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## ERNIE HUI

**Ernie Hui** is the Chief Executive Officer, Environmental Monitoring, Alberta Environment and Sustainable Resources. Since 1989, Hui has served in a number of different and progressive roles within Alberta Environment. He has been extensively involved in developing the regulatory framework, including legislation, for the Department and has also led teams in implementation and delivery of numerous department programs. In 2011, he became Deputy Minister of Alberta Environment and Water, and has also served as ADM of Environmental Assurance. As DM, he was involved with the Alberta Environmental Monitoring Panel to provide recommendations for an environmental monitoring system with an initial focus on the Lower Athabasca region. Specifically, the panel was asked to determine how to deliver excellent environmental information and increase public confidence in Alberta's environmental management systems. His most recent assignment is to help develop Alberta's new environmental monitoring system for the oil and gas industry. In recognition of increasing scrutiny on the environmental impacts of Alberta's natural resource economy, the Province is working towards establishing a world class environmental monitoring, evaluation and reporting system. A series of panels has been established to help develop the system. Hui's educational background is in engineering, having received a Bachelor of Science in Chemical Engineering from the University of Alberta.

**Date and place of birth (if available):** August 7<sup>th</sup>, 1960, Hong Kong

**Date and place of interview:** Office of Ernie Hui, Deputy Minister Alberta Environment and Water, April 30, 2013.

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**Full names (spelled out) of all others present:** N/A

**Consent form signed:** Yes



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**Transcript reviewed by subject:** Yes

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**Last name of Subject:** HUI

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AD: My name is Adriana Davies and I am the Researcher/Interviewer on the Petroleum History Society Oil Sands Oral History Project. It is the 30<sup>th</sup> of April, 2013 and I am in the office of Ernie Hui, Deputy Minister Alberta Environment and Water. Thank you so much Ernie for agreeing to be interviewed.

HUI: Well thank you, I really do appreciate the opportunity to be interviewed. I think that it's a great opportunity for us to talk about what has occurred from an environmental perspective relative to the oil sands.

AD: Excellent, so now you know why you were chosen to be interviewed. Can you just provide me with a summary biography including place and date of birth, educational background and a short outline of your work history, and, of course, we will go back to some of those elements as we proceed with the interview.

HUI: Sure, I think I can certainly do that. I was born on August the 7<sup>th</sup>, 1960, not here in Alberta, but I believe that I am a true Albertan. I was born in Hong Kong and I immigrated here to Alberta when I was five years old. Typical of being five years old, once you come to Alberta or come to any Canadian province, your father and your mother throw you on to the streets and go play and so I was raised watching hockey, Hockey Night in Canada, and really getting acclimatized to the Canadian culture at that point.

Eventually I went through to the University of Alberta, here, got my Bachelor of Science Degree in Chemical Engineering from the U of A, in 1982. 1982 was an interesting year; for people that will recall that year, because it came on the heels of the introduction of the National Energy Program here in Canada and, as a result of that, a lot of my fellow graduates from the Engineering Program were not successful in obtaining permanent jobs at that point. I was one of them, but I was lucky that I had worked a number of summers with Alberta Environment up to that point, and they obviously remembered me, and I was successful in acquiring some part time work with the Department. So, I like to sort of kid with people that I'm the summer student that never really left the Department.

In terms of my work career, I have spent all of my working career here with the Department of the Environment in its various forms and shapes over the years. I think that I have held the privilege of working in almost all facets of the business here in the Department.



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Early in my career, I had the pleasure and opportunity to work in the Water Allocation side of our business, and that was primarily about issuing licenses for the allocation and diversion of water here in this province. After spending a little bit of time doing that type of work, someone indicated that, “Well, perhaps, you need to get some experience in other parts of the department,” and one of the things that they asked me to go do was project manage the development of a brand new piece of legislation that was to deal with water allocation in this province, and, so, for a number of years I worked in developing a piece of legislation that ultimately was passed and is called the Water Act. That Water Act is still in existence today, and it is the primary vehicle for allocating water in this province.

After having spent some time doing legislation and strategy type of work, there was a call to form what I will call “drinking water business units” across the country. This was in the wake of some of the tragic things that happened in the province of Ontario, directly related to the Walkerton tragedy. We created a drinking water branch here in our department at that time, and I was fortunate to be asked to lead that particular branch. Subsequent to that, they asked me to become the Regional Director in the northern part of our province here; that was a fairly big region but I think the most significant part of that region was that it included the boundary within most of the oil sands activity that would take place here in this province. I was Regional Director here for the period of time from 2006-2008 and, within that time Alberta probably experienced its biggest boom in terms of activity related to oil sands here in this province. So, I presided over a working - that had to deal with everything from applications on the mining projects, to SAG-D projects, to all the other environmental type of issues that you would need to deal with. Following that, they asked me to become the Assistant Deputy - ADM [Assistant Deputy Minister] of Policy, which is a senior executive position. My area of responsibility there dealt with policy type of development in this department, and policy ranged from everything from water policy to greenhouse gas policy. I followed that with a stint being the Deputy Minister of the Environment and Water and, up until just last year, I was the Deputy Minister of that department and now subsequently they have asked me to take hold of the monitoring file here in this province, and I am currently the Chief Executive Officer of Monitoring.

AD: Wow. As you said when we first met and talked, your career as a civil servant, who has spent his entire career in one ministry that was the first Environment Ministry in the Commonwealth, established as you know in 1973. I interviewed just a few weeks ago Fred Otto, former Dean of Engineering and he mentioned that in 1973, he created a course on – within Chemical Engineering – on Environmental Monitoring, did you by any chance take that course?

HUI: No, but interestingly enough Dr. Otto also taught a course on Air Pollution and I did take that particular course that he offered at that point when I went through the university; so, I never got to take Dr. Otto’s Environmental Monitoring Course, but air pollution - certainly stuff that we deal with here in the Department of the Environment. I took that course.

AD: Which I think would surprise some members of the general public, and perhaps the media, that engineers, of course, are not just building and certainly Mechanical, Chemical, all of that stuff related



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to the oil sands, but that – in the department, at the University of Alberta there was leadership to create these environmental courses very, very early on.

HUI: Absolutely. You know the one thing that I remember because Dr. Otto was the Dean of the Engineering Faculty when I went through, but he also taught a number of courses, particularly in some of the courses that I took from Dr. Otto, the one line that I think that stuck with me throughout, or has stuck with me, has been his description of what engineers really do. I remember him saying, “You know what, Engineers are really trained to solve problems,” and I think you are absolutely right in that that leadership came through, because they put forward courses that were really meant to solve the problems of the day.

AD: So, you were going to be working likely for a petroleum company but the economic downturn shifted your aspirations in different directions. Can you describe that early work that you did in the ministry?

HUI: Yes, I think that it was a great time for me. I think that here was an opportunity for me to really come into an area where perhaps I didn’t receive the formal sort of education on, but I think it forced me to grab on to the sort of adage from a perspective of going to work – you always need to learn things – and I think that has stuck with me throughout my career; that it’s always good to learn something. I had worked a couple of summers in the water allocation business and I thought this is pretty good so, even though I didn’t have formal training, I went out and I got that education. I got that learning and, I think, at that point I was very happy obviously to have a job, but I demonstrated to my bosses at the time that I was able to take situations and solve problems for them.

For me, those early years in the department were quite rewarding in that I got to solve a lot of the problems. I was allowed time to think about what the future might hold in terms of water allocation types of issues, and I got a firsthand view of how some of these issues impacted what I will call the “broad industry” that we work with. What was interesting for me was that our culture, from a regulatory perspective back in those early days when I started, was really one of “command and control” where we directed industry - and industry here is every industry from oil and gas to irrigation, to the agricultural industry. But, basically, our culture was that we would direct those proponents on how to do things; how to protect the environment; how to set up their activity; and how they would manage their environmental footprint. That was quite the eye-ful for me. Here I was a young engineer, and I got to work alongside these seasoned people in the broad industry, and I was helping direct how they should conduct their activity.

AD: So, help me to understand what “water allocation” meant in terms of the ministry and what frame works were in place, because I know from some work I did for the Town of Okotoks, they have gone very “green” because – and even talked about a population cap – because the allocation of water for the municipality dictates that.

HUI: Absolutely right. I found this to be one of the most insightful facts that I learned when I first joined the department, that here in Alberta we have roughly 80% of the population, which is



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Edmonton south. But, within that region of Alberta where 80% of the population are situated, we only have 20% of Alberta's water resources available from a surface water perspective; whereas the flip situation is in the northern part of province where we have roughly 20% of the population but 80% of our water flows through the northern half of the province.

So, one of the issues that I got firsthand knowledge of is the issue of water scarcity, because of the situation that occurs from south of Edmonton, particularly in the South Saskatchewan River Basin. People have to understand – or people do understand – that there is only a limited supply of water, and there has to be systems in place to enable, I believe, sharing of that resource when the time comes, when the shortage actually takes place. So, I think the town of Okotoks as an example, because they are situated just south of Calgary, are very cognisant of that sort of water shortage type of situation which may occur, and the way that they tried to address it was to place a cap or “limit” on the population that they as a small town that they would sort of have.

AD: Now, of course, one can hearken back to the past and the “dirty 30's” when the province actually created irrigation districts and other special zones so that is the continuation of that sensitivity to the importance of the water supply for various competing uses. So, what would have been the competing uses when you started?

HUI: Well, when I first started, most of my work was done in the southern part of the province because I was given the Agriculture Irrigation sector to focus on. But, my observation would be that, over the years – at least – certainly the focus in Southern Alberta would have been on those two primary industries of irrigation and agriculture. But I think that in the central part of the province, and certainly in the northern part of the province that at that time the big focus was on the oil and gas sector from a conventional sort of energy-extraction perspective. The competing uses between the industry or that particular sector at that time was with people, because we had people, for example in Central Alberta, that relied on groundwater wells for their own personal water supply, for the water supply for their family farms. And, in the north-east part of the province, there was a competition from people – from the First Nations, the Metis who were living in that area and relied on surface water flows for their traditional way of life, and/or for their drinking water supplies. So, competition for water, particularly when you have 80% of the population, is really a grapple between population and what I will call the ‘economic activity that would take place.’ In various pockets of the province, what I observed was the oil and gas sector because it is one of the prominent sectors of activities in this province and their competition was really with people.

AD: Now, in terms of my readings and editing articles for the *Canadian Encyclopedia* as Science and Technology Editor, of course, the Boreal Forest circumpolar contains a huge percentage, I think as high as 60-80% of the fresh water supply in the world, which is staggering, not just in terms of lakes and rivers but in muskeg and other surface and subsurface vehicles for storing and retaining water, which is an interesting transition point because when did you first become aware of the oil sands?

HUI: I would say that I probably didn't get first-hand type of association and experience with the oil sands activity until later in my career. But, let me just relay my first experience with what I will call



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the general oil and gas sector. It was an indirect sort of experience where [I was] working in the same office with my colleagues that had to deal with the other sectors, and, once again, I'll remind you that I was asked to deal with primarily the agriculture and irrigation sectors. But my colleagues that were dealing with the oil and gas sector at that time – would be the mid-1980's, that period of time – we had major issues from a water perspective with our conventional oil and gas producers, and the issue there was that, for a water supply, most of these operators would be drilling groundwater wells, and using what I will call fresh, potable groundwater to meet the needs of their activity.

As you recall, I indicated that the industry's competition was with people, and so neighboring land owners would raise large issues with the department about how that type of activity, taking all that groundwater up, would impact the wells that they would have, and that they rely on for their own domestic use. That was a big issue back in those days and even though I was not directly involved, I saw the incredible amount of work that my colleagues went through to develop what is still known today as the "Oil Field Injection Policy," which was really the initial foray of a policy instrument response to that type of issue, which was a policy that we would move to ask the industry to do a feasibility study on whether it was appropriate to basically use groundwater within a certain region and, if it was, then we would take steps to restrict the amount of groundwater that could be used. So, that was my first association with the oil and gas sector.

My real, first touch point with the oil sands activity came later on in the mid/late 1990's dealing with some of the water allocation issues in the northern part of the province, and, by that time, I had come back, and was the leader of a business unit that dealt with water issues across the province as opposed to just the "engineer dealing with the irrigation and agriculture sectors."

AD: So, do you want to talk about the relevant legislation and frameworks, certainly in the water area, which of course is going to become more and more important as we move forward in your career, and your most recent responsibilities? But, just talk a bit about the legislative frameworks, as well as the guidelines and monitoring in those early days.

HUI: Well, maybe, we probably need to step back a little bit in time, and let me just sort of take you through a broader context of the legislative framework. I'll call it that, or perhaps we will call it the "regulatory" framework.

When I started in the department, we had one piece of legislation dealing with water but that piece of legislation was about 100 years old at that point in time. We then had several pieces of legislation, also in the department when I first started, that dealt with various component types of issues. So, we had an Air Act; I can't remember the exact name, but we had pieces of legislation that dealt with air that dealt with reclamation that dealt with water-quality type of issues that dealt with drinking-water-type of issues.

I think it would be remiss for me to not talk about the appointment of the new Minister of Environment back in the late 1980's – a pretty good politician by the name of Ralph Klein – was



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appointed as the Minister of the Environment in 1988 and at that point in time, he as the minister directed that – we as a department – we needed to move forward and be developing more progressive legislation that would sort of enable a broader scope to environmental protection at that time.

I think it's important to recognize that, in 1993, the regulatory framework that we operate here in Alberta changed and, I believe, for the better. That saw the introduction of the Environmental Protection and Enhancement Act; it brought all the disparate pieces of legislation together in one broad bill. I think it did a few things really, really well and it put Alberta at the forefront of environmental type of legislation.

But the three key points that I would raise about that regulatory framework was: one, it clearly set out the intent was to protect the environment and that doesn't sound like much but I think at that time it was a big statement to make, that we were actually going to protect the environment. Two, it clearly laid out a bunch of mechanisms that would enable the public to become more involved in the decision making process which, again, was a big first in Canada; and thirdly, it really set in the principle of the "polluter pays," and what that really meant was that, if you were disregarding the rules of the day here in Alberta, and you were polluting the environment, then – the principle was that you would have to make restitution for that. Whether we charged you or we took severe forms of compliance, it was the fact that it would always come back to you, and you would have to pay restitution for that type of environmental damage.

AD: Which was the first prosecution and fine, do you remember?

HUI: I can't remember that but, you know, one thing that I will say about prosecution and fines that under those various pieces of legislation that we had prior to the Environmental Protection and Enhancement Act, the fines and penalties were relatively small and, I think, that the one thing that the Environmental Protection and Enhancement Act put in place was that these fines would be significant. I think that the current – the largest maximum penalty that we can now impose on people that do not follow the Act, I think is \$1 million for a corporation. That's a significant increase from the previous pieces of legislation.

AD: When did water quality become a major issue – you mentioned Walkerton and, of course, it was bacterial contamination that caused that. In terms of Alberta, it's my understanding that certainly that was an issue, but there were also some significant spills - I'm thinking of the Lake Wabamun spill, so you want to talk about that?

HUI: Well I won't talk about Lake Wabamun yet, but I think that your question is a good one about when did the issue of water quality rear its head from a public standpoint. So, let me just say from a department perspective, right from the day that this department was put into place, right from the early 1970's, we have always focused on water quality. We certainly do, through the regulatory approval process, regulate the discharge that comes out of the "end of pipe." But I would say that when – in the early 1990's or just before the 1990's and in the early part of the 1990's there were a



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number of pulp mills that were going to be developed here in Alberta, and situated in the Athabasca region. I think that's when the whole issue of water quality, the potential impacts on water quality, were brought to the public spotlight. I think at that point in time, certainly there weren't what I will call – particularly hot spots across Alberta that had a burning water quality issue. But I think what the potential development of those pulp mills did was escalate the fact that – you know are there emissions that go into the river that would impact on water quality, and, I think, through the environmental impact assessment at that point, the answer was clearly, “Yes, there are some of those impacts.” And it brought to the forefront – what would Alberta be doing about either trying to curb those, or trying to have the company address the mitigation of those impacts. My real – oh there was no big emergency, but, I think, what those pulp mills raised was that there could be the potential for water quality issues. What is Alberta's approach to managing those water-quality issues. I think that sort of elevated our water-quality monitoring, water-quality programs, conditions and approvals that would really help address and minimize the impacts from those types of emissions going into the receiving stream.

AD: The ALPAC [Alberta Pacific Forest Industries] example that you have given shows the ministry becoming proactive. The environmental impact assessment process identifies those issues and then in respect to that, I know that the companies, basically, bleach is used as a part of the process and, of course, would have been devastating to aquatic life of whatever sort. So, that the industry, when told about this, was very proactive. Do you want to talk a bit about that?

HUI: I would talk about it more from the evolution of our approach. I think that's very important because it's also a very interesting observation to my career, that I said previously – that the first part of my career saw the government take a “command and control” type of perspective in terms of directing certain things to take place by the person undertaking that activity.

Then, I think, that we also began to realize that we can manage these individual types of source emissions; we can regulate what comes out of the stack; we can regulate perhaps what comes out of the pipe; and we can regulate the footprint that might get created. You might be able to regulate all that but, when you add up all of the effects of this activity, with this activity that is just over here and this activity that's over there, from a cumulative-effects-perspective you may have a real situation on your hands.

So, what I saw through my career here is that – the first part of my career was spent on managing what I will call the “point” source, and managing on a single-site basis; and probably within the last 10 years, the department and government has shifted its thinking a little bit and said, “You know what, we really truly need to manage on a cumulative effects basis.” So, I would say that cumulative effects is not just about the department taking action, and I think it really goes to your point here, that cumulative effects is about how you are taking the collective as a whole, and how are you along your role as – a regulator, the industry as a rule of their proponents of the activity, citizens as being citizens – how do we all take a part in trying to manage on a cumulative-effects basis?



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For the industry that might mean taking a proactive approach; that might mean doing certain things in advance of a problem as [it is] coming up. For government, I think that means setting clear outcome targets from an environmental perspective, and sort of saying that is what we want to see take place in this region, and this is the type of environmental performance that we want within a region. I think that government needs to set that tone but industry also needs to be seen as proactive as well. So, I know I didn't answer your question specifically, but I think that that is an important context.

AD: Well, you explained it in terms of government really identifying an issue and, then, seeing how it can facilitate the correct outcomes, because the industry basically said that they could get rid of this offending chemical in the process, and that it had been done at the lab scale. But, of course, they did do it; which is enormously significant. If government is partnering with industry and guiding, directing them, then they [must] follow through. Now, of course, I'm thinking of Daishowa, if I'm pronouncing it correctly and of course the Friends of the Peace, and so on, that we did begin to have an emergence of environmental activism. Do you want to talk about that vis. a vis. the ministry?

HUI: I think that I've had the good fortune to have a real front row as what I will call each "wave" of environmental activism has sort of risen up. First wave that I would recall is probably at the time that Premier Klein would ... when he was first appointed as the Minister of the Environment back in the late 1980's. That to me was probably the first wave of environmental activism, and that's what I think really helped support the Ministry push through the brand-new piece of legislation called the Environmental Protection and Enhancement Act; and, subsequently, when we moved forward with the Water Act that helped propel that along. And that was a recognition that citizens, whether they were here in Alberta or across the country, were waking up to that – "well there is a process, we should ensure that the environment is being protected and, you know what, we should hold people to account for the process, and we should be able to participate in those types of decisions."

So, I think that was the first wave – just recognition that, okay, we have to worry about the environment a little bit more, and we also have to take charge of being able to say, "We want a say in what happens in what happens." That was the first wave and I think after that, we went through a time where, at least here in Alberta, we were fighting the fiscal reality of the province, that that was a little bit more in vogue. So, I think, the activism sort of dipped down a little bit. But I think back in the late 1990's, and the early part of the 2000's, was a little bit of a "rise back up" of environmental activism and, at that point, there was, I think, this recognition that it was about...not about the individual pieces of the environment but more about thinking from an "ecosystem" perspective. How are you managing on a more integrated basis; what is the issue; or how are you addressing cumulative effects from that?

I think that next wave of environmental activism was really about, "Okay – so you've been doing a fairly good job and whether you would agree with that statement or not, but people are saying you have been doing a good job managing on a sort of "silo" or component aspect; what are you doing



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to manage the whole of the environment?” I think that has sort of played out in the sense that government has moved forward to try to take that “cumulative-effects” approach.

I think we have seen over the last few years is the “third” way of environmental activism, which is what I will call a bit more visible than the first two waves and it’s probably as a result of the social media and the instantaneous access to information that we all have access to now. But, I think, equally, it’s valid; equally it’s about sort of “pinpointing” – is the data and information out there relative to the condition of the environment, is it credible; is it being made available in an open and transparent way?

I think environmental activism right now is also about challenging – “Well, if you say the environment is good, Adriana, how do we know that? What data did you use? What method did you use?” So, that is how I would broach the subject of environmental activism, and the phases that at least I’ve seen through the department.

AD: So, you know, there is the activism that... and, of course, the Friends of the Peace and Daishowa and so on – was in reaction to proposed industrial activity, and now it’s partly about other things – we will talk about that shortly because I want to return. I do want you to talk about the Lake Wabamun spill, of course, Guy Boutilier was the Minister.

HUI: I’m not – let me see what aspect I should talk about. I think Lake Wabamun from our department’s perspective was also a big wake up call. And the big wakeup call was the fact that we probably did not have the capacity within our department to really go address a spill, or an event of that type of magnitude where the spilling of the Bunker C Oil into the lake had the potential to impact on the residences that were surrounding the lake, and it also brought to the forefront perhaps that there wasn’t clear governance in place when the Government of Alberta had to react to that type of an event.

I think that the recommendations that ultimately came from the panel that the government had put in place to review the spill and provide some recommendations on “what capacity and what gaps” needed to be addressed following that spill. I think those were valuable. As to the spill itself, it was really interesting watching it from the inside, because I think, while it may perhaps not have been seen from a public perspective as a speedy response from the government, I can tell you that the amount of work that we did inside the department to facilitate testing, to send staff out there to ensure that the things that needed to get done were being done, in terms of communication messages, in terms of working with the local residents, that was all a big effort. I think that we responded as well as we could at that time, but, really, what came out as a result of that was that we needed a specific emergency-response-type of unit here in this department to help us respond to those types of situations. We did create that unit and that unit still exists today, and is called the – I can’t even remember the exact name, but I’ll have to get it on another take [Author’s addition: Alberta Support and Emergency Response Team - ASERT].

AD: And so, CN was fined wasn’t it?



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HUI: Yes, CN was fined. Things that need to get done were being done in terms of communication messages, in terms of working with the local residents. That was all a big effort. I think that we responded as well as we could at that time, but really what came out as a result of that was that we needed a specific emergency response type of unit here in this department to help us respond to those types of situations. CN was fined; CN was taken to court – I’ll call it that, and ultimately there was a decision that was rendered and they did pay their fine.

AD: And how much was it?

HUI: I can’t even remember but it was not a small number.

AD: But what is important is that the government took it seriously and you referred before to – “the polluter pays” – and so that was an example of that. Now you mentioned, well we will get to oil sands and Athabasca region shortly, but we saw downsizing of government around 1997, and with regionalization and, of course, one of your appointments was a regional appointment – a direct outcome of that I assume. From the perspective of the general public, the way that it played out in the media was that the government was downsizing; the government was following “Thatcherite” and “Douglas” monetarist views and that the bureaucracy had to be downsized. Do you want to talk about that in terms of what it did to the Ministry?

HUI: Well, I certainly can talk about it. Once again having a front-row seat I did see a number of my colleagues leave government at that time. That was particularly tough, but I think that we understood the government’s direction at that time was to fight this deficit situation that it found itself in. People have asked me, “Well, Ernie, did that compromise the department’s actions relative to protecting the environment, or running the various type of programs that it was used to running?” And I’d say, “You know, I’m always reminded of the adage that when you only have two dimes in your pocket and you are asked to do something, I think that’s the time you are asked to be the most innovative, and it’s usually those times that you do become the most innovative in delivering on the two dimes to deliver your program.”

I think that that’s what government did, at least in the Department of the Environment. So, I would say that we took new approaches. We looked at how we could do things a little bit differently but yet still provide that same level of assurance to Albertans that the environment was being looked after. The one example that I would use is, that it used to be that we almost asked every person that was undertaking an activity that had the potential to impact the environment that he or she, or that particular company, would have to come and get a full, formal approval from government. So back in that era too, one of the things that we did was [ask] – “Could we do that in a different way?” And one of the approaches that I think as a department that we chose to adopt was to sort of move along codes of practices, where we would say, “Here’s the code of practice for this activity; you follow it – you don’t need to come get a formal approval, but we will say that, if you follow that and you conduct the activity in this sort of manner, then you are fine. You don’t need to come get our formal approval; you just have to tell us that you are doing this, and you are going to follow the code of practice.” So, there is an example of innovation [that] started to take hold.



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Yes, we were short on people per se because of the reductions, but we still managed to find different approaches to give that same level of assurance to Albertans that the environment, and the activities that were going to be done that would potentially impact on the environment, that those were being looked at, and that the environment itself would not be harmed.

AD: So, now, I think is the time to ask some oil sands specific questions. When did you get assigned responsibility for the northern region of the Province?

HUI: This was 2005 and we were starting to boom in Alberta. The department had organized itself into three main regions: there was the northern region, the central region, and the southern region. As the Regional Director of the northern region, I had roughly 60% of the province in total area; so everything basically from north of Edmonton to the borders of Alberta and the Territories - that was my territory.

We were responsible for everything from drinking-water-facilities to compliance-type of activities on the landscape, to the approvals that might be associated with any type of oil and gas extraction activities. The context here too is - in that part of the province the oil sands were big in terms of where it was situated but we also had an area just north of Fort Saskatchewan called the “Industrial Heartland.” Within that Industrial Heartland, as well, this was before people realized that building upgraders here in this province are kind of an expensive proposition but, at that point in time, there was a proposition that there would be up to 10 upgraders situated in the Industrial Heartland. So I had incredible activity in the upper northeast part of the province where we had mining operations; we had SAG-Ds wanting to jump in; we had a very clustered set of activities in the Fort Saskatchewan area where there was going to be major industrial activity taking place. Up in the Peace River, Grande Prairie part of the province there was still conventional oil and gas that was taking place; plus there was some oil sands activities up in the Peace River area; and to the west was some coal facilities that we also had to manage. Plus you put in all the people in there, there was all that set of activity. So, I would say that I was the Regional Director at probably one of the most incredibly busy times of Alberta’s history.

What I recall and this is directly connected to the oil sands activity was, we had something like – probably in the order of anywhere between 50-60 applications of development from what I would call the oil sands developers. So, everything from new mines to expansion of mines, SAG-D type of operations plus those pesky little upgraders that I talked about.

What stuck out for me was two things. Under our regulatory process at that time, each one of those projects would require an environmental impact assessment, and the environmental impact assessment would need to be done by the industry, but then reviewed by an internal team trying to look at – “Well, did they get the environmental impact assessment correct; what does it mean for their specific activity; what does it mean from a Government of Alberta viewpoint of policy, regulatory decision making?”



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And the reviews of those EIAs (Environmental Impact Assessments] are significant. The volumes of EIAs, if you can imagine, each EIA that would come in would be a 12-16 binder set of documents, usually two or three boxes of these binders and we would have somewhere in the order of 50-60 applications coming in. I think what stood out for me was someone saying, “Well Ernie, we can’t wait for you to spend two to three years going through your EIAs– as they come in, that type of approach, and as your resources become available type of approach.”

So, we were asked to come up with a new innovative way of “how do we review those environmental impact assessments” and the approach that we came up with, and is still in use today, I’m happy to say, is that we would go to third-party consultants, and we would have those third-party consultants review those environmental impact assessments; using those third-party consultants as our project managers, still involving internal staff but basically we would add capacity by bringing in these third-party consultants. And we would ask the industry to pay for that service. We were probably able to go through a review of EIAs probably at a clip of two to three per year, because these are big documents, big things and with the use of third-party consultants, we were able to bump that up to about six or seven per year. That is a significant capacity increase. That’s one of the things that I remember about my time in the oil sands.

Another thing that I recollect was the fact that the ERCB [Energy Resources Conservation Board] at that point was the primary regulator of these projects, and mining operations, and SAG-D operations, and certainly upgraders would certainly have to go through an ERCB hearing process. The hearing process was conducted in a “quasi- judicial” type of manner; would usually also involve the Federal Government because the Federal Government’s environmental impact assessments would also kick in, and these ERCB hearings, or joint hearings if it did involve the Federal Government, usually took anywhere from three to four weeks of actual sitting in a room that had all the feelings of a judicial type of process we had to go through. There was a period of time where we had three ERCB hearings to go to in a row. So that meant for my staff in the northern region – that was a significant work load. I just remember the incredible dedication, incredible fortitude that our staff showed because what I experienced in those hearings was the fact that, through the hearing process, certainly governments’ policies were closely examined and, at times, the cross examination of the government was really a rationalization of government policy, and took a bit of focus off of the actual activity that was going to be taking place. Those were some of the interesting experiences that I went through in the oil sands back in my tenure as the Regional Director.

AD: How would you respond to the opinion expressed by some environmentalists, and disseminated in the media, that these processes are token?

HUI: I would react, as I have in terms in of trying to educate those people that these are not token processes. I think that, if anyone observed the amount of work and the amount of thought going into reviewing the impact assessments, in terms of preparing for what I think were the open and honest answers that we provided at these hearings, and certainly the preparation and thought put into – once the decision was rendered by the ERCB and the conditions that we were asked to include as part of the approval process, I would not think it token at all. I would say that – people



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might say, “Well you didn’t turn down the application.” But I would remind them that, “That was not the decision made by the department, that was a board decision that was made; it was ratified by government and Alberta Environment was asked to put that approval into play.”

AD: Do you think that there has been a failure in communication in respect to environmental impact assessments?

HUI: I think that, over the years, and this is my personal opinion, that for an area where we have substantial activity – if you take the oil sands region as a whole – I can tell you that, at some point, the information that we were getting from the companies that were right beside each other, in terms of timing, were going to be very close to each other, the information about the general impact assessment was pretty much the same. They were in the same area; they knew all the players that were coming on so there was not a lot of different or new information. Perhaps the only difference that you would see in that information was really what was their site-specific type of impact, or what activities they were doing on the site that was markedly different from others.

I think that that got us thinking about perhaps – we need to think about a more innovative way to think about environmental impact assessments in the province – and the department is continuing to still do work but what it is trying to advance forward is this sort of notion of a regional strategic-impact-assessment, which is maybe only do an impact assessment once for a region; think about all of the activity that might take place; think about what the cumulative impact of that development might be; do the impact assessment based on that type of information; and then tell the individual operators that might becoming on to that region, “Well, we already know what the – call it the regional assessment is – you just have to come back and tell us what your site-specific impact, your site-specific activity might be.” I think that that is probably a better approach to thinking about how we should do environmental impact assessments going into the future. Because I think a lot of the work within a region at times, if you have a lot of development in place, it’s kind of duplicate information.

AD: I think from, again this innovation and thinking strategically, you’ve talked about cumulative impacts but the kind of environmental impact assessment, which includes social impact assessment, really looks at the capacity of the region because, when you look back to the 1960’s and the beginnings of the Lougheed era, they were talking about an enormous number of these projects coming onstream, never looking at the capacity of the natural and the human environment; to sustain those.

HUI: A couple of interesting points to make about that. I think that, absolutely, you are bang on in terms of we have to understand what the capacity of a region might be. I think that is certainly the intent behind the regional plans that the Alberta Government has begun to move forward on (under the Land Use Framework). We have one regional plan that has already been approved and that is the plan for the Lower Athabasca Region. Within that regional plan, it does identify limits from a water, air, land perspective. It has frameworks within that regional plan that says, “You know what, these are the trigger levels that we should think about when we are managing air quality; these are the



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limits for these types of emissions relative to air quality. They have similar ones for water.” But, the whole point behind those frameworks and setting those outcomes is that at some point, if you do reach those trigger limits, there has to be some indication of what management actions need to be taken, so that is what that sets out.

The other comment that I would make about capacity, and this is a personal story involving some of the oil-sands operators, within the oil sands region the main surface water source that flows through the oil sands region is the Lower Athabasca River. The Lower Athabasca River has a water management framework attached to it. It is a framework that was developed with industry but with also the local stakeholders, and I recall there was one meeting after we had landed on a phase one of the water management framework that places some restrictive conditions as to when you can withdraw water from the Athabasca River. There was one, in particular, where I presided over and it was a calling of the main operators that withdrew water from the Athabasca River and I said, “Well, you know, I’m here to talk about the water management framework. It places some restrictions that during low-flow seasons which may happen next year – it could happen in the next 20 years – you are as a collective group of people that withdraw water from the Athabasca, you will need to decide on how you address those low-flow situations.”

One of my suggestions was – “Perhaps you should all band together to think about a common solution that you should undertake, if, indeed, a low-flow situation takes place.” Why I’m relating this story is that it just shows the evolution of the industry, and of what they are recognizing. The first reaction that I got was, “Well, Ernie, we can’t do that. We don’t do that because we are competitors, and even though I might get along personally with my colleague from company X, company X and company Y, we don’t collaborate because we are competitors.” But I managed to say something to the effect of, “Okay, that is great but, if you don’t work together and address what happens in a low-flow situation, maybe you are not a competitor with anyone, including company X.” So, I think that got them thinking about, “OK, well, maybe they got something here. How do we think collectively, proactively, such that when there is that low-flow situation, as an example, that we are able to respond as an industry, rather than responding as competitors all trying to compete for the same resource, or for the same scarce resource.” I think that has led to a lot of thinking within the oil sands industry and perhaps the oil and gas sector itself, about how does it collectively respond to a challenge, as opposed to always thinking from the – “you and I are competitors and so therefore we should never talk to each other about how we are going to respond to a situation like that.”

AD: So, there are new ways of thinking and new roles for government and industry. Would it be fair to say, well this is what environmentalists and some in the media are saying, that the scale of the development has been so large that it challenged the capacity of government to regulate it, and that the resources were not in place to do it properly?

HUI: I would – I’m not able to comment from the politicians or the political point of view as to whether they should have put the brakes on, or what they should have done. I know that the direction was very clear from government in that period of time, and the clear direction from



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government was, “No, we are not going to put any brakes on,” but it was a free market situation and that, if companies chose to come forward with their application, we were going to do whatever we could do to move their application through the door. That is not to say that we would approve them, just that we would process them. But, I think, and I’ll offer my personal opinion here, could we have used more resources to address some of those applications, some of the approaches that we took – absolutely. But I don’t think though that not having more resources compromised any of the approvals that we moved forward. So, could we have used more resources to think of a better way to word or to condition an approval; sure, could we have used more monitoring resources at that time – probably. But I don’t think that the lack of resources other than just perhaps being able to just do things a little bit faster or do things a little bit more efficiently, but I don’t think the lack of resources compromised any of our decisions that we took at that time.

AD: Now, you mentioned another interesting word and concept, and responsibility for the Ministry, monitoring. Now I want to address that, but the other issue that I want to raise is that third-party and academe, and I’m thinking specifically of David Schindler, have felt that the capacity both federally and provincially to conduct appropriate research and monitoring is limited; and, therefore, other studies have had to be done, some involving government funding, some involving foundation – private foundation funding. I’m going to ask you to talk about the Northern River Basin Study [1996], which is one of these over-arching studies, and how did that impact on the department and on the way that you do business? What was your sense of that?

HUI: I have been involved in a lot of things in the department and, unfortunately, I did not have a lot of involvement with that particular study but, I think, once again, sitting from afar and looking at it, I think that that was a great model for us to try to emulate. It was a great model in the sense that it really embodied where the Alberta Government wants us to head in terms of monitoring of the environment. Through the NRBS [Northern River Basins Study], here was a program that was based in science; we had all these good scientists say, “If you want to measure water quality of this, then this is the program that you need to put in place;” so, from having it from a science basis, absolutely, very credible. It demonstrated a collaborative effort between the Federal Government at that point and the Provincial Government, which was always a good.

From my understanding of the NRBS, it had a significant component that dealt with First Nations types of interests and, whether it fully satisfied that or not, I can’t comment because I wasn’t there. But, I can say they did try to address the First Nation component. For us, or for me, I thought that was a great model and the fourth part of that, which I will point out, while they didn’t have the internet and all that social media stuff back in that point, they did commit to sharing information; they did commit to sharing the data that they collected from that. So, to draw that into a parallel as to one of the things we are working on now, which is the implementation of the Joint Oil Sands Monitoring Program, very interesting parallels.

The Joint Oil Sands Monitoring Plan is based on science; it is a broad-based monitoring plan for air, land, water, and biodiversity that is based in science. We have a commitment between the Federal Government and the Provincial Government to work together to implement it and we have a joint



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commitment between the two governments to provide what I will call “open and transparent access” to the data and information that is collected from that program. That was clearly demonstrated when the ministers publicly released the joint data portal just last week. So, I don’t comment specifically on what came out of the NRBS, but, I think that that model of how we should approach monitoring; how we should work together; and how we should share the information is certainly a model that we are trying to follow with the monitoring program that we are trying to implement for the oil sands region of our province.

AD: Again, it’s taking a holistic approach, cumulative impacts over a region, and then of course in terms of oil sands, its reservoir engineering. But, of course, you are also dealing with the Boreal Forest Ecosystem, which is at a particular extreme range, where you have limited types of species and that, when you use surface mining techniques, you are disturbing all of that. Then, with air pollution that comes from the cokers in the process – of course, it is scattering – scattering not only through rain but also through snow and, in terms of studies that David Schindler has done, you can see this particulate matter in a bullseye pattern with the plant right in the middle of it; and, of course, once it disperses and the snow melts, it gets into the river system so that these – when you talk about an ecosystem approach, that’s now viewed as the tool for managing any environmental impacts.

HUI: Absolutely, I think that that’s one of the key characteristics that we are integrating air, land, water and biodiversity, and not integrating it in a sense that people taking samples have to be experts in all four of those areas, but integrating the information that comes from the data that we get from monitoring air, land, water and biodiversity and figuring out what that means on a much broader scale.

The one thing that I will say, and I think that this is important just from the monitoring perspective, that it is absolutely studies such as the ones that Dr. Schindler and others have conducted showing elevated levels of PAHs [polyaromatic hydrocarbons] dropping from the air onto the snow that ultimately gets into the river, those are very good work. But, I think, that the other context that has to be put into play here is that it is a one-year measurement, and that’s a one-year measurement that you cannot come to any conclusions on whether that has really impacted on the condition of the environment. So, I think that what it does point out, though, is the need to continue to monitor for that, continue to monitor perhaps at a much more frequent basis for that, and to identify when the trend would indicate that we have a problem coming on our hands.

People have reacted negatively – “Oh, okay, there is a great deal of impact,” but I would say, “I think that is a great find, but I think it is a one-year set of data. We don’t know what that means other than there is PAHs [polyaromatic hydrocarbons] going into the system, and it does not tell us whether those levels – well the current readings that we get now are that those levels of PHs are way below the health guidelines.” So, we need to monitor it; we need to keep track of it, but we also need to not get too fearful that it immediately signals a health impact, or an environmental type of impact.



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AD: So, in terms of the evolution of the Ministry, you've indicated that now and certainly the position that you hold now – and I want you to talk specifically about that – the department has evolved now to take a much more holistic approach. You are looking at long-term impacts; you are looking at increased regulatory-oversight and about the monitoring which really is the component that then determines [impacts] – is the feeling of the pulse of that area of Alberta, right?

HUI: Absolutely, and I don't use words like "pulse" but I use words such as there has to be a science and data foundation for policy decisions, and regulatory types of decisions that we make here in Alberta. We have not done as comprehensive a job as we could in providing that sort of science-based, credible information to policy makers, and to regulatory decision makers as well. I always like to [emphasize] that you need that foundation before you should make policy choices and regulatory choices. But you're right in characterizing it as a revolution because I think that for the past – like our current system – is not broken per se, but it certainly is one that is operating in a bit of an uncoordinated fashion, uncoordinated from a sense that, while you have many individual organizations, departments of government, organizations that may be set up by industry to do the ambient type of monitoring in this province, we don't do it in a really coordinated fashion.

So Adriana, you would do monitoring. I might do monitoring. We might hold the information. We might talk to each other, but the key word is "might"; and we might even share the information, but, again, the keyword is might. But I think we need to take a much more deliberate approach to saying, "You know what, someone needs to think about who is doing what within a region, making sure that your activity is complimenting the ambient monitoring activities perhaps that I am undertaking, and that it all fits into a comprehensible type of plan for the region."

The direction that the government has signaled here is that it intends to create – and that's part of the job that I have been given – to create an arm's-length public agency that would lead that monitoring system here in this province. And while that doesn't quite sound like a game changer to a lot of people, in fact, it is. Because what I think it is trying to address is certainly this issue of credibility and the credibility gap that we face within Alberta right now [and that] is that there is a perception – and a lot of the people might say that it is wrong but it's a perception – that the current monitoring in this province is really industry directed – "industry controlled" – whatever term you are going to throw in there. Once again, it's not my belief but it's the perception that is out there. And that does have an impact on our credibility, and it does have an impact on the reputation of Alberta. So, by having the government direct that, we will create an arms-length agency; part of that is intended to really signal that we do support sustainable development. We want to conduct the activity of extracting our energy resources in a sustainable manner. We will report on the condition of our environment, but we will report on the condition of the environment through – as close as possible – to as "neutral" type of body as we can. And, I say as close, because we will [do this] – there may always be perceptions of whether it's an agency, a department of government, it is not neutral, not as independent as people would like. But, I think, that's what we are trying to put into place, an arms-length [entity] – keep it as separate as we could – from a directly-controlled department of government.



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AD: What is interesting, and I think you only have this perspective if you are a political historian, an economic historian or an industrial historian, that the foundations of the scientific establishment in Alberta – the universities and government departments – was around the exploitation of the natural resources. In 1905, Alberta became a province; in 1912, thereabouts, the University was created, and the first President Henry Marshall Tory was educated about the surveys – the geological surveys – and that his task was to create the “brains” that would enable Alberta to exploit those resources for the economic wellbeing of its citizens. Now, so government – I mean in terms of the early research phase on the oil sands – that research was funded by government until Premier Manning in 1951 said, “Okay, we are giving you this, go out and build,” so that when the Ministry was created, the Department of the Environment, in 1973, the government was still hand-in-hand with industry in terms of the economic development agenda, and jobs – and all of those good things. So that, having an environment watchdog that potentially is going to tell industry, “You shouldn’t do this; it’s going to rap knuckles,” is uneasy. I think that that is part of the optics because people’s expectations of government is government is going to do the monitoring; it’s going to be doing the regulations; it is going to be punishing wrongdoers.

HUI: Two responses to that. Number one, it’s very clear from at least from where I sit now in my current position that this arms-length agency is not going to be a watchdog per se, in the sense that it is not. Its functions, from my perspective, are to simply report on the state of the environment or to report on the condition of the environment. It is not going to be a policymaker; it is not going to be a compliance type of watchdog. There are others in the system who are more appropriately set up to undertake those functions. But, I think, what has been missing at some point of our history, has been that arm’s-length group that will stand up and say, “You know what, we did an assessment or we are going to report on the condition of the water quality here in the Athabasca River,” and it would be done from an arm’s length perspective from government. Certainly, not within the direction and control of industry that might have a vested interest in the area but it would be seen as a somewhat not-directly influenced by either government or the industry.

I think that we have to be clear that that is it. I think the other comment we should have made is, “Well, why would the government move along that direction; why would the government think that having credibility about the information that we report on and the condition of the environment, why is that important to Alberta? I think, one of the terms that we use here in the department and certainly it’s a term that I hear more and more, is this term “social license.” I think that’s perhaps what we are fighting here for is that – Alberta has been, for lack of a better term – we have been beaten up the last few years, and our reputation is not– you don’t say Alberta and think environmental protection first thought – but I am one of the biggest advocates here in our government for saying we do a very good job at protecting the environment, but we don’t get [acknowledged for doing] that because we are being “tarred,” for lack of a better term, with this reputation of “They don’t care; they don’t do enough to protect the environment.”

I think, from our perspective, part of the work that we are trying to do in terms of creating this arm’s-length agency – having a monitoring program that is seen as a credible; one that is centrally coordinated; one that’s science based; one that shares data openly – is to sort of regain back some of



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that social license, as to say, “You know what, Alberta has all along been doing a very good job of looking after the environment, but we’ve heard people say, ‘we are not credible because we are too closely associated and the industry is too closely associated,’ so, here is our approach; here’s what we are going to do; here is how we are going to report on the information.”

AD: So, you are really in the hot seat aren’t you?

HUI: Some days it feels like it.

AD: I’ve been doing some research and actually some writing around why the oil sands have become the environmental bad guys and I was looking specifically – well 2010, 2 500 birds land on tailing ponds.

HUI: One thousand five hundred.

AD: Oh, one thousand five hundred. Thank you. I knew you would know the right answer. And, then, 2012, fewer – six hundred – another incident and, for the first incident, Syncrude was fined. How much were they fined?

HUI: Once, again, I don’t know the exact number.

AD: I think it’s about \$1 to \$1.5 million. It was a big number. And, then, of course, in 2012, there is the Gulf oil spill, and you look at the staggering amount of oil that was spilled in this sensitive habitat, Louisiana – all of those coastal regions, fishing grounds, other crustaceans, etc. – and you look at the Exxon Valdez, again, huge spill, and that you compare those to what is actually happening in the oil sands, the bird deaths which capture the public’s attention, and then the aerial photographs, and we are really talking apples and oranges.

HUI: Scale.

AD: Exactly. But there is no perception of scale out there, about these things. And, so, the companies are the bad guys of the environment. Why is that?

HUI: I am not sure that I can answer specifically why but I think that we have looked at, tried to put ourselves in the shoes of what I will call the ‘average’ citizen. Now, the average citizen has not had an opportunity to go and take a look at that particular region of Alberta; does not have an understanding of the typical operations that might take place within a mining operation; might not have a good understanding of the processes that might be associated with the extraction of oil sands. So, it’s kind of a mystery to people. If your first image of an oil sands activity is the general iconic image of either tailings ponds or an open pit mine – that is sort of ingrained in your mind to say that is typical of everything about an oil sands operation, and it’s perhaps the only image that you will remember. I talk about this a lot – that we live in a day and age right now that instant access to media, instant access to the social media, the average person would just get inundated by the information but, what the average person would remember, is the first story that they hear. So, if the



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first story that they see or a picture that they see is that negative image of that activity, that's usually the one that gets ingrained – that sticks.

My point is that that's not something that government as a whole – that we control. I think that we have tried to take some steps from the department's perspective, sort of not having people think in a "mysterious" way about the oil sands. For that reason, we did launch the Oil Sands Information Portal just in late 2011. On that portal, it tries to provide people with instant access to not only satellite type of images but it tries to show you – here's the whole scale and scope of the development that takes place up there. We try to provide information on processes: what's a tailings pond; is that typical of mining operations, because there are bigger tailings ponds than the one we have up in that particular region, but it's not associated with oil sands. Maybe it's a giant coal mine somewhere in the world but they all have them. So, it's not unique to just the oil sector and to the oil sands activities.

We've tried to take some steps, and I think the industry has as well to try and really take the mystery out of what are oil sands; how is that extraction taking place; what are the typical operations within the oil sands? We also tried to give people access to as much information as possible that we have, so everything – from the approvals to what their greenhouse gas emissions might be to the report that they submit as part of their compliance-type of reporting. What does it say about their "end of pipe," "end of stack" type of information?

Certainly, I can't answer specifically why the industry is painted as a "bad guy" but I'd say that at least we have tried to put some information that's made available, that you can reach that conclusion on your own because we are trying to say, "Here is the process; here is what you typically see; and here is what comes out of their stacks and end of pipes"; and whether that is within the normal operating limits that we expect them to be in.

AD: Can you give me the exact name of the arm's-length agency that you head, and its mission and mandate statements?

HUI: I can't, and it's not because I don't want to but it's because, at this stage, we are still – from a government perspective – trying to create this arm's-length agency so there is no official name and since there is no official name, I can't give you what I will call the "mission" or the "vision," anything of that nature at this point.

AD: Its aim really is to demystify and to be proactive in terms of monitoring?

HUI: Perhaps. What I can say is, though, just judging from the direction that we have gotten up to this point in time – the discussion that I have had internally within the government – this is an agency that will have responsibility and accountability to do baseline type of monitoring, cumulative-effects type of monitoring, evaluation of the data, and basically to report on the condition of the environment. Reporting on the condition of the environment means, to me, everything from providing almost real-time kind of access to the data that is being collected, to what I will call the



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more traditional – “here’s the condition of the environment” type of reporting, for all regions of the province.

AD: That was strange because that was going to be my next question. Are the oil sands being treated unfairly in comparison to the other types of industry?

HUI: I don’t believe so because it’s certainly our intent that, as regional plans are rolled out for each of the seven planning regions that we have in this province, there will be a corresponding monitoring plan for each of those regions. Now, it just so happens – I guess if you are being picked on – we might say they were only being picked on because right now it is one of the “highest” regions, or one of the regions with the “highest level of activity.” One would only logically assume that you would go to the highest-level-of-activity region in order to say, “What monitoring do you want done there?” So that’s why we have looked at that particular issue in that region first.

AD: The whole issue of the credibility of this – although it is arm’s-length from government, it could become a crown agency, who knows – but it is still a part of government, and some are going to say that it’s too close, and that government is going to control the messages that come out of that.

HUI: I’m not going to speculate on how the agency will exactly work at some point in the future but, I think, what I would say to that, is that, though one of the mechanisms that I think that we would want to be put into place – and one that was recommended by these groups of experts that the minister had put together to provide advice to government – was that we should put in place what people are referring to as “a science advisory panel,” and this science advisory panel would be obviously comprised of non-government type of people, probably academic staff or academics of some type, probably not restricted to people here just in Alberta, but it could be an international science advisory panel. And, the job of the science advisory panel will be to really validate or confirm the monitoring plans that we have waiting to be implemented for each region of the province. From a science perspective, does this monitoring plan – does it provide the appropriate monitoring data and information to report on this state, or the condition of the environment? That would keep a bit of the criticism in check that we are “too close” to government, or that we are “too close” to industry for that matter.

AD: Exactly, those are the two poles.

HUI: Right, so that it would be a program that might be put together by the agency, but it would be, for lack of a better term, “validated” by this science advisory panel.

AD: Has thought been given to closing the loop – that when the monitoring happens and the data says certain things – well, then, will that indicate new guidelines in terms of the legislation relating to water, air, land?

HUI: I’m not so sure that we have set all the processes or all the business processes yet but, I think, that clearly that is the intent; that we want to tie the collection and the evaluation of that data, that



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monitoring data, to a policy choice or to a regulatory choice that government or regulators may have to make.

So, if we report on the condition of the environment, the government policymakers should take that information and say, “Okay, does this either validate the policy outcome that we had intended, or does this mean that we should make adjustments,” whatever that might mean. And, similarly for regulators, they should ask themselves the same question, “Here is some information on the condition of the environment; does that, or should that play any role in making their next decision,” on whatever it is they are making a decision on. Or, does it also play a role in understanding whether compliance efforts have to be stepped up, or adjusted – that would not be a decision that the arm’s-length agency would need to make. Those are decisions that would have to be made by the policymaker, or the regulator itself.

AD: Which are within government?

HUI: Yes.

AD: And, you know, those are key terms across this discussion that we’ve had. And you actually held the policy portfolio and, so, I want you to go back a bit and talk about that, and what that looks like within government. Who determined that there needed to be a policy shift? How was this thought through? Who was involved in the process? Some of those aspects.

HUI: Well, I would look at it from the aspect of, well, I will call the monitoring side. Because, from a policy perspective, if I wanted policy developed, I would say, “What data do we have to support that,” and we would take the data that was acquired from a monitoring perspective; we would likely analyze it; evaluate it; and then we would ask ourselves a question – “Does this validate the policy outcome, or does it force us to alter course?” So, generally, we were the one-stop-shop. We either asked someone to provide us with monitoring data – we would evaluate that monitoring data from a policy lens and say, “How does this play out,” and then we would go and either adjust policy or create new policy to account for that. So, I think that with the creation of the arm’s-length agency, all that – what is likely going to happen now is instead of the policymaker doing the collection of data and, perhaps, the analysis of data from a “condition of the environment perspective,” they will likely have to ask the arm’s-length agency, “Could you provide us with that information on what is the condition of the environment?” And, then, that would be one input into their policymaking process.

AD: You concluded with using those two terms has indicated the limits to the powers that this arm’s-length agency is being given, it is still incumbent on government to make those policy and legislative, and regulatory decisions.

HUI: Right, and I think rightfully so. I think that is – my time in government, I think the one thing that I would say has been very clear to me, right from the early part of my career till now, is that it is government as a whole that makes policy. It is not agencies of the Crown; it’s not Crown agencies that should make broad public-interest policy choices. That is truly the job of government – is to



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make that policy. And how the government gets its information to inform itself as to what that policy choice needs to be, that can happen in several different ways, but, I think, clearly the accountability is not anyone else's, other than the government as a whole.

AD: Now, putting on your futurist hat and looking 20 years forward – you know, a number of years [for which] that exercise was done – what would the oil sands look like? What would be the level of production? What would population up there be – all of those things. What about the environmental perspective with respect to the oil sands – what are things going to look like in [those] terms? And a parallel question is that – departments of the environment have been junior ministries, really. I don't mean to be offensive, simply, you know, you've got energy, you've got education, you've got health and welfare and whatever. Do you think that with the public's increased perception of scarcity of resources, the need for wise use, and the need for environmental protection, do you see the role of the department changing? So, those would be the two questions that I would put to you.

HUI: Yes, I haven't had a great deal of thought about your first question about what it might look like 20 years from now, or whatever the time period is, but – so I don't know if I could give you the specific vision of 20 years out. But, I would say is that I am very much encouraged. I know that I had the good fortune of working on policy pieces that I know are getting to move through government. They are likely to address the gaps that I would say people are voicing criticism over. One example may be, you know, we have done some work on a tailings management framework that is beginning to move through government. It would likely address many of the questions and many of the criticisms that have been leveled at government over the last number of years about what the government intends – or how the government intends to address that issue. It just hasn't become public yet obviously.

But what I would say is that I am encouraged because I think that we have delivered a bunch of those pieces to government, and that policy pieces take time, but I think that my hope would be that those pieces move through and, if those pieces move through, I think 20 years from now, you will have a much different perception, for lack of a better term, of that type of activity within that region. I think certainly we have made progress on the reclamation side; certainly we need to make progress on the tailing side, I think through the cumulative effects approach, I think we are looking at things in a much more holistic matter. Through the framework, we've also tried to set these outcome limits; we've tried to define the capacity of the region to accommodate that type of activity within that region. So, if all goes according to plan, I think what you will see is a very sustainable sort of landscape 20 years from now; and that we will have done that activity recognizing the environmental capacity limits within that region.

As to the changing role of the department, I think we are in that formative stage of once again evolving. I think, with the advent of the arm's-length monitoring agency, there will be a shifting role for the department, obviously.

There is another shift that is taking place as we speak which is the creation of the Alberta Energy Regulator and that Alberta Energy Regulator will become that “one-window” stop for oil and gas



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and coal activities in the province. So, once again, that was a function that was primarily handled within the departments of the environment, and assisting resource development. Obviously, the role of the department has to shift a little bit to accommodate that. I think also that our focus on cumulative effects through the regional plans, that will likely take some of the – some of the roles that I had a part in participating in when I first started here. Some of those roles might have to evolve to accommodate the cumulative effects approach as well. But, I think, we have been on the journey to evolve for the last several years and the big signal of these regional plans is probably one of the things that helped kick start that, because you are putting cumulative effects into operation and, at the same time, you are beginning to set these regional limits. So, I don't know if I've answered specifically how the department's role might change, other than to say that I think there will be a much greater emphasis on the department's policymaking role.

AD: You have answered my question to the extent that you can and that it's this stuff that doesn't get out to the media, I think, and that is a part of the problem. That the perception is that the governments stonewall; they circle the wagons and not that they are actively responding to these criticisms, seeing how they can do things better. And, you know, could not Alberta have a "super"-Ministry of the Environment in response to, because it isn't going to go away. We are in a post-industrial society, which really has seen a resurgence of primary industry and people don't get that. They still think in terms of the information age, as the great revenue generator; that only goes so far.

HUI: The other thing that – and I know that this is a sort of oil sands-centric look – but I think that you cannot discount that one of the consequences of oil sands development has been population. And, the increase in population, people say, and I can't remember if this is exactly the number but my recollection is that in Alberta we grow roughly 100,000 people per year, so that's like adding the city of Red Deer annually, and the pressure that that places on natural resources, the pressure that that places on infrastructure systems within the province - people don't have that full appreciation. Yes, there is a great activity called the oil sands taking place; the consequence of that is populations coming into the province, and there are other environmental issues and pressures caused by people coming into the province as well. So, you know that we tried to talk about what are the environmental consequences of oil sands but one of the offshoots of oil sands development is you've got population, and there are environmental issues associated in dealing with population growth as well.

AD: You think of roads and buildings and all of that, which consume land, there as well as these industrial installations. It's intriguing, as a historian and a rare breed of scientific and technological historian at that – I mean there are all sorts of opportunities as well as the challenges and whether the Government of Alberta has the capacity to take this on, and to play a leadership role. On the federal level, we've seen the Ministry of the Environment and agencies being slashed at a time when the "Germanies of the world" are really looking at environment protection with large, finite resources of this small planet and so on.

HUI: Part of my makeup of staying within the one ministry within the employ of the Alberta Public Service for the period of time that I have been with the Public Service has been – I've seen the



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leadership that Alberta Environment has demonstrated over the years. I would like to think that on the file that I'm working on now, in terms of the monitoring file, we are once again showing our leadership because I don't think, at this point, there are many jurisdictions across Canada that are looking at the monitoring from the viewpoint that we are looking at it, and, at the same time, thinking about what are the – what I will call the mechanisms to sort of put that into play. So, I – this goes back to my – when I first came out of school, I didn't have a job that was particularly in my field and I had to learn...I like the fact that we are leading edge and, as a result of that, we have to learn as we go. Whereas, perhaps some of the other jurisdictions that may come after us to do the exact same thing that we are doing, they will receive the benefit of some of our experience going forward.

AD: And, do you think with multinationals and the nature of the ownership of the companies, can you expect them to be good corporate “Alberta” citizens or “Canadian citizens.” Do you want to talk about – you mentioned the social license to operate, all of that?

HUI: I can honestly say I've spent a good part of my career developing relationships with the industry and, you know, I had to deal with a lot of people from the oil sands industry, and, truly, from my perspective, they are all trying to be good corporate citizens. They are all trying to certainly help the government achieve its environmental outcomes, or goals. But you have to overlay the fact they are also in a very competitive industry; they have boards of directors that give them a certain direction as well. I truly believe, because I have worked with a lot of the people and maybe it's more in part because of the people that I deal with, but I don't see companies, or very few companies, having that deliberate [attitude] of – “We aren't going to follow the rules; we are not going to try and be generally trying to achieve better than what the rules say.” So, like I said, at times I feel like maybe I got the nice rose-coloured glasses on.

AD: Well, yes, some would accuse you of that.

HUI: But I think that is truly how I feel in terms of the people that I have interacted with.

AD: And, so, then, when you look at – and this isn't oil sands but it's the conventional industry spills that we have seen – the Encanas and others, which further exposed the entire industry and the whipping boy, of course, is the oil sands to those charges.

HUI: But, in response to that, too, I think, over the past few years, I think you've seen the two ends of the spectrum where companies may have those types of incidents, and you will see that particular industry respond very well, from everything from emergency response to working with the local community about what it did, and how it should act in terms of a spill to in terms of industry does not perhaps do all the right things. But I go back to my comment – there might be some players, very few in my opinion, that would give a total disregard for rules and for what we are trying to achieve, but, I think generally, through some of the groups that I've dealt with, whether its CAPP [Canadian Association of Petroleum Producers], the individual company, the various OSDG [Oil Sands Developers Group], or the OSTC [Oil Sands Tailings Consortium] type of groups, and



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COSIA [Canada's Oil Sands Innovation Alliance] now, there is much more recognition within the industry of "We need to be proactive; we need to work together; and we need to help with the achievement of these environmental outcomes that are being specified for these regions of the province."

AD: Incidentally, I am going to be interviewing Alan Fair later in the month so its covering all of the bases. Now, is there anyone that you would recommend that I interview?

HUI: Relative to the oil sands specifically?

AD: Well, yes, I mean they don't have to be entirely focused on the oil sands but, you know, that is the scope of the project.

HUI: I think that if you want to get into the finer details of what I will call the "regulatory environment," the day-to ay working operations with the oil sands – I can certainly tell you that my Regional Approvals Manager when I was in the northern region should probably get the benefit of a discussion with you, because, I think, that he would tell you about all the day-to-day operating with all those oil sands companies.

AD: And, I think it's important for the record, to have that.

HUI: And his name is Kem Singh, and if you want I can give you the contact information to that.

AD: And, if there is anyone else, that would be useful. Because of my background, I am looking at the whole environment area and looking at it from various perspectives, because it is going to still continue to be of enormous importance; it isn't a flash in the pan.

HUI: So, maybe I'll give you two names; Kem Singh was my Regional Approvals Manager so he dealt with – "Okay, we have all these boxes of applications; how do we deal with all these applications; how do we do those applications and what will we put into those approvals." And the other person I would point to is my Regional Compliance Manager at the time, Albert Poulet, and he dealt with – "So, we have all of these conditions on these oil sands operators; what happens when something goes wrong, and we actually have to enforce, or we have to initiate some compliance type of effort." I'm still at a very broad level when I talk about some of those activities but they will get down into that.

AD: They are in the trenches.

HUI: They are in the trenches; they will tell you about odour issues, they will talk to you about stuff like that.

AD: I think we need that. So, I think that we are just about there. Are there any summative remarks that you want to make or have I not asked you about something?



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HUI: No, I don't recall that you have not asked me and maybe I'll ask you, was there anything in my previous stuff that you think I should....

AD: No, I think we have covered the ground really, really well. Is there a need for a new generation of Environment Act?

HUI: It may be a very quick answer because my answer would be no, at this point.

AD: No, at this point.

HUI: Right, because we've got most of the broad powers in the Act now

AD: But that might be a good question with respect to the future then. So, as a final question, you mentioned the importance of the 1993 Environmental Protection and Enhancement Act, and that you summarized it by saying it highlighted environmental protection including the areas of emissions, depositions, etc.; and it established a mechanism for the general public to take part in decision making; and it entrenched the principle that the polluter pays. We are into a whole new generation of much more public scrutiny, international public scrutiny, and accountability, do you see a re-working of the Act as a necessary or does it still hold?

HUI: I think that the general principles of the Act and some of the provisions that were obviously written into it, I think would hold today, as well as probably five to ten years from now. I think that, though, at some point, because all acts need to be reviewed at some point in the future, there will likely be an inclination within the next 10-15 years to review an act to see if it continues to be relevant. But, even with the direction that I've talked about – separate agency for monitoring, perhaps a new energy regulator – I think the provisions in the Act would continue to apply today, continue to be relevant today, and if any changes are made in the future, it would probably be done to account for the separation that we have seen, or that we will be seeing over the next several years. But it would not be to fundamentally shift us away from those important things that I said, that back in 1993 what EPA had sort of represented in terms of a new way of thinking, a protection of the environment, involving people and making choices and decisions and, certainly, entrenching the “polluter pay” type of principle.

AD: You know, the first one was passed in 1973; that one was passed in 1993, and we are in 2013, so these things seem to work in 20 year cycles, don't they?

HUI: Well, I think that's how it worked out; the other parallel that I would draw is that we had a Water Resources Act that was initially passed in 1931, as an example, and not reviewed until 1996, so sometimes the cycle is from just an eerie sort of circumstance perspective; works in twenties or it could work in sixties for all I know. So, I don't know if there is a perfect rhyme or reason as to when EPA might get reviewed, but I think all I would indicate is that I think it has all the powers that it needs right now to put into play the direction that government sort of set us on.

AD: So, it's a good time to be a career civil servant in the Ministry of the Environment?



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HUI: Well, I first came to the department in the summer of 1980 as a summer student, and, as I said, and I don't think I have ever had a feeling where it has ever – it has always been a good time to be a part of the Department of the Environment. Yes, to your question.

AD: Well, thank you so much; it is now 3:25 pm and I thank you for agreeing to be interviewed and sharing this historical information.

HUI: Thank you very much.

[INTERVIEW ENDS]



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