

ACAP

*Arctic Contaminants Action Program
to Eliminate Pollution of the Arctic*

**ACAP
PROGRESS REPORT
TO SENIOR ARCTIC OFFICIALS**

**By Bob Dyer
Chairman**

**28-29 November 2007
Narvik, Norway**

REPORT TO SENIOR ARCTIC OFFICIALS
28-29 November 2007 – Narvik, Norway

Work Plan for 2006-2008 approved by SAOs in Salekhard (26 October 2006):

ACAP will continue to implement projects approved by the Ministers to:

- Work with Russia to develop an Integrated Hazardous Waste Management strategy.
- Complete inventory development and safe storage of obsolete and prohibited pesticides in the remaining five Russian Arctic and sub-Arctic priority Regions.
- Develop and implement control technologies for reduction/elimination of dioxin/furan releases at a pulp and paper facility in the Russian Arctic.
- Complete a feasibility study and initiate a demonstration project for management of mercury-containing waste in Northwest Russia.
- Continue close cooperation with the partnership project in Russia for achieving measurable reductions of uses and releases of mercury at chlor-alkali facilities.
- Develop demonstration projects to address additional mercury-release sectors in Russia (products, coal-fired power plants, non-ferrous metal production).
- Issue the BFR Inventory Report, prioritize and begin implementation of Phase 2 recommended activities to reduce/eliminate BFR-containing wastes and releases.
- Complete the model project on safe handling and storage of local sources of contamination in Nenets Autonomous District and in Chukotka.
- Continue work with the Barents Euro-Arctic Council to address additional “hot spots” in the Arctic.
- Continue close coordination with NEFCO to finance and facilitate implementation of ACAP projects and mobilize the Project Support Instrument.
- Collaborate with SDWG and AMAP to develop the action plan for Human Health Risk Reduction in the Arctic, as a component of the evolving human health cluster.

ACAP PROGRESS SINCE SENIOR ARCTIC OFFICIALS MEETING OF APRIL 2007

ENVIRONMENTALLY SAFE MANAGEMENT OF STOCKS OF OBSOLETE AND PROHIBITED PESTICIDES IN RUSSIA (CHAIR: FINLAND)

- Over 2336 tons of obsolete pesticides in ten priority regions have now been inventoried and placed into safe storage under this project.
- We are currently working in four priority regions as follows:
- In Altai Krai, the total amount of pesticides safely repackaged and stored is 938.5 tons.
- In Tomsk Region 105 tons have been inventoried.
- In Republic Sakha-Yakutia, 36 tons of pesticides have been inventoried, which included 6.5 tons of mercury-containing pesticides and 4.5 tons of POPs-pesticides.

- Krasnoyarsk Krai has inventoried 80 tons.
- In Summer 2007, repackaging and storage efforts for obsolete and prohibited pesticides stockpiles continued.
- An additional 444.9 tons of pesticides were collectively identified in the Altai Krai, Krasnoyarsk Krai, Tomsk Region and Republic Sakha-Yakutia for inventory, repackaging and safe storage.
- Phase I and II activities are being implemented according to schedule.

Note: Implementation of Phase III, destruction of obsolete pesticides, is dependent on availability of licensed destruction technologies in Russia, which are currently not available.

There has been a trend of increased funding support by the participating Russian Regions over the past three years. In 2007, the following three Regions contributed funding as follows:

- Republic of Sakha-Yakutia allocated 10 million rubles (\$400,000)
- Tomsk Region allocated 3 million rubles (\$120,000)
- The Altai Krai allocated 6.6 million rubles (\$260,000) for refurbishing centralized warehouses in the Region.

It is estimated that \$150,000 USD will be required in 2008 to complete the inventory and safe storage work in Altai Krai, and an additional \$100,000 USD to complete work in Krasnoyarsk.



The former missile hangar at Pokrovka was converted to an interim pesticides storage site under the ACAP obsolete pesticides project. It contains 350 tons of repackaged obsolete pesticides. Altai Krai, Summer 2007.

REDUCTION OF MERCURY RELEASES FROM ARCTIC STATES (CHAIR: DENMARK)

Mercury containing waste in NW Russia

A feasibility study for the proposed demonstration project on Mercury-containing waste in the Northwest Regions of Russia is being developed and will include assessment of the current system of collection-storage- transport-treatment. The first step will be a Seminar in late 2007 to share current practices in various regions of northwest Russia.

ACAP Mercury Partnership to reduce mercury consumption and releases at Russian chlor-alkali production facilities (Canada, Norway, Russia, USA)

- The Russian Association of Chlorine Manufacturers, RusChlor, has now completed mercury audits at all three chlor-alkali facilities in Russia.
- Based on these audits, RusChlor conducted a technical workshop in Volgograd, Russia, with the participation of international experts and experts from all three Russian chlor-alkali facilities, to share experiences and best practices.
- The ACAP Mercury Partnership conducted two technical exchange visits of Russian experts to chlor-alkali facilities in Europe to evaluate Best Environmental Practices (BEP).
- As a result of these technical exchanges, each facility developed an “Action Plan” to reduce mercury consumption and releases. Currently, all three Russian chlor-alkali facilities continue developing and implementing mercury reduction projects, as identified in their “Action Plans”.
- In 2007, the ACAP Mercury Partnership in Russia reduced mercury consumption and releases by an additional 941 kilograms over the 1060 kg reduction achieved in 2006. This is a sustainable activity which now ensures that more than 2000 kg of mercury will no longer be discharged annually into the surrounding environment.
- At the World Chlorine Council Meeting in Delhi, India, on 22-26 October, 2007, the Russian Association of Chlorine Manufacturers, RusChlor, presented this partnership as their most significant activity of 2007.

Other demonstration projects being considered in Russia for reduction of mercury releases include:

- Evaluation of the effectiveness of sorbents in reducing mercury emissions from coal-fired power plants using electrostatic precipitators;
- Cleaner production & energy efficiency measures at a combined heat and power plant;
- Measures to reduce releases from non-ferrous smelters (e.g. zinc smelters);
- Recycling of mercury-containing products.

REDUCTION OF DIOXIN/FURAN RELEASES INTO THE ENVIRONMENT (CHAIR: SWEDEN)

- There continues to be reasonable agreement between dioxins levels determined with chemical analysis and calculations using the UNEP Tool Kit, as postulated in Phase I.
- Phase II of this project is scheduled for completion in December 2007.
- Phase II, Feasibility Studies that were completed in the three priority Regions of Murmansk, Arkhangelsk and Komi, include:
 - **Analysis of dioxins in gas, liquid and solid wastes at selected facilities.** Sampling and analysis of flue gas (8 samples) and effluent water (12 samples) were successfully completed. These results will provide a good baseline for determining

the effectiveness of possible dioxin-reduction measures in Phase III. No measurements of soils were reported.

- **Selection of the most efficient technological solutions and development of recommendations.**

Technical proposals, together with cost estimates, have been developed for Vorkuta Cement Plant (one proposal, \$550,000 USD) and Kotlass Pulp and Paper Combine (two proposals, \$1.4 Million USD and \$24 Million USD). It should be noted that Kotlass Pulp & Paper Combine has converted from chlorine gas bleaching to bleaching with chlorine dioxide, thus significantly reducing the dioxins emissions. It should also be noted that Vorkuta cement plant uses only coal as fuel and formations and dioxins from similar facilities indicate that dioxin emissions are low.

- **Development and implementation of training programs on BAT and BEP for operators at individual industries (pulp-and-paper, cement, timber mill, and an incineration plant)**

Cleaner Production Training at Kotlas Pulp and Paper Combine in Arkhangelsk Region, has been completed. Significant reductions were achieved in consumption of electrical energy, water, sulfuric acid and other resources. This program implemented six dioxins-reduction projects. For example, a related measure was reduction of chlorinated water consumption by 113,700 cubic meters.

Implementation of Phase III demonstration projects will be initiated in 2008. Funding of environmentally-sound investment projects will be sought from national and international financial institutions.

One of the first dioxins-reduction projects under consideration by the Project Steering Group, is “Municipal Waste Separation in Severodvinsk” to remove dioxins-forming plastic waste from incineration.

Integrated Hazardous Waste Management Strategy (IHWMS) (Chair: Russia, co-chairs: Norway and USA)

Development of the IHWMS was encouraged by the Ministers and reflected in the Salekhard Declaration.

Rostekhnadzor of the Russian Federation has developed the draft Terms of Reference (TOR), which are now under review by the ACAP Working Group. TOR include development of the IHWMS in the northern areas of the Russian Federation and will address institutional, legal, technological, and information requirements. The IHWMS is targeted for completion by the next Ministerial meeting (18 months).

Rostekhnadzor announced that they will contribute \$1.04 Million USD for development of the IHWMS.

The IHWMS will be validated by implementation of one or two regional demonstration projects in Arctic and/or sub-Arctic regions of the Russian Federation. These

demonstration projects will address management of the most hazardous wastes - - Class 1 and 2 wastes.

The cost of these demonstration projects is estimated at \$2.7-2.8M USD for each demonstration project.

These demonstration projects will address management, including destruction, of PCBs and obsolete and prohibited pesticides.

BROMINATED FLAME RETARDANTS (CHAIR: NORWAY)

Stakeholders comments were received during the public review of Phase I and have been incorporated into the report on “Inventory of Sources and Identification of BFR Alternatives and Management Strategies”, that was finalized in June 2007. The Final Report has been sent for printing. An electronic version is available.

Section 6 of the Phase I Report identifies possible follow-up activities that ACAP and/or other relevant international fora may wish to pursue.

- It is particularly noted that Russia is not a significant source of BFRs and that any Phase II activity “needs to have a wider geographical scope, namely, to promote actions to reduce/eliminate sources of releases of BFRs that impact the Arctic in both Arctic and non-Arctic countries, and in particular those countries with high consumption of BFR-containing products.”
- “Within the Arctic, actions could be considered to address the handling of BFR-containing wastes under circumstances that prevail for many Arctic communities, for example, where facilities may not exist for local collection for recycling or incineration and where local landfilling or burning of wastes could be a source of local BFR contamination or exposure.”
- The BFR Project Steering Group (PSG) has not yet reached a conclusion on specific follow-up actions for a prospective Phase II activity. One proposed alternative to Phase II action is to continue the PSG activity as an information exchange forum. Further Phase II actions are currently under review.

Further Phase II actions are currently under review.

INDIGENOUS PEOPLES COMMUNITY ACTION INITIATIVE

Gwich'in Council International of the Council of Athabaskan Tribal Governments successfully removed and disposed of five obsolete transformers containing PCB liquids from the Fort Yukon, Alaska villages of Venetie and Beaver. Over 285 kg of PCB-containing liquids were destroyed, and the housings were cleaned and recycled.



Pumping transformer liquids into 55-gallon drums. Beaver, Alaska

In Summer 2007, ACAP partnered with the Aleut/Pribilof Islands Association, RAIPON, the Chukotka Red Cross and the coastal indigenous communities of Lorino and Lavrentia in the Chukotka Autonomous District and conducted two training sessions for 40 volunteer-residents in identification, analysis and removal of drums and storage tanks containing persistent toxic substances.

In an earlier AMAP PTS study, residents of these communities showed some of the highest PCB blood concentrations in Russia. It is estimated that there are over 200,000 drums containing hazardous substances in the vicinity of these communities.

A pilot demonstration program, which can be replicated in other communities, has been developed to include:

- Characterization of the contents of the drums with estimates of volumes and types of waste (e.g. spent oils, lubricants, paints, insecticides, fuels)
- Collection of the drums
- Disposal/destruction of contents of drums
- Drum cleaning, compaction and recycling

On September 23, 2007, a “Protocol” was signed between ACAP and all key participants in the Chukotka Region to proceed with the next steps of the project.

This project has received strong endorsement by RAIPON and the Chukotka indigenous communities. It has also received wide media coverage.



Training residents of Lorino and Lavrentia, Chukotsky Autonomous District, in handling of toxic and hazardous wastes. July, 2007.

Project Support Instrument (PSI)

In August 2007, in Moscow, by the invitation of Rostekhnadzor, representatives from the RF Ministry of Finance (MinFin), the Ministry of Foreign Affairs (MFA), ACAP and UNDP participated in a meeting to discuss the progress of the Project Support Instrument.

The MinFin representative announced that the RF Government has the “political will” to proceed with development of the PSI. MinFin brought up four issues that should be resolved in order that RF can contribute to the PSI:

- Involvement of RF specialists
- Guarantee of foreign sources of funding
- Exact outcomes of the proposed projects
- Exact budget proposed for each project and schedule for project implementation

Further meetings are scheduled between MinFin, MFA and NEFCO and will be reported by NEFCO.

Other actions:

- ACAP is developing its Operating Guidelines consistent with Part IV of the Arctic Council Rules of Procedure.
- ACAP recommends close coordination with AMAP, as AMAP evaluates the linkages between climate change and contaminant transport.
- ACAP also supports AMAP’s recommendation to remain closely involved in the Research and Action Plan for Human Health Risk Reduction (HHRR) throughout the risk assessment process. This will allow for more efficient development and planning of follow-up risk reduction activities by ACAP. This is also consistent with the Work Plan for 2006-2008 approved by SAOs in Salekhard.
- See also “Annotated Agenda”, provided separately, which addresses:
 - ACAP Indigenous Peoples Community Action Initiative
 - Integrated Hazardous Waste Management Strategy (IHWMS)
 - ACAP Cleaner Production Program at Norilsk Nickel Company –focus on sustainability
 - Work with non-Arctic countries that are sources of significant Arctic contamination