

In Defense of AEMERA

Media coverage of the termination of the Alberta Environmental Monitoring Evaluation and Reporting Agency (AEMERA), by Minister of Environment and Parks Shannon Phillips contained an appalling number of inaccuracies and misrepresentations about the need for AEMERA and its accomplishments. We believe that the Alberta government is making a huge mistake by eliminating AEMERA just when it is beginning to show an accurate picture of the state of the Athabasca River and gain public support.

The AEMERA story began with the publication of two studies from the University of Alberta in 2009 and 2010. These studies showed that the oil sands industry was adding significantly to the burden of contaminants in the lower Athabasca River and the surrounding landscapes, challenging the claims of industry and government that contaminants in the river were “all natural.” Federal and Provincial government formed two panels of experts to review and compare results from the university studies with results from government and industry monitoring programs. To the embarrassment of both governments, the reviews supported the conclusion that many years of monitoring led by Alberta Environment (AE; later to become Alberta Environmental Protection, AEP) and industry had been poorly designed, executed, and interpreted. As a result, then AE minister Rob Renner formed yet another panel, composed of both experienced administrators and scientists, to design a “world class monitoring program.” It was this Alberta Environmental Monitoring Panel (AEMP) that recommended that an arm’s-length agency be created to oversee monitoring, because both levels of government had lost the public trust by promoting inaccurate information about the state of the Athabasca River system. The planning to create AEMERA began, and proper monitoring of the Athabasca River followed rapidly.

Within months of the federal oil sands expert panel’s report, in early 2011 Environment Canada led panels of national and international experts to design a new and credible monitoring program. The program was developed and some aspects were begun in spring of 2011, well before AEMERA’s creation in April 2014. Despite the logistic difficulties of working in an area largely without laboratories or other amenities, with few roads and accommodations, and without the backing of a formal agency in Alberta, some important results were published

rapidly by federal and university-based scientists. Some examples: Snowpack studies in spring of 2011 and 2012 confirmed the findings of the University of Alberta group that mercury emitted from upgrader stacks and dust blowing from oil sands developments were dispersed over a radius of at least 50 km. Scientists extended the result to include methyl mercury, the toxic and bioaccumulative form of the element. Fish-eating birds showed long-term increases in their content of methyl mercury. Polycyclic aromatic hydrocarbons (PAHs) with distinctive industry signatures were found in lakes over 90 km distant from the upgraders. Embryos of fish hatched from eggs exposed to bitumen-contaminated sediments or to spring meltwater contaminated by polluted snow had lower survival, and higher rates of malformations. We could go on. In short, science did not wait for administrative permission from Alberta to begin excellent monitoring. Obviously, these are not, as some have surmised, produced “industry friendly” results. Despite this, industry appears to be satisfied that finally they have accurate information upon which to gauge the performance of their environmental investments.

The Minister stated that her decision was based on a review by Dr, Paul Boothe, who characterized AEMERA as a “failed three year experiment.” This is simply not true. After its creation on paper on April 2014, administration at AEMERA was not as fast in getting organized as science had been. Environment Canada’s Dr. Wrona was hired as Chief Scientist at AEMERA in April 2015. In May, 2015, other leaders were hired to clean up the mess inherited from AEP, including AEP’s terrible relationship with First Nations in Alberta. The transfer of staff and resources from AEP was finally completed in July 2015, over 4 years after the development of the new oil sands science program began. Boothe’s review of AEMERA’s performance is dated November 2015, only 4 months after AEMERA actually received the resources to do its job! Before then, all of Alberta’s contributions to oil sands monitoring came from AEP, primarily through outsourcing to outside agencies and contractors.

Further, the “Boothe Report” states that AEMERA staff have received private sector-level salaries, implying they far exceed salaries in AEP. A simple check with three scientists at AEMERA shows that they are paid the same or less than other civil servants of equivalent rank in AEP and elsewhere. In fact, after years of federal and provincial austerity, the salaries for scientists in AEP now are not

competitive with those provided to equivalent individuals in either university or industry, suggesting that the program may actually face problems recruiting new, high quality science staff, especially given AEP's reputation for instability in its science and monitoring programs.

There also seems to be some confusion in the Boothe report and media coverage between AEMERA and JOSM, the Joint Oil Sands Monitoring Program. JOSM, not AEMERA, was reviewed in February, and rated as a 'B.'" That review panel, composed entirely of individuals unfamiliar with the peculiarities of the Athabasca River or its unique problems, rated the monitoring as excellent, although the program was marked down slightly because only a few of the JOSM results had been published. But a substantial delay between monitoring, analysis of samples, and interpretation and publication of final results is expected in science, and numerous papers are in preparation.

It also should be noted that the video clip that has accompanied many of the stories about AEMERA's demise actually has nothing to do with Boothe's review of AEMERA that was released this week. The statements from AEMERA's Dr. Wrona and Environment Canada's Dr. David Boerner in that clip are actually their response to the February JOSM Science Review, filmed months before the AEMERA review. There are other statements in Boothe's report and media reports of it that suggest that perhaps JOSM (a creation of Environment Canada and AEP that preceded AEMERA) has been confused with AEMERA. Instead, JOSM is one of the many programs that AEMERA is now responsible for evaluating and improving.

Considering the many organizational difficulties and interdepartmental squabbles it has faced, AEMERA's scientific performance in the nine months since it actually received the resources to do its work has been excellent, especially when compared to the previous two decades of AEP's confused monitoring programs that produced incomprehensible data, almost none of which has been analyzed or published, and the hundreds of millions of dollars spent on it.

Much of the reported high cost of AEMERA in its first operational year has little to do with the cost of new monitoring programs. It includes the costs of the programs, consulting contracts, etc. that were inherited by AEMERA from AEP,

when the final administrative transfer was made nine months ago. AEMERA has since been auditing and reviewing these contracts and programs, and has been eliminating or modifying those that are scientifically flawed or deliver poor value for the money. These reviews continue, and their objective is to eliminate redundancy and bad science.

Minister Phillips believes that there is public trust in government science. It is our experience in dealing with the public that this is not the case, which is why AEMERA was and still is necessary. Mistrust of government in Alberta is especially high with indigenous people. While we have every reason to believe that the Minister is sincere when she states that monitoring will continue to be transparent, we do not believe that transparency can be assured when the Minister or her party is replaced by those less committed to scientifically-defensible monitoring, like those of the last 20 years or more.

In summary we, a group of scientists who have studied the oil sands or the Athabasca River, or were members of the expert panels that reviewed past monitoring efforts by AEP and led to the formation of AEMERA, believe that AEMERA should remain as an independent body. Duplications of science and governance should of course be eliminated where they occur, but these decisions should be made as the result of independent financial and scientific reviews, not sole-authored bureaucratic reports. Alberta's international credibility in environmental monitoring and assessment, and by extension its decisions on approving or denying additional industrial development, are at stake.

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