broten.

Ms. Laurel C. Broten (Etobicoke–Lakeshore): I wanted to ask a few questions with respect to the auditor's concerns about certificates of approval. Certainly that's an issue that raises red flags as to whether or not approval levels have been established, whether they are being complied with and whether, as time passes, the certificate-of-approval system has been keeping up with modern knowledge about what level of pollutants is safe or not safe and the types of pollutants. I'm wondering if someone can comment with respect to how the ministry is going to respond to the auditor's quite severe criticism of the lack of enforcement and probably the lack of modernization of the certificate-of-approval system.

**Ms. West:** In my opening remarks, I referred to a few of the initiatives the ministry has undertaken. It really is

an important area of concern and it's a challenge for us but I'll ask Debra Sikora to speak to that.

**Ms. Sikora:** I'd be pleased to give you an update on what the ministry has done with respect to certificates of approval and will certainly call on our colleague Jim O'Mara if we need more details.

The auditor did raise a number of concerns, both in the audit report a couple of years ago and this most recent one, and I'd like to tell you a bit about what we have done to address a number of those concerns.

We have implemented a number of processes over the last years to assist us with the updating of the certificates of approval. Most recently, we have introduced protocols. These have recently been posted on the environmental registry. In effect, these protocols will allow the ministry to ensure that the updated certificates of approval will incorporate all the current environmental standards and procedures and updated ministry standards as they come about. As I said, they were recently posted on the environmental registry, and that will ensure that our regulated community is aware of our practices.

In addition to that, we have developed what we call model terms and conditions to be included in all of our certificates of approval. This will help ensure that the consistency of each of those areas of standards is represented in our certificates of approval. The wording will then be more standardized, more defensible and more enforceable as well.

The auditor also recommended that we implement a checklist, and indeed we have done so. It is in use today in the ministry. This checklist assists in checking against the use of the protocols and the model terms and conditions, so again we ensure consistency with all of the certificates of approval.

In addition to all of those pieces, we worked very closely with our district offices and we have implemented what we are calling a bit of a field alert program. As the field is conducting inspections at the facilities, they will alert our environmental assessment and approvals branch whether or not there need to be updates to the certificates of approval and whether new certificates of approval need to be put in place. That field alert program is in place as we speak.

I noted earlier in my remarks that we are moving beyond that. We are looking at a risk-based approach to certificate-of-approval issuance and updates, and there will have to be systems enhancements to ensure that that takes place.

Ms. Broten: So practically, for example, say a certificate of approval was issued well in the past, can you just give us an explanation of how the process will unfold so we are assured that we are not in the same circumstance five years from now? I understand there are many certificates of approval that have been issued that are long-standing. How do you go back and determine the connectivity between new information we have about hazardous pollution levels and a certificate of approval that was issued 15 years ago, ensuring there's a connect-

edness between that and how we're going to follow that process through?

**Ms. Sikora:** Jim, I wonder if I could call on you to address some of the details of the question.

**Mr. James O'Mara:** Good morning. My name is Jim O'Mara. I'm the director of environmental assessment and approvals. Thank you very much for your question.

As certificates of approval come up for renewal or amendment, we do check them through, using our protocols and checklist that was suggested by the Provincial Auditor. By using both the protocols and the checklist and other devices—standard operating procedures—we make sure that those certificates, as they're updated, reflect the most modern guidelines, standards and requirements under legislation.

**Ms. Broten:** What's the cycle of updating or renewal on certificates of approval?

**Mr. O'Mara:** They are updated as they come in for amendment and application. We are doing, in total, both new and updates, about 8,000 per year.

**Ms. Broten:** So the area of concern, I guess, continues to be a company operating under our radar screen with a long-standing certificate of approval that would not meet today's criteria for pollutant levels. Is that a risk factor?

Mr. O'Mara: The risk we're trying to address through the risk management plan or, as I prefer to call it, performance management plan, is to look at those areas we have identified as representing significant environmental risk and to target our activities on those sectors. So as we develop that risk management or performance management plan, we will be focusing on those sectors and those companies that represent the greatest risks.

**Ms. Broten:** What type of sectors would those be?

**Mr. O'Mara:** Clearly the large emitting sectors, such as the metals sector and some of the chemical sectors, are key to our considerations, as well as things like the pulp and paper industry, which is a large emitter as well.

Ms. West: If you want a list, for example, of the greatest areas of risk in the sectors, perhaps, Deb, you can speak to that.

Just as Deb's coming up to the table, I think we want to remind you that in the field there's an opportunity by way of the district offices to identify some of those problem areas that ordinarily, if you will, would fly under the radar screen, as you say. Then they can, as they see them in the field, bring them forward with an alert so they can be addressed from a certificate of approval standpoint.

1040

**Ms. Broten:** Just on that note, if an alert was brought forward, what action would be taken?

Ms. Sikora: I can address a couple of your concerns and maybe just establish the linkage between how these are brought to our attention. Between the field alert program, as we're calling it, which is any time we go out and respond to an incident report—these alerts may come to our attention through our planned district inspections. They may also come to our attention through our STAC program, which is the selected targets for air compliance

program. That is where we have incorporated and looked at the highest areas of risk for any of these facilities. Those three programs would be the triggers or the alerts where we would look at the certificates of approval.

The kind of compliance or abatement action that we would take would certainly depend on what kind of exceedences we were finding to those certificates of approval limits. If we're looking at health-based exceedences through the STAC program, we would be looking at notifying the medical officer of health of those, through our district inspection realm. We would take the appropriate abatement action, whether that was issuing a provincial officer's order—depending on the facility's compliance history, we would certainly take the most effective compliance, up to and including enforcement of those exceedences, if that was the case.

The Chair: Are there any grandfathered industries left that are operating without Cs of A? In other words, when the C of A regime came into effect, I believe in the early 1970s, there were some industries that were grandfathered. If you were in operation before that, you didn't need a C of A.

**Ms. Sikora:** Sorry, I'm going to have to defer to my colleague on this answer.

**Ms. West:** Maybe Joan could speak, in terms of requirements under the statutes for certificates of approval.

**Ms. Andrew:** We will have to get back to you, but I am pretty sure that there are some parts of the agricultural industry that do not require Cs of A.

**The Chair:** I understood that some smelters are old, old—

**Ms. Andrew:** They predate the C of A program?

The Chair: Yes.

Ms. Andrew: We'll have to get back to you on those.

Ms. Sikora: We can certainly get back to you with that information.

The Chair: Mrs. Munro.

Mrs. Julia Munro (York North): I do apologize for not being here earlier. I hope that I'm not asking questions you've already answered. The Chair just referred to the issue of grandfathering, and actually I want to ask a question with regard to grandfathering that comes out of the question of the certificates of approval.

When you talked about the sectors that you have identified, the ones that you identified for us just now were obviously major industrial players. My question is more related to small businesses that would require a certificate of approval and those that might have been provided some years ago, that now, as Ms. Broten asked about, there are changes in technology and upgrading and things like that. What would trigger the individual who holds that to be compliant? Are they going to know? Are they going to have to be inspected? What kind of relationship is there for those people?

**Ms. Sikora:** I think I'd like to refer to some of these sectors that we have targeted through our environmental SWAT team. Certainly the SWAT program looks at the risk-based sectors, and that does include some of the smaller industries as well as some of the larger industries.

I commented earlier about some of the examples of SWAT sector inspections that we have conducted in the past: the electroplating and metal finishing areas, auto body and auto repair shops, auto wrecking and recycling—that kind of area. Traditionally, these are not very large industrial emitters. Through that identification of risk-based inspections, we would certainly target those areas where there is potentially risk to human health or the environment. So it would be through an inspection process, and that would be one of the triggers.

In addition, another trigger would possibly be a pollution incident that is reported either through our district offices to SWAT or to our spills action centre. That may also be a trigger for us to look into whatever abatement action we would have to take. Those are a couple of the triggers for the smaller industries.

Ms. West: Just in response to that as well, I think SWAT, as a very good example, has modelled a few very good approaches to focus on the goal of compliance, so it's not just through inspections and through orders or charges that we act. We recognize that there's another part of the spectrum, that we need to provide assistance and education. I think in some of the areas that Debra noted, some of the small businesses were not aware of the fact that they were out of compliance, weren't aware of what they were required to do to come into compliance. Working with any associations in that industry, helping to sponsor seminars or sessions, helping to inform them and educate them on the requirements: I think that's another very important role of the ministry, not just the enforcement side.

**Mrs. Munro:** Actually, that's where my question was going, on the issue of the education.

Can you just give us, not necessarily a statistic but a flavour or a sense of to what extent issues around the necessary changes in investment in terms of the new technologies and things like that—to what extent would investment play a role in an individual's difficulty or challenge to come into compliance?

Ms. Sikora: Are you referring to economic investment?

Mrs. Munro: Yes. If you go in there—I'm assuming people who have been out of the loop, so to speak, in terms of the kinds of requirements that a new application would require—I assuming that's going to involve some kind of significant investment on the part of the organization that now is out of date. To what extent is that an issue in terms of getting compliance?

Ms. West: Maybe I could just speak initially, and then Debra or Joan may want to add to that. Certainly, if we look at the main objective of compliance, we recognize that in order to come into compliance, industry and small business in particular have certain factors that they have to consider to permit them to do that. Basic economics obviously is one of those considerations. As we work with, for example, the small businesses or some of the small industry that Debra mentioned, we certainly take into account that they do have some financial impediments. But also, as part of the education side, we would

help to perhaps inform them of technology that is available that they may not have been aware of, technology that, if they did invest in it, doesn't only assist them in terms of coming into compliance but could assist them in terms of their other operational benefits, whether it's energy efficiency or whatever.

Certainly, some of the policy that we look at on a broader scale in terms of regulation within the province—of course economic factors come into it as well. We do attempt to recognize that there's a balance that needs to be reached with respect to good regulatory environmental policy within the context of the current economy and current and evolving technology. It is something that the ministry certainly is aware of and that we take into account in policy development, in compliance activities—that sort of thing.

Do you want any more information on that?

Mrs. Munro: No. I think understanding that balance is obviously important, and you don't want to see it used as an excuse. At the same time, you do want to see compliance.

I'm sorry I can't remember which of you, but one of you mentioned the role of the district medical officer of health. That prompted me to think, "What power is there in that office that would send you there to report on an issue?"

#### 1050

Ms. West: With respect to the air emissions concern, obviously the medical officers of health, and certainly the city of Toronto public health—that's a good example of their involvement and interest in terms of good air quality and the impact on human health. It's obviously our concern as well.

With respect to enforcement and compliance, I'm not sure who's best able to answer that specific question. I'm thinking of the air side, rather than water spills, for example. I'm not quite sure when the medical officer of health is actually alerted and involved. Certainly, at a district level, our district officers do work with their public health units on human health concerns.

Joan or Carl, do you have any—

Ms. Andrew: We do work with local health units on air issues. It varies a little bit across the province, depending on the capacity of the local health unit, but under the Health Protection and Promotion Act, they do have the authority to deal with issues as they may impact human health. So if there was a particularly substantive emission to air, like there are sometimes to water, they can order the closure of the plant. They can do a variety of things if they believe—they have quite significant powers to deal with human health issues.

**Mrs. Munro:** That was really my question. My further question on this round: Reference was made a few moments ago to the introduction of ethanol in fuels. I wonder whether or not, in establishing the 5% minimum, there is also a requirement to make it Ontario corn.

**Dr. Rockingham:** I can speak to the announcement that was made by the government and the actions that are underway to flesh out the details of exactly how the

ethanol content is going to be enforced. The objective or the commitment is to ensure that, averaged across the gasoline sold in Ontario, 5% of that gasoline is ethanol, the total content.

What we're looking at right now are the mechanisms to both encourage ethanol production in Ontario and ensure that that requirement is met. So the Ministry of the Environment is looking at options around a regulation that would require both recording of the ethanol content sold at various points within the province and the amount of gasoline sold and disaggregated in a manner that we can ensure that obligations for suppliers are met.

The question of where the ethanol comes from is a detail that's going to have to be worked out, but there have been no decisions on that, as far as I know, at this point.

Mrs. Munro: Thank you.

The Chair: Can you provide me with the energy inputs and outputs of ethanol? Do you have a paper on that, which you could forward to me, please? In other words, what is the bang you get out of a 5%—as I understand it, it produces about 10% of the energy a normal octane gasoline does, but I'd like to know what the energy inputs are to produce the ethanol as well.

**Dr. Rockingham:** I can speak broadly to the greenhouse gas benefits, or is it the energy benefits in particular?

**The Chair:** Energy benefits. Well, I'd like to know both, actually. If you could just provide that on paper to me, that would be—

**Dr. Rockingham:** OK. We'd have to get back to you with further information on the energy content.

The Chair: Ms. Churley.

**Ms.** Churley: I wanted to go to the five-point plan. Actually, my first question around that relates back to a question we referred to earlier under the Cs of A, and that is the chemical industry, which you mentioned is, as we all know, a very major source of pollution, but it's not subject to the new pollution limits when it comes to  $NO_x$  and  $SO_x$ . They've been exempted. I just want to know why. I mean, I recognize that there are economic issues, I suppose, but in my view, that's one of the big flaws with the five-point plan, that they're exempted. Can you tell me why and when they're going to be brought in.

**Dr. Rockingham:** Yes, thank you for the question. I'd be happy to give you some context and the answer to that. What Ontario is doing in terms of NO<sub>x</sub> and SO<sub>2</sub> controls is that we're looking at programs across all sectors of the economy. We're using particular instruments where it makes sense, given the situation for the sector facilities.

For example, Ontario did move several years ago to cap the of  $NO_x$  and  $SO_2$  emissions from the electricity sector, recognizing that that sector is typically a very large emitter—a coal-fired power station—where you might have tens of thousands of tonnes of  $NO_x$  emitted by a single facility. So acting on that makes sense, in that one can take advantage of economies of scale. As well, the sector as a whole is a major emitter, even though

there are smaller facilities that have fewer emissions per year.

The way that regulation worked was that it capped the six largest emitters—the five coal-fired power stations and the large oil-fired power station—first. That cap came into effect in 2002. In 2004, the rest of the sector was capped, so that now any electricity producing facility that sells more than 20,000 megawatt hours into the electricity grid and emits at a rate greater than defined in the regulation faces obligations.

The next step in terms of using emission caps for annual emissions was to look at what are the next largest facilities in terms of emissions. The work that the Ministry of the Environment has done is to look at the facilities right across Ontario, in terms of their emissions, and prioritize. The initial cut to allow us to do a much more detailed study was to look at those facilities that had emissions of more than 1,000 tonnes of NO<sub>x</sub> per year and more than 1,000 tonnes of SO<sub>2</sub> per year. On that basis, the ministry published a paper in 2002 that basically signalled that if that's the threshold that's used, then these are the sectors that are, indeed, called large emitting sectors. Initially we looked at the chemical sector and, upon reviewing the data, there's only one facility that exceeds those criteria, and that's the NOVA facility in Sarnia. It turns out that that facility's emissions are large, in part because they do something very close to refinery-type work, so that facility—

**Ms. Churley:** Where did that threshold of 1,000 tonnes come from?

**Dr. Rockingham:** That's a judgment made after looking at the distribution of emissions across all of the facilities. A very large proportion of the total  $NO_x$  emissions from the industrial sector can be controlled if you act on those facilities that have emissions of more than 1,000 tonnes. What we have done is, we have made some judgment calls. So, for example, the only facility in the chemical sector that is under an SIC code that would indicate they're chemical is the NOVA facility. That is proposed for regulations in the draft regulation that was posted earlier this month.

In the pulp and paper sector, there are several facilities that are over 1,000 tonnes a year. We looked at the makeup of that sector and made a judgment call about even those facilities that are emitting perhaps just less than 1,000 tonnes but are in the same competitive market as those facilities above 1,000 tonnes. We have named nine facilities in the pulp and paper sector where we are proposing to cap their  $NO_x$  and  $SO_2$  emissions.

Ms. Churley: Given the time, just a couple of other questions on the five-point plan. I think that I'm going to stick to one that has been raised by Mr. Sterling earlier. As I understand it—well, I know; this is into the whole emission credit plan—right now the US coal-fired plants can buy credits from Ontario so that they can actually continue to pollute more in the regional airshed that we all use. Do you think that's a problem?

Under the proposed plan, the OPG, as I understand it, can earn credits even if the coal plants—there are two

issues here around emissions credit trading: the one that I just mentioned and that OPG can earn credits if the coal plants close. In turn, they can sell those to the US coal plants operating in the neighbouring states. So any net benefits—I think this is partly what you were referring to, although we have a different view about the coal plants, because I believe that to have any credibility in pushing the US, over time, to close down and not expand coal plants, we have to deal with ours. But any net benefits of closing down a coal plant here will be lost, beyond what Mr. Sterling was talking about, if the plants south of the border can buy permission to pollute even more. Would you admit that that is the problem and that we need to revisit our approach to emissions trading?

1100

**Dr. Rockingham:** Maybe I can answer a number of parts of your question. Let me establish, first, that while power stations operating in the US are welcome to buy credits or allowances from Ontario, they would not have any value to them, because the US regulations do not recognize allowances issued in Ontario or credits issued under regulation 397.

The other part of your question: Can OPG facilities earn credits by switching fuels or taking actions to reduce their emissions? The answer is no. The OPG facilities do face obligations whereby they have to report their emissions, and at the end of the year, match tonne for tonne so that they surrender to the Ministry of the Environment one tonne of emission allowances or credits for every tonne of emissions. We have been alerted through the EBR comments on the proposed regulation that there is concern about, when you close the coal-fired power stations, will other capped facilities be able to buy those allowances and therefore avoid any reductions at their own sites?

First of all, let me establish that the existing regulation reduces the caps; that is, the number of allowances the government hands out each year. Those allowances are reduced over time, and there are substantial reductions by 2007. The government has recognized that it needs to gain experience with emissions trading and will be reviewing that regulation, and as other programs are developed, changes to that regulation would be made. So the government will be making a decision about how the emissions trading regulation and the caps associated with different sectors would change as other decisions are made that would affect the facilities that are capped.

**Ms.** Churley: I know we have to move on. Can I have one quick follow-up question on this?

The Chair: Sure.

Ms. Churley: I just want to be clear, and I'm glad you're reviewing that, because I think we would all agree that creates a problem. As I understand it right now, the capped and uncapped industries, say, like the chemical industry, can buy credits from neighbouring US states and that will allow them to exceed regulated limits. That's the way it is right now, correct?

Dr. Rockingham: No.

**Ms. Churley:** Could you clarify that?

**Dr. Rockingham:** If I could provide the context for that, the emissions regulations that exist for the electricity sector impose new obligations on capped facilities. They do not relieve those facilities of any other obligations. So whether it's a coal-fired power station that's currently capped or the proposal to cap facilities in the pulp and paper sector, that regulation does not relax any other regulations or obligations that facility requires. If, under a control order or a certificate of approval, it must take certain actions or must reduce emissions or meet certain standards, then those standards will be unaffected by the emissions trading regulation.

If your concern is that the government has established a sector limit, or through the regulation has handed out a specific number of allowances to that facility, and can that facility buy allowances or credits from other emitters, the answer is yes. In terms of credits, they are only issued when there are proven reductions by that emitter so that the environment is held harmless. In fact, the environment benefits, because when someone approaches the Ministry of the Environment to say, "You have to find a standard method"—so you have accepted this particular technology, whether it be low-NO<sub>x</sub> burners or switching fuels to lower sulphur fuels. By accepting a standard method, the ministry has signalled that it believes that technology or that method is a bona fide way of reducing emissions. The ministry then requires that the baseline emissions be established for that facility or process, and that once the technology being proposed has been installed, there is monitoring that takes place to prove the emissions have been reduced.

After a period of public comment on the methods and the reports that have been submitted, the director is then in a position to award a credit to that facility. It has made proven reductions. In fact, the regulation requires that it provide a gift to the environment, that if it reduces by 100 units, 10% of those units are ignored, and it's awarded a credit for only 90 units. So the environment benefits by that creation of credits. Then if that credit is sold to a capped emitter, yes, that credit can be used by the capped emitter, but it has been purchased, so it's still providing a real incentive for that emitter to take action to reduce its emissions. The environment is protected because the total NO<sub>x</sub> emissions in the airshed have not risen, and in fact have gone down.

Again, I just reiterate that the proposal that was posted on February 10 is that the emissions limits for each of the sectors will decrease over time so that there is a continuing signal that you have to take actions to reduce your emissions. Because there will be some facilities that are able to reduce their emissions far below the number of allowances that are handed out, I think it's very clear that the price for emissions allowances over time is going to increase. I believe it's an excellent economic instrument to ensure the accountants understand that the emissions from this facility are costing the company money. It's my view that once you get the accountants involved, you will look more closely at cost savings through pollution reduction.

The Chair: Mrs. Sandals.

Mrs. Liz Sandals (Guelph-Wellington): I'd like to have a look at page 125 of the auditor's report. It's going back to the issue around air quality monitoring. In the second paragraph, more or less, on the page, it talks about five cities that had 19 days of poor air quality. It just happens that the list is Hamilton, Mississauga, Guelph, Sarnia and Windsor. Four of those you might intuitively expect to be on the list for one reason or another, but Guelph, which happens to be my riding, is not someplace that you would have traditionally expected to be a hotspot of bad air in Ontario. In fact, my observation, as somebody who has lived there for a very long time, is that traditionally we thought we had pretty good air quality. My observation would be that when we have a bad air day, and we certainly noticeably do now, it's almost invariably attached to a southerly wind instead of the prevailing northwesterly, and that the occurrence of smog days has gone up dramatically since Ontario started to rely more heavily on coal-burning plants; that is, it would seem we're downwind when we have a south wind from the coal burners on Lake Erie. I'm wondering if those observations are true and if the extension of that would be that getting rid of the coal-fired plants, on Lake Erie at least, would have an impact on the number of smog days in Guelph.

**Ms. West:** We'll ask Tony to start to address your question, but if we start to get into the monitoring aspect itself, we'll ask another director to step up.

**Dr. Rockingham:** I think your question is, is it true that bad air quality days are associated with particular atmospheric conditions and typically transported pollution from the southwest? I think the answer to that is yes. We can provide more detail, if you wish, but air quality is very much associated with particular atmospheric conditions. This is the issue I talked about earlier, where we recognize local air quality issues, regional air quality issues and global air quality issues. Regional air issues arise because the conditions are caused by a number of polluters, a number of emission sources that are spread out over a large geographic area. In the case of air quality in southern Ontario, there's no question that sources in the US are very important to the air quality conditions that exist in Ontario.

#### 1110

Mrs. Sandals: Would it also be true, though, that the number of smog days, if I can put it that way, in my particular neck of the woods seem to have increased along with the increase in the use of those coal-burning plants, one of which is an Ontario coal-burning plant to the south of us?

**Dr. Rockingham:** The increased use of coal-fired generation has certainly contributed to poorer air quality. It's very difficult to establish exactly which facility is causing air quality issues that are regional in nature. It is true that, as Ontario has increased its coal-fired generation over the last few years because of circumstances in Ontario associated with demand growth and poor nuclear performance, there has been an increase in coal-fired

generation in the United States. Both of those factors could well be part of the cause for the air quality incidents in Ontario.

Mrs. Sandals: The other thing—and this may be for the other manager—is that it seems counter-intuitive that Guelph would appear on this list and not, for example, Toronto, which probably gets us into what's being measured. As somebody who spends a lot of time in both places, what you feel when walking on the street would be that it intuitively seems that the air quality during rush hour is significantly worse than the air quality I would ever experience while walking around the neighbourhood in Guelph. So I guess the question, then, which the auditor has raised, is the whole methodology around measuring the AQI. You make reference to working with the federal government to come up with some new methodologies, and I'm wondering if you could tell us a little bit more about that and what you would expect to see if you're looking at the cumulative effects of various pollutants in terms of different patterns, in terms of where the hotspots are.

**Ms.** West: Why don't we ask Ed Piché to come and speak to the issue of the air quality index, both with respect to that specific question and with respect to any current discussions with the federal government.

**Mr. Edward Piché:** Thank you, Deputy. Good morning. My name is Edward Piché. I'm director of the environmental monitoring and reporting branch. One of our many networks is the very comprehensive and, I'm proud to say, state-of-the-art monitoring program in Ontario.

Intuition is always a fascinating dimension of the human condition, because sometimes it's very insightful and sometimes it's misleading. If I may set the ground rules for a second here, I just happen to have in front of me historical data covering a full calendar year for Ontario, and I'll just go back a couple of years. For 2004, there were eight advisories covering 20 days; for 2003, seven advisories covering 19 days; for 2002, 10 advisories covering 27 days; and so on. So the actual fact in the last several years is that there hasn't been a significant change. The auditor's observations do have merit, of course, and the causality or the reasons why are, quite frankly, very complex. We study them, as do a large number of academics and other folks, to try to determine why that is.

All sources are significant. Power plants are significant. But let's not diminish the importance of vehicular traffic and the incredible growth that Ontario has seen over the past decade or more. Reflecting also on transboundary airflow—about which your observation is correct; you notice these things at certain times of the year under certain conditions—that is correct, and the scientific evidence supports that. As Dr. Rockingham said earlier, you get these weather phenomena with a very strong southerly flow and, when that happens, we have significant and adverse air quality in Ontario. So we contribute and our neighbours contribute.

The observation is, yes, there has been a change. Your intuition that those areas seem to be obvious, except for

Guelph—Guelph is in the middle of very significant economic growth, and that's why.

Mrs. Sandals: That answers why Guelph is getting worse, but it doesn't answer whether we are exactly measuring the right thing if Toronto somehow appears to be less polluted, if I can put it—has fewer alerts than Guelph. That just doesn't seem to stand up to experience. I take it that the Toronto medical officer of health has made similar comments, so that's not just my lay intuition; there might actually be some professional thought that that's the case. What are we doing in terms of looking at the air quality index with the feds and the way we measure it? Where is that work at?

Mr. Piché: Ontario has a very long and exemplary history of being involved in air quality indices and actual measuring. It implemented, in the early years, the air pollution index, which measured ambient particulate matter and sulphur dioxide, and it had actionable activities that were related to that. Industry would cut back when the levels went above certain numbers.

We are working with the federal government, with federal health agencies, with provincial non-government organizations and with academic experts as part of this federal-led initiative to determine what is the best—I'll call it metric—measure to use when you're measuring air quality to alert us as to what actions we should do to best protect ourselves. As the media have indicated—and of course, if you look at the literature, it has also been hotly debated there: What's the best thing to do? Should we look at one substance? Should we look at just when it exceeds certain numbers or certain thresholds? Should we look at all the substances, or which subset of those substances? How do we evaluate the cumulative impact? Those are extraordinarily difficult questions.

I'm very pleased to say that Ontario has the most comprehensive network. We have a large number of leadership experts. We are participating in the federal process. There are some proposals that will be coming forth soon to look at where the index should evolve to. You may recall that in August 2003, Ontario was the leadership jurisdiction in Canada to implement measurement of particulate matter—it's called PM: Two and a half means 2.5 microns, and that's a very, very small measure of particulate. We were the first to put that in. It has changed. You'll see that some of these statistics will begin to change now because there are more advisories. We just had an unprecedented one in February. That was because of particulate matter.

Suffice it to say, there will likely be announcements in the not-too-distant future. They'll be continuous and ongoing as the federal process continues to make recommendations on how best to measure, what to measure and what that means. It's a very challenging initiative. We're in there with the best there is in Canada, and we'll be implementing recommendations as the government advises in due course.

**Mrs. Sandals:** I wanted to switch topics, but I'll come back to that later.

The Chair: OK. Julia?

Mrs. Munro: Just following up on the issue of air quality, I had a couple of questions. You referenced the work that you do as part of a federal initiative, and I just wondered if you could give the committee any sense of a timeline or a critical path in terms of what the federal government has laid out and when it wants to achieve particular objectives around this initiative.

**Mr. Piché:** As in all similar issues, the federal government has the challenge of dealing with all the jurisdictions in Canada. Is it fair to say that some are more advanced than others? But the intention is to bring some equity, if you will.

The current process is very close to producing a document that will give some advice to leadership jurisdictions; we are anticipating that some time in late spring or early summer. The intention of that community is to produce a document, and of course we're monitoring and participating very closely in that. In terms of the time frame, I would say very shortly. The intention some time ago was to move a little bit more expeditiously, but some of the key individuals, unfortunately, suffered significant setbacks and that's held the process up. Also, there has been very strong polarization within the provincial community as to what is the best next step and why. It's very, very strongly debated.

#### 1120

The analogy I would use—for those of us who are more than 25 years old—is smoking. I can remember medical authorities 25 and 30 years ago saying that smoking didn't have any impact on your health. Of course, time has proven them not to be correct. Similarly, in this instance, air quality does have an impact. The question is, what's the best thing to do about it and how to go about doing that. What are the best parameters to measure—when, where—and what to do about those measurements when you have them?

Again, I'm very pleased to say that Ontario is a leader in Canada. Our scientists are key players in this process.

Mrs. Munro: That leads me to my next question, because on page 124 of the auditor's report, it refers to the fact that Toronto's medical officer of health "has estimated that 92% of the hospitalizations and premature deaths that are attributable to air pollution occur when the air quality rating is good or very good." That sort of jumps out at people, I think. Talking about one's intuitive sense, that obviously comes as a surprise. The second reaction is, have we got a really good definition of what is good air quality or are we dealing with issues around the science of attributing these hospitalizations? I wondered if you would comment for us on that particular, which appears to be something of an anomaly.

**Mr. Piché:** First, I would say that we are the Ministry of the Environment, not the Ministry of Health, so obviously we are not experts in health. We do work very closely with health experts, and there is health expertise in these communities and on these committees that we're involved in.

We're obviously very concerned and interested in the state of the science, the state of the understanding of health. The observations by the auditor obviously have merit. We study them and we keep abreast of the latest developments. As part of this federal-provincial process, we will be incorporating the best medical science into advisories and whatever metrics are used to alert the public.

So yes, we do work with the medical officer of health. That body of science keeps evolving, and as it evolves and as critical milestones are attained, that information will be incorporated into the process that we use to advise the people of Ontario how to best protect themselves.

Mrs. Munro: It seems odd, because when there are air quality advisories, there are public announcements that go with that about people with respiratory concerns and so forth. It just strikes you that it seems odd it would be at a point when those kinds of advisories would not be given if the air quality is good or very good. I appreciate that your expertise is only on the environment side and not on the health side, but I'm sure you can appreciate why it would strike someone like me as rather odd.

Mr. Piché: We have, since that publication, as I said earlier, incorporated particulate matter 2.5 into our index. We're the first jurisdiction in Canada and one of the first in North America to do that. And, as I indicated earlier, we are participating in the federally led process and subject to all the restrictions thereto to evolve us to what is the next step, what is the next best thing to do.

I would also counsel that whatever processes we take, however we advise people, we share a border with various provinces and states: Port Huron-Sarnia, Windsor-Detroit, Niagara-Buffalo, Ottawa-Gatineau and so on. Whatever advice we give to our community, for those citizens living in those cities, needs to have some harmony with adjacent jurisdictions. Those are some of the other challenges we have when we give this counsel, because if you're in Detroit and the US is telling its citizens one thing, we need to be able to respond responsibly and appropriately.

For those who know, Ontario, as a leadership jurisdiction, put in the smog watch and smog advisories several years ago. Those are done in concert with people in Michigan, with the federal government, with the US federal government and also with the provincial government of Quebec. So there is some common understanding among all the citizens who share what heretofore have been very friendly borders.

Mrs. Munro: With this initiative by the federal government and what I would understand to be Ontario's leadership role vis-à-vis the provincial side, the question that follows logically from your last comment is, do we have good information with what other jurisdictions do on the issue of connecting air quality and health? I'm thinking particularly of countries of the EU, where you'd have, in many ways, a similar geographic and industrial complexity to what we have in Ontario.

**Ms. West:** I'm trying to decide who's best able to respond to the question. We'll ask Tony Rockingham to come up and give you some observations.

**Dr. Rockingham:** I think the way I would address your question is to talk about what are known as Canadawide standards, particularly for air quality. There have been Canada-wide standards developed for ozone and PM2.5, and those are standards that are set. For example, ozone would be set at 65 parts per billion; that's the short form. The longer, more detailed form is it's measured as the 98th percentile averaged over three years. It's a probabilistic form for a standard, recognizing, as I said earlier, that atmospheric conditions are very important to pollution concentration levels.

We look at similar sorts of standards that are set in the United States. As science progresses, those standards have tended to change over time. They have in fact become tighter, as science has demonstrated things like ozone, but more specifically the very small particulates, the PM2.5s that Ed referred to. In fact, there are finer particulates as well that we're aware of—PM1 or PM0.5, half of a micron—very small particles that enter into the lungs. The science is progressing. The standards are reviewed constantly, so that we are aware of the health impact and can gauge as well the ability of society to move to those clean air standards.

Your question: Are we looking at the European Union and the sorts of standards that exist there? Very much so. We look at the health science that is done around the world. We are aware of the health studies, and we tie in, as Mr. Piché said, to the work that Health Canada does. They have expertise in looking at epidemiological studies and how different air quality affects health in different parts of the world that would be expected to experience different sorts of particulates or pollutants.

So we look at health studies around the world; we're aware of that. We look at the standards that are set around the world to deal with particular issues. We also look at the technologies in use around the world. Indeed, part of what the ministry published on February 10 as part of a proposed regulation to limit NO<sub>x</sub> and SO<sub>2</sub>—nitrogen oxide and sulphur dioxide—emissions, is a methodology whereby we define what we mean by "best available commercial technology economically achievable."

That's a term that is very important. What is proposed in the regulation is that if a new facility is built in Ontario in one of these regulated sectors—pulp and paper, steel or non-ferrous smelting—we would say to that facility owner, "You are captured by this regulation. We will provide you with allowances for emissions, but we're only going to provide you with allowances that are consistent with this best available commercial technology economically achievable"—BACTEA.

The document that we've published defines for industry how we're going to assess that. Part of that assessment is that they must scan the markets they compete in, they must scan the sort of technologies that are in use, and the lowest-emitting technologies that are appropriate to their circumstance are what we are going to use in gauging the emission rates that are appropriate to those facilities.

1130

Mrs. Munro: Thank you. Have I got time to—
The Chair: You'll get another crack. Is it related?
Mrs. Munro: No, it's a slightly different topic, so I'm quite prepared to wait.

The Chair: Mrs. Churley.

**Ms.** Churley: I want to come back to the emissions trading briefly, because I knew I was going to be cut off, although he's not as strict as the Speaker. The mikes don't go off, do they?

I wanted to just follow up, because I wasn't really clear. You gave a very clear and concise answer, but this is my concern and why I'm coming back to it. As you know, probably better than I do, there is a move afoot for the emissions credit to be integrated with the Americans'. I don't know if you're involved in that or what your statement on that is. In some ways it makes sense, but we know that there is a move afoot. So while what you've said right now is that US coal plants can't apply to buy credits from Ontario, my assumption is they will be able to, and that's my concern. I guess I wasn't clear enough in terms of what we can do now, but this whole emissions credit thing is evolving and it's becoming a very major part of the Kyoto plan and reducing targets, and that's why the integration is being looked at.

The first question is, are you involved in those discussions or is that just the feds at this point? If so, wouldn't my contention from earlier be a fact: If that integration happens, then the trading that could result would in fact be really detrimental to the reduction of our smog levels and, if that's the case, if that happens, shouldn't we then pull smog pollution out of the emissions credit trading?

Dr. Rockingham: It's a very interesting question. Let me answer a couple of parts of that. Is there consideration of integrating emissions trading systems with the US? Yes, there is. The ozone annex to the Canada-US air quality agreement establishes a number of mechanisms. I am part of the Canada-US air quality committee that reviews the agreement and the commitments made in the agreement and the research studies that are underway as part of the agreement. It was an important part of the air quality agreement that Canada and the US would try to better coordinate their scientific and economic studies so as to be able to develop better programs, to learn from each other. So the federal government is indeed leading an exercise to look at whether it makes sense from an environmental perspective to allow cross-border emissions trading. The situation there presumably would be that emitters on both sides of the border are capped and that, as in emissions trading, one can buy or sell allowances to other capped emitters. It's part of a system that exists in the United States, where they have, in the case of NO<sub>x</sub>, some 21 states where the facilities face emissions caps and trading is allowed so that a facility in New York can buy emissions allowances from a facility in Ohio. The background again in the US—those regulations that impose caps on facilities do not override any other regulations. So the obligations, because of control orders or the equivalent in the United States, are not in any way relaxed by the emissions trading system. You cannot buy your way out of those sorts of obligations.

What it does mean, however, is that if a particular jurisdiction, for example, were to lose their nuclear power plants and, therefore, they would expect more production from their coal-fired or gas-fired stations, then they may on a temporary basis—a couple of years—require greater use of those fossil facilities and this provides a way to ration the total allowances that are provided. The environmental benefit is such that the total emission in the airshed, and it is a regional air issue we're dealing with, is not increased because of that. That's the first part: Yes, there is consideration of integration of emissions trading systems across the borders.

As to your concern about what happens if Ontario takes actions to dramatically reduce the pollution caused by the electricity sector in Ontario, and does that mean allowances could be bought by facilities in Ohio, which would just pump out more pollution and that pollution would drift across Ontario, I guess I'd answer in two ways. As I said before, as decisions are made about additional programs in Ontario and as the circumstances for different sectors change, I would expect that the emission limits for those sectors would be revisited by government. Another issue that has been raised, and is under consideration in a number of jurisdictions, is what is called flow control, and that exists right now in the US. What happens is that if the number of banked allowances exceeds a certain threshold, then as facilities withdraw a certain number of allowances from that bank, the conditions for withdrawal change. In effect, when there are large withdrawals from a large bank of allowances, you have to withdraw two allowances to be able to use one. That's a market-based mechanism to ensure you do not have excess withdrawals from the bank at a particular point in time.

That may be one mechanism to address the concern you've expressed.

**Ms. Churley:** Thank you. I'm glad you're on the committee. You could be a politician, and I mean that in the most positive way.

**Dr. Rockingham:** Thank you.

Ms. Churley: It's a very good answer because—

Mr. Richard Patten (Ottawa Centre): It's an insult.

**Ms.** Churley: No. It's coming from a politician, so it's not an insult. From anybody else I'm sure it would be. You're very good at answering these questions.

That is a major concern, not just for me but for many in the environmental sector and other energy sectors, that these kinds of things could happen.

Do I have another minute to touch on—

The Chair: Sure.

Ms. Churley: I want to come back briefly—you've covered a lot of it on air quality. My question would be, is there going to be more investment in more ambient air quality monitoring stations, because some of those were cut, and other data collection methods to predict emissions coming from the fleet of cars, and modelling

technology that will calculate the pollution from all these different sources, because that's what the auditor referred to and that's what we're discussing. You talked about some of the things that need to be done and some of the progress that is being made, but in terms of the latest technology, in terms of the need, in my view, for more ambient air quality monitoring stations, is there within the budget some allocation to allow you to move forward with this?

Ms. West: Maybe I can ask Carl Griffith, who's the assistant deputy minister of environmental science and standards, to speak broadly—and we'll get to your question specifically—on air monitoring and what we're doing in that regard, and then if you want specific details on budget or investment, we can deal with that as well.

**Ms.** Churley: In fact, maybe we could do it in two parts, because I could touch on the whole budget stuff. There are a couple of other issues. If we're going to do it, then we can do it all in one piece.

Ms. West: OK. Why don't I ask Carl, first of all, to speak to air monitoring. He may want to call on a director

**Mr.** Carl Griffith: Let me try. I think you may have heard this morning that Ontario's air monitoring network is kind of the state of science and we are quite proud of where we are right now.

Ms. Churley: Yes.

Mr. Griffith: You've also heard that we've been working with various partners to look at different advancements that may be made in the future that we would certainly be very much a part of and be right there to ensure Ontario has the most up-to-date monitoring system. We are always looking for ways to better use our resources, and when new technologies and advancements come, we make the best use of our resources to make those necessary improvements.

1140

**Ms.** West: Perhaps I could just add as well that we do have Allan Gunn, who's our chief administrative officer, to speak to any specific questions you may have on the budget.

Carl mentioned partnerships. I think one of the things that the ministry is doing is recognizing a need to improve our attention to and our outcome from science and research, and obviously there are limited resources to do that in a dedicated way within the ministry. But certainly partnerships with other jurisdictions, with universities and colleges and with the private sector are very important. I should say that, at least with respect to that, we are paying more attention. We're looking at more creative ways to deal with that. It is a more focused piece of attention for the ministry in the past year and in the years to come.

Perhaps I can also ask Allan Gunn to speak with respect to the investment issues that you had or if you wanted more particular—

Ms. Churley: Yes, I asked a specific question, and another specific question would be around the smog patrol. I think we all agree it's got a good record. We

asked the question, I believe, in the House about it facing cuts, and I wonder if you can elaborate on that. Given their record of not being able to follow up with violators to ensure that they have taken the necessary action to reduce emissions, I would assume that shifting more resources into the program would make more sense than reducing it when it's a program that's really working. So it's a couple of examples of areas there where I'm concerned about there just not being enough resources in your budget. I know you have to work with what you're given; I understand that. But this is an ongoing issue, in terms of following through with the auditor's recommendations. There are creative ways, as you said, that you can get at some of them, but in other areas, you simply can only do so much with so many staff and so much equipment. Those two areas, specifically, I'm worried about.

Mr. Allan Gunn: Good morning. I'm Allan Gunn, the chief administrative officer for the ministry. I wonder if I could start by just commenting about our budget as a whole, and I could, for the context of the committee, talk about how we've refigured our budget to focus it and give us some of that flexibility. We currently have an overall budget of \$317 million, of which \$299 million is the operating budget, which is a significant piece that pays—

Ms. Churley: How much operating?

Mr. Gunn: The operating budget is \$299 million. Out of that operating budget comes the salaries and wages that, by and large, pay for the staff—we have a salary budget of \$142 million, which is roughly 50% of the budget—the benefits and then the program support dollars to support that. What we've done is taken the budget and broken it into four key envelopes to give some of that flexibility. We have an envelope for air. The size of the air envelope in our current budget is \$50.8 million, or 16% of the budget.

**Ms.** Churley: How is that different? Has it gone up or down?

Mr. Gunn: It's pretty much been consistent. I'll speak in a minute about the budget as a whole over the last five years in general terms. I just thought I'd give you context. There are four major envelopes: There's an air envelope, a water envelope, a waste envelope and a strategic management and program support envelope. The water envelope is 50% of our budget, and it's \$158.4 million of the budget; the waste envelope is 14% of the entire budget, or \$46 million; and the strategic management support is \$57.2 million, or 18% of the overall total budget of \$317 million.

On the operating envelope for air—or any of the envelopes, for that matter—we then try and allocate the resources to the various functions within that. For example, the compliance function, which gives a bit to the smog patrol, would be funded out of the air envelope. What, in general, is happening there—and our operation folks can specifically speak to the smog patrol and how that relates to the risk-based assessment—is that the compliance envelope is taking the envelope that's available and trying

to target those compliance officers to the highest risks that they want to do. So there's flexibility to move the environmental officers from smog patrol to the SWAT offices to district offices or wherever the risks may be and, as turnover takes place within the organization that reaches targets, the operating plans for the year and the issues that are targeted to get the most environmental payback on the compliance staff, and it's a particularly large portion of the staff.

Deb will actually talk to you specifically, if you want, about the smog patrol and how that fits in—there are the SWAT officers and the smog patrol officers—as part of the overall budget.

I'd just comment a little bit on the budget as a whole, because one of your other questions is, what has happened to the budget? Over the course of the last five years, there have been incremental additions to the ministry's budget. It has grown approximately—

**Ms. Churley:** Sorry to interrupt. That would have been from what? I guess you're saying there has been some move upwards, but talking from the base of when it was cut, I guess throughout 1995 and 1996 significantly, you're saying there have been some small improvements since then?

Mr. Gunn: Yes.

**Ms.** Churley: I just wanted to establish that.

Mr. Gunn: I have the last five years with me. Our operating budget in 2000-01 was \$158 million. That operating budget is now \$299 million. You can see that there has been a series of gradual increases over the last five years. The vast majority of those increases have been in the water envelope: building the drinking water management division and the compliance officers there. But there have been other resources that have come in over that period.

**Ms.** Churley: Sorry to interrupt. I'm just trying to get a handle on this, because I was aware of that, and that was going to be my question. Do you have a breakdown of how much of the increase has actually gone into all of the new water laws that have been passed since Walkerton?

**Mr. Gunn:** I can get that accounting. I don't have that direct accounting with me, as an action item.

**Ms. Churley:** Can I ask to have that provided?

Mr. Gunn: I can indeed. I can give you some general sense, but I don't have the specific accounting with me. That has been the vast majority; there's no question about it. In general terms, when you look at the water envelope, a large majority of it is for the compliance staff within clean water. In addition to that, there has been staff added for source protection and resources for source protection and also resources for nutrient management. Those have been the major components in both staff and resources, and also technology to support that. We have invested in a drinking water management system to do that electronically, as well as working on nutrient management and those sorts of systems. We can definitely provide that to you.

Over that same period of time, some of the other significant pieces that were incrementally put into the

budget were base funding for the SWAT team, which is a multidisciplinary team—and it would cover a number of media. There have also been resources put in for brownfields, as an example. Some technology staff, for sure, have been put in, not only for the drinking water systems, but for other systems like hazardous waste and for management—

The Chair: I don't want to interrupt, but we've been going on for quite a long period of time. We're straying off the auditor's report, in terms of the overall budgetary matters of the ministry.

**Ms.** Churley: I agree. Perhaps this is something that I can have a separate briefing on, if you could put together some of this information. I know that you need to move on, but maybe we can come back to the two specific areas when we do the next go-round. We can follow up on this.

The Chair: Mr. Patten.

Mr. Patten: My question is related to the framework for the national health-based index and how comprehensive it is. I'd like to say this: I'm always surprised when something appears to be really good and effective on the surface, and then later on, as I dig into it, it misses the point on a variety of things; for example, air pollution. We're going to take a look at air pollution. That's not only gases in the air but particulate matter. We know the impact on people and animals and one thing or another, and we're talking thousands and thousands, maybe millions, of tonnes of particles that are being emitted. That falls in our soil, that falls in our lakes, that falls on our forests, and this is pretty serious stuff. My point is that I see a far more integrated impact than simply what's happening with the quality of the air, because it impacts on all those other things. Are there studies, is there a frame of reference that you have that says, "You know, this is not just air we're talking about"?

We know that if you live in Hamilton, your possibility of having asthma as a child is 10 times greater than if you live somewhere else, in another part of Ontario. But this is going into our soil, which means it's going into our food. I do a lot of studying on this stuff, and the pass-through effect is very serious. It adds to the health concern that we have, but we seem to come at it in a very segmented fashion.

#### 1150

I'm wondering, as your concern for the environment and of course it's not limited to air, and I know that's what the report is dealing with somewhat today; the environment is the totality of the environment. When you look at this index, does that have those important tangential relationships that also talk about quality and impact on health?

Ms. West: Perhaps we can try to respond to this focused not just on the index, because I think your question is a broader question: Are we dealing with things in a segmented manner, or are we making the connections—the connections among the media; the impact upon the media, whether it's water, air or soil, as a result of pollutants—and what does that mean in terms of the

health impact? I think there's a growing field and a growing recognition of the very basic connection between environment and health, and that's associated with the various media that are affected by the environmental factors, whether it's air, water or soil.

Perhaps we'll ask Dale Henry to speak. Dale is the director of the standards development branch, so he perhaps can speak to the broader issues of the connections and the comprehensiveness, and perhaps also in terms of the connection to human health concerns.

Mr. Dale Henry: Thank you very much for the questions. What I'm going to do is try to give you some context with regard to the job that my branch does within the development of standards. We're going to talk about standards in general with regard to if it's going to be emitted to the air, to the water—be it drinking water quality standards. I know the focus is on air today, so when we develop standards within the branch itself, we look very comprehensively with regard to the various factors that are going to impact the individual, the human being. But we also go beyond that. We also look at environmental impacts with regard to vegetation. With regard to air, we even look at sooting of someone's laundry, because that can occur with some of the substances that are being emitted. So we look at a variety of impacts that would occur with regard to the development of air standards.

One of the areas that you talked about was that if you have an air emission, it also gets into our forests and into our soil. So we also look at some of the substances that don't break down, such as metals, with regard to accumulating in the soil itself. What we do when we develop our air standards is make sure that we're looking at inhalation with regard to human impact but also looking at the accumulation that's going to occur on the ground with regard to the impact on the soil itself, on vegetation, but also from a different exposure route as people work in their gardens, play as kids in the soils and lick their fingers—with regard to the ingestion route, too.

When we look at developing air standards, we look very comprehensively at the exposure routes with regard to any type of air emissions: going into forests, going into the soil, going into our water, even. We look at that.

Mr. Patten: Do you recommend policies on other impacts that you identify, such as the soil? Do you have an interministerial committee that says, "Agriculture: Better take a look at the quality of the soil that farmers are using, because it's contaminated and it's impacting on our health"? Does somebody from health say, "Hey, just a minute. We want to hear from our friends from the environment related to what's happening here, because here's what we're seeing"? Is that kind of activity going on?

**Mr. Henry:** Absolutely. In fact, we have an interministerial committee between the Ministry of the Environment, the Ministry of Health and Long-Term Care, and the Ministry of Labour that gets together a number of times a year.

What we focus on typically, though, is human health. We look at it from the context of the environmental exposures that we're getting from industry that are coming down on the population itself. We also look at it from a labour consideration. We're looking at that any standards that are developed from an occupational health exposure are in line with exposures with regard to what we're seeing in the environment.

In the occupational field, there are other methods of making sure that the worker is protected. For example, people wear gloves, and that certainly would limit any type of dermal contact. In certain cases, where there are elevated concentrations of airborne materials, protective masks would be taken care of by the employee. So we certainly work with a number of agencies.

There's also an interministerial committee that looks at nutrient management, and we're looking at it with regard to biosalts. This isn't an air issue, but I just think I'll give you a little bit of context.: We also work with other agencies and ministries in developing standards with them that would be acceptable both on the agricultural side of the equation and also on the human health side of the equation.

Mr. Patten: Thank you. The Chair: Any questions?

Mrs. Munro: I do have a question. I wanted to go back to an earlier discussion that we were having with regard to coal-fired energy sources from the US. As I understand it, in the States there's an increase in the number and size of coal-fired energy sources, and at the same time there's also a whole issue around the cleaner coal technology that I believe the US has embraced. I just wanted to know what kind of impact, when we're talking about the closing of the coal-fired furnaces in Ontario, we can anticipate with this response in the US.

**Dr. Rockingham:** Let me answer the question by, again, just noting that air movement from the US is very important to air quality in Ontario. We are working, through the Canada-US air quality committee, to encourage the US to undertake programs which will reduce the emissions of those sorts of pollutants that move distances to cause regional air issues. Typically, those are  $NO_x$  emissions and  $SO_2$  emissions.

We know that the US is considering further actions. Their most recent initiative, to reduce  $NO_x$  emissions, is typically called the  $NO_x$  SIP Call. That is still coming into effect but was ordered as law some two years ago. So there are tremendous  $NO_x$  reductions that will result in emissions from US sources that are typically able to influence Ontario air quality.

The US does have laws that reduce  $SO_2$  emissions and that cap  $SO_2$  emissions from the electricity sector. Our judgment is that those caps are not as stringent as the caps that are in place in Ontario, and we welcome the activities by the US to review the  $SO_2$  caps. So we're very pleased when we learn of progress on what's called the clean air interstate rule, which will further tighten the limits on the total emissions of both  $NO_x$  and  $SO_2$  from sectors

Those regulations are silent on how the emission reductions will be achieved, but we do take some comfort

out of the fact that the regulations are written in such a way that there is a cap on the total emissions that can be created, independent of how their electricity sector grows or what plants they choose to install. The discussions are still underway on whether it's possible to find ways of even further reducing emissions.

1200

**Ms.** Churley: I wanted to come back to the budget and just finish up that piece. It may be that you will want to answer this, but we'll see who wants to answer it.

I asked about a couple of specific areas, but further to that, just in looking at the auditor's report in general and looking at some of the stresses on the ministry and some of your new obligations on top of what you already do, trying to follow up on these recommendations—I can give you some examples. Talking about firms seeking exemptions from complying with the new air standards, which is going to be allowed based on certain things: That obviously is going to require more technical and engineering and other staff. I was talking about smog control earlier and some of the other programs. It's already widely known that there are not enough resources in the ministry to keep up with a lot of things, so you have to be creative and move things around. There are these pressures that I'm asking about—and yes, there have been some additions, mostly going to the water area, which have caused some problems in some of the other areas—but it also looks like there is a 12% cut coming. With these demands, both from following up on the auditor's report and other demands upon you, how are you planning to do all of this with the further cuts coming?

**Ms.** West: Maybe I can make some general comments first and ask Debra to address your questions with respect to smog control, and then I'll ask Allan Gunn to come back and address the cuts issue.

First of all, just generally—and in some respects this is an obvious answer—there are always fewer resources than one would want to do the total job that's required. That's why you've heard us speak a fair amount about a risk-based approach to find a proper methodology to allocate our resources for the best benefit possible.

You're right in terms of looking for other creative ways to address our needs and also to recognize that, in terms of protecting the environment, there are lots of players and there are lots of shared roles and responsibilities to do that. It's not just the role of the Ministry of the Environment or other government jurisdictions; we have to recognize that there is a responsibility on the part of those who produce pollutants, such as industry, as well as the general public, who share a role as well.

As we look at trying to take the broadest, most comprehensive approach to occupying our role in protecting the environment, it includes looking for partnerships, reminding people of their responsibilities and looking at creative ways, whether it's performance-based or risk-based approaches to inspections and approvals. We're starting to explore ways, through a transformation agenda that the minister has mentioned recently, in which we can

look to better cost recovery of our services, look for other partners to take on some responsibility and look at different methods to ensure compliance that don't always solely look at inspection, orders and charges, but look at it more upstream in terms of how we can encourage and support and educate others to assume their role appropriately. It always is a challenge, but we're trying to be as creative as possible in our approaches.

Why don't I ask Deb Sikora to speak to the smog patrol issue and compliance, and then I will ask Allan to speak to what we see going forward in terms of the expense limits that have been identified for the ministry.

**Ms.** Churley: The cuts that are coming; right. OK.

Ms. Sikora: Thank you, Deputy. I can certainly address your query about the smog patrol program. One of the things that we do, as Allan and the deputy mentioned, as a ministry and certainly as an operations division, is go through an operational planning process where we look at what our priorities are with respect to the business that we do in our respective divisions. As an operations division, indeed we did look at one of our programs, including smog patrol, in an effort to look at program improvements and enhancements.

As you know, smog patrol is our on-road enforcement arm nested within the environmental SWAT team. We do target grossly polluting vehicles on Ontario roads, both licensed in Ontario and outside Ontario. We have indeed looked at a realignment of the smog patrol program and adopted some of the best practices that we have found coming out of our SWAT sector-based inspections, and we have applied that rationale and model to the smog patrol area. So we are certainly looking at targeting the higher-risk sectors and we are also looking at realigning the way we actually do these inspections. So as opposed to perhaps a more random approach to looking at targeting, we are looking at very specific sectors, focusing some of our inspections on heavy-duty vehicles, perhaps areas like taxis and tow trucks, focusing our resources in the areas where we hope to achieve the best air quality improvement.

Mr. Gunn: In terms of planning and going forward, we have been given four-year planning envelopes. Of course, decisions haven't been made and we haven't been given any direction on reductions or of things to take place. But some of the activities that we are involved in—

**Ms.** Churley: But there was something in the last budget, you'll recall. So you weren't given any direction?

Mr. Gunn: We've not been given specific direction or decisions, but I could give you an example of some of the things we're looking at that are directing our priorities away from front-line staff and participating in things like cross-ministry initiatives. For example, there is an initiative within our technology world, and what we're looking to do is see if we can't consolidate all of the servers and stuff across government to be able to use the computers in a more efficient manner, so directing our energies in those areas; also, clustering more of our efforts working together. Again, the technology world is already working

in clusters—looking for other opportunities to do kind of backroom, middle-room types of things, continuing to work with the Ontario Shared Services Bureau to consolidate the services there to generate savings of that nature.

There's another initiative called supply chain management that we're all participating in to ensure, through the Ontario Shared Services Bureau, that we generate savings in the procurement and methodologies of government. Right now that's where our efforts are focused, directed away from front-line environmental delivery.

**Ms.** Churley: So you're trying—you have to make these cuts—to do it without impacting front-line service.

Mr. Gunn: Absolutely.

**Mrs. Sandals:** I'm going to share my time with Mr. Wilkinson, if I may, Mr. Chair. I have another request for you: You mentioned lunch once.

**The Chair:** It should be in the other room now. I asked for it to be brought—

Mr. Wilkinson: I think we're winding up.

**Ms.** Churley: Just for the record, although I have many other questions, for the purposes of today, that was my last question. I don't know about you.

Mrs. Sandals: Then why don't I ask, did Julia or Jim have—

The Chair: I don't know.

**Mrs. Sandals:** Can John and I ask our questions quickly?

The Chair: Sure. Go ahead.

**Mrs. Sandals:** OK. What I wanted to do was look quickly at the recommendations on page 121 of the auditor's report, which reference developing and updating air quality standards and guidelines on a timely basis and "consider using up-to-date air dispersion models."

#### 1210

The research staff and the deputy's presentation have both drawn to our attention that Ontario's five-point plan for cleaner air has been announced since the time when the auditor was doing his work. It struck me that a couple of the items in there appear to address these recommendations. I'm wondering if you could quickly comment on whether or not that's true and what the effect will be. One is setting tough new and updated air standards for 29 pollutants, and the other is updating the air-dispersion models. I'm wondering if you could give us the connections and what impact that would have.

**Ms. West:** Mr. Henry will help you with that.

Mr. Henry: With regard to the five-point plan that was announced in June 2004, three components of it were dealing with having more stringent air standards, having better air-dispersion models and using a risk-based decision-making process to assist us in implementing these more stringent standards. In that announcement, there were a number of advancements that we made with regard to our air quality standards. We looked at advancements of 43 substances; 35 of them were high-priority. There were five new substances that we also introduced, and there were three secondary priority substances.

One of the key components of that was also updating our air-dispersion models. When we talk about air-dispersion models, we're not talking about global air-dispersion models; we're not even talking about regional air-dispersion models. We're talking about air-dispersion models that would be used by a company or a facility to determine what their air emissions values would be outside their fenced property to protect the health of people, to protect the soil, the property. Our air-dispersion modelling capability has been on the auditor's plate for updating. We are moving forward with updating these air-dispersion models. We're looking at using the US EPA models that evaluate industrial facilities with regard to their impact on the local environment.

Finally, we're also looking at doing a better job in implementing our air standards. This is certainly one of the challenges the province has had in introducing new standards. The challenge we faced on that was implementing new standards with regard to timing of a company to actually implement them, economics, and also technology. We put into the proposal posted on June 21 a risk-based decision-making process to assist companies in implementing new air standards as they come out.

**Mrs. Sandals:** So it appears with this update that these recommendations are being addressed.

Mr. Henry: Yes.

The Chair: Can I ask a supplementary to Mrs. Sandals's question? The proposal that was put on the EBR on June 21 asked for a lot of input from people. Where is that proposal now? Can you update us on the results of those consultations? Where is it now?

Ms. Andrew: The five-point plan covered a number of different initiatives. For the industry emission reduction program, we've moved through the consultation process and the government has made a decision to post a draft regulation for the emission reductions for those 30 major industrial emitters. That was posted on the EBR—on the environmental bill of rights registry—last week, for a 30-day posting.

That addresses two points of the five-point plan, because it sets the emission reductions for now and up to 2015 for both  $NO_x$  and  $SO_x$ . The three other points of the five-point plan are related to standard-setting.

Mr. Henry: They're currently under development with regard to amending regulation 346. Just to provide you some information about the package that was sent out, there were a number of stakeholder meetings held once it was posted on the environmental registry back in September, since it was a very complex package. We provided our stakeholders across the province the opportunity of 120 days to comment on it, considering that the five-point plan was quite complex. In the fall of 2004, we had a number of workshops that were attended by over 400 individuals representing a variety of industrial sectors and environmental groups across the province. We received over 70 comments from various facilities, environmental groups and associations.

The Chair: Ray, did you want any—our researcher would just like to get something clear.

Mr. Ray McLellan: If I could ask with respect to this notice of proposal, there are four or five points identified here with respect to guidelines and amendments to the regulations. Is it possible to have a written response to update the committee so that we can go back and read through exactly what has happened? I think we've touched on a lot of these today, but it's starting to get a bit mixed. And then, if you could link that into that June 21 five-point plan. Parts of those five issues have been discussed today, but I think it needs clarification so we can see exactly where we are today.

Ms. West: We'll follow up on that.

The Chair: Mr. Williams?

Mr. Wilkinson: I go by Wilkinson, if that's OK.

The Chair: Wilkinson, sorry.

Mr. Wilkinson: It's all right, Mr. Sterling.

My question will be on the Drive Clean side. As you get your person available for that, I would agree with the member for Toronto-Danforth on two points. Dr. Rockingham actually is an excellent person to have to deal with on a day-to-day basis for a layperson like myself. I know that he and Jim O'Mara both have been very helpful in trying to get someone like me to understand these issues and to get a handle on them. And I would agree with you, as you noted, that it's very difficult to get your neighbours to cut their grass if you haven't cut yours. With regard to coal, I think we do have to work with our American neighbours. I'm heartened to see that we are working closely with them to try to eliminate the cheapest yet dirtiest form of electricity generation in North America.

My question has to do with Drive Clean. I note that the limit has been raised with regard to repairs from \$200 to \$450. I just went through Drive Clean myself and, unlike this paper-based system, I know that when I got my certificate done, when I went over to MTO, it was already there, so it was one of these electronic filers. It must be disturbing, I think, for some who created Drive Clean to see that you actually have to work with the OPP to try to help them in their investigation of abuses of that system. I'm glad and heartened to hear, from the government's perspective, that you're working closely to be helpful in that.

The rationale to go from \$200 to \$450 goes to my question: Do we feel that this is the type of stuff with which we're going to get demonstrable improvements in air quality, by raising—I don't know the rationale for the \$200 in the first place and the rationale for the \$450 now, so if I could just get some comment on that, it would help me.

Ms. West: I'll ask Carl Griffith to do this.

Mr. Griffith: Let me start. We believed that the movement up to the \$450 would then capture when repairs have to be done at the \$200 level. We've all taken our cars in to mechanics, and \$200 doesn't buy you a whole lot. So what was happening was that people would get partial repairs done. That may not fix the problem from an emission point of view. It was felt that raising it to \$450 would capture far more of a complete repair test

and we would get the emission results that we were looking for. I would add, that is one of the things we'll be looking at in the program review that's underway as well: Is that the right level of repair costs?

**Mr. Wilkinson:** It's my understanding that it's not just cars now; there has been a broader capture of vehicles. Is that true as well?

**Mr. Griffith:** We do heavy-duty vehicles.

**Mr. Wilkinson:** Right. But are there limits on that as well, or is it unlimited? They need to get them fixed up.

**Ms. Morah Fenning:** My name's Morah Fenning. I'm director of the Drive Clean program. Was your question, do heavy-duty vehicles have to be fully repaired before they pass?

Mr. Wilkinson: Yes.

**Ms. Fenning:** The answer is yes.

**Mr. Wilkinson:** Yes, OK. Thank you very much. **1220** 

**The Chair:** I'd like to ask Mr. Piché a question or two. You've been with the ministry a long time. How long have you been with the ministry?

**Mr. Piché:** Thirty one years, sir, I'm very proud to say.

The Chair: I'm very proud to say that you've done a tremendous service for the people of Ontario. Because you've had 31 years there, could you give us an historical context of air quality in Ontario as we've gone through those 31 years? Is the air better now than it was then? Where did we start then? Where are we now in terms of monitoring our air quality?

Mr. Piché: Ontario is a very unique jurisdiction. Of course, I think we all believe that or we wouldn't be living here. But it is very unique because—and many may not know—we have published an annual air quality report. I think the recent one is number 33. I'm very proud because I think more than half of them have been done when I've been director in one capacity or another. That report is available on the Web site, so if you go to the Ministry of the Environment Web site, you can see that report and the history of those reports.

If you look at the annual air quality report, you'll see that Ontario does have a very enviable record in improving air quality for what I would call the so-called criteria pollutants. They're a special subset traditionally associated with heavy industry. An example would be sulphur dioxide, but particulates are another area—oxides of nitrogen and so on and so forth. If you look at that report, you'll see there is a very enviable record over that time comparable to any jurisdiction nationally and internationally in terms of improvement in air quality. That doesn't mean we need to diminish our vigilance; quite the contrary. There are constant and ongoing challenges. As Dr. Rockingham has indicated, Ontario is consistent and has been consistent in working very hard with neighbouring jurisdictions to meet those challenges.

But in succinct summary, there have been very, very significant improvements done in partnership with the federal government and with our neighbours, but nevertheless there are still very significant challenges and the ongoing need to be vigilant.

The Chair: Is there any way that you could quantify how much we can do domestically in the province to improve our air quality and how much has to be done cooperatively with other jurisdictions around us?

Mr. Piché: Yes, there are always methodologies available. I think Dr. Rockingham indicated earlier that Ontario is an economic community within the very powerful Great Lakes economic community and that we need to be concerned about our own sources and their impact on our health and on our environmental health. But we also need to be very, very sensitive and strategically aware of our neighbours and their contribution to our air quality and our environmental health and of our contributions to their well-being, to their environment and environmental health.

The principal methodology that's used, of which Ontario fortuitously has very skilled practitioners, is modelling. We provide support to Dr. Rockingham's community as they look at various scenarios: If we reduce this sector by this amount, what is likely to happen? But remember, the models are what I would call reasonable estimates of the likely consequences. The true test, ultimately, of course, is to embark on the initiatives and then carefully measure what happens.

An excellent example in Ontario, ladies and gentlemen, is what I call the greater Sudbury scenario. Beginning in the late 1970s, everyone knew that Inco and Falconbrige were very, very significant contributors, provincially, nationally and internationally, to the acid rain phenomenon. Over a period of about 25 years, very, very significant reductions were evidenced by those sources, well in excess of 90%. Of course, the great part of the story was that there was a very significant recovery through our monitoring programs, unequivocally demonstrated in the literature, of the lakes in the greater Sudbury area. Now, the story isn't finished yet. There's still immense work to be done, provincially, nationally and internationally, but nevertheless the data are there. The monitoring networks have unequivocally demonstrated the benefit of those regulatory programs for Ontario and for northeastern North America.

The Chair: Are there enough mechanisms now to deal with our border friends, to the south in particular, in terms of our American counterparts? In other words, can our federal or provincial governments do more in concert with the United States, because they are immediately on our borders, to improve our co-operative efforts? There are some mechanisms now, but I'm not certain that the Americans think as much about us as perhaps we think about them on this issue.

**Ms. West:** Mr Sterling, if you're talking about mechanisms in terms of relationships, influence and that sort of thing, I wonder if you would like to hear from Dr. Rockingham with respect to that. I'm not sure that Ed would have any particular comment. Ed?

**Mr. Piché:** Tony certainly has the appropriate responsibility within the ministry to comment on that.

**The Chair:** You may remember, Mr Piché, that I asked you about the quantifying, and I was interested in that answer. But at any rate—

Ms. West: Tony may be able to respond to that, sir.

**The Chair:** Thank you very much.

**Dr. Rockingham:** I feel like a youngster, with just nine years' experience at the Ministry of the Environment.

Your question: Are there enough mechanisms for Canada or for Ontario to influence US emissions and laws around emissions? Maybe I'd start with, as I said, the Canada-US air quality agreement, and there are a number of committees associated with that. I have the honour of sitting on one committee which is associated with the overall policy direction and undertaking studies around whether the commitments are being made. There is a subcommittee, number two, which deals with science, and I think the agreement has been very successful in ensuring that studies are taking place that don't just stop at the border. If you look at maps done by the EPA on pollution trends, 10 years ago those maps had a great blank area north of Lake Erie. I'm pleased to say that in the most recent progress reports under the Canada-US air quality report those blanks are now filled in and there is a recognition that the trends one can see by looking at the geography across the US continue north of the Great Lakes. That has been very helpful in our argument that emission sources in the US are influencing air quality in Ontario.

The other mechanisms: I don't need to remind you of some of the court action that Ontario has engaged in for the NOx SIP call. When that was being challenged in the courts, Ontario applied for, and was granted, status and made a submission to the US courts to assist the courts in deciding on some of the science and implications for other jurisdictions, and that's allowed for in US law. So that is an opportunity that exists.

We jointly study with the US, not necessarily with the EPA but some of the state departments, and there are initiatives associated with particular states where we are gathering together information on the policies and tools that exist in Michigan and Ohio, and compare them with what's happening in Ontario in an effort to ensure that both jurisdictions can understand best practice and im-

prove the tools that are applied. So there are a variety of mechanisms that exist and those can be used, and probably most appropriately, with different sorts of pollutants.

I think one of the very major tools that we are using right now is the increased scientific co-operation, because 10 years ago I don't think it was true that PM2.5 was seen as one of the major pollutants. Through cooperative research with the United States and around the world, it's now understood that these very small particulates may not be what cause the grey pall or the brown haze that's associated with smog, that they're small enough that they may not be part of that. The science continues to look at these submicron-sized particles which may well be getting into the lungs and past the lungs and getting into the bloodstream. So there is a tremendous amount of scientific work that's needed because it may be that it's not just the particles that are the cause. You need to know the nature of the particles that you're talking about. If they are ionized particles, they may be doing more damage than if they're not ionized particles. Or if they're particles that have particular configurations—essentially, I think of them as sharp edges—are they causing more health problems? That's an area where the US and Canada can move forward by assisting each other. Canada has established a substantial reputation for scientific work in this area. So there are lots of mechanisms.

Again, many of the members here would be aware of the work that was done in the 1980s around acid rain where Canada and Ontario, and this ministry in particular, were very important in bringing together the science in a form that decision-makers could understand, to assist decision-makers, both in the US and Canada, in understanding the problem, in understanding the sources and in understanding the sorts of programs or regulations that would be appropriate for reducing those emissions. As a result, there have been major reductions in SO<sub>2</sub> both in Ontario and in our neighbouring US states.

**The Chair:** Any more questions? Thank you very much for coming today.

Ms. West: Thank you, Mr. Chair.

The Chair: I hope you all enjoy an early lunch.

**Ms. West:** Thank you for that as well. *The committee adjourned at 1233.* 

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