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POPs Action In China

OFFICE OF NATIONAL COORDINATION GROUP FOR STOCKHOLM CONVENTION IMPLEMENTATION

Headline

Vice Minister Zhang Lijun Arranges Priorities for Stockholm Convention Implementation in 2009

On March 27th, 2009, the fourth meeting of the National Coordination Group for Stockholm Convention Implementation (the Coordination Group) and concurrently the first meeting of the Expert Committee of the Coordination Group， were held in Beijing. Mr. Zhang Lijun, Vice Minister of the Ministry of Environment Protection and head of the Coordination Group attended the meeting and delivered important speeches. Coordinators and contact officers from fourteen member ministries, advisors of the Expert Committee including Academician Wei Fusheng, Academician Qian Yi, Academician Cai Daoji, Academician Fu Jiamo and other committee members participated in the meeting.

During the meeting, the progresss of the Stockholm Convention was briefed, and the Coordination Group's work progress in 2008 and the proposed work plan in 2009 were reported, the summary of 2008 and the work priorities for 2009 were approved after review. And Letters of Appointment were offered to the advisors and members of the Expert Committee.

Content

China's National Implementation Plan (NIP) entered full implementation stage in 2008. Adhering to the principles of people-oriented and scientific outlook on development, the member ministries of the Coordination Group followed the direction of the State Council, promoted the phase-out, reduction and control of Persistent Organic Pollutants (POPs), and achieved great progresses in the Convention implementation.

According to NIP and the work plan of the Coordination Group, China shall fulfill its commitment of phasing out the production and use of POPs pesticides before May 17th, 2009, and lay the foundation for achieving the goals of completing the investigation on dioxin emission in key industries, and applying the Best Available Technique (BAT) and Best Environmental Practices (BEP) in the new projects of key industries by the end of 2010. Therefore, the work and the task for Convention implementation in 2009 are still arduous.

Regarding the Coordination Group's work in 2009, the Vice Minister demanded all member ministries to concentrate on four key areas. First, to make good preparation for the phase-out of production, circulation, use, import and export of POPs pesticides by May 17th, 2009; second, to make increasing efforts in the application and replication of BAT/BEP in key industries, and strive to reduce dioxin emissions; third, to push forward policies, laws and regulations strengthening and capacity-building, and speed up the formulation and revision of relevant laws, regulations and technical standards; fourth, to fully realize the challenge brought by the proposed addition of new POPs in the Convention, and make timely countermeasures. Meanwhile, the Vice Minister also emphasized the importance of coordination and required all the members to make great efforts in the publicity of Convention implementation, so as to raise the awareness of relevant departments and stakeholders to participate in and support the Convention implementation.

As for the work of the Expert Committee, the vice minister stressed that the Committee is an important force to support the implementation of POPs Convention, and hoped that the academicians and experts would play the two roles of think-tank and communication, so as to help the ministries and the Coordination Group to accomplish the Convention implementation tasks more effectively.

All coordinators and representatives agreed that under the leadership of MEP, China's Convention implementation has achieved significant progress in 2008, POPs phase-out, reduction and control were pushed forward, and the work plan in 2009 has clear priorities and responsibilities. Each ministry is committed to follow the arrangements and fulfill the various tasks. The academicians and experts present at the meeting spoke highly of the implementation of the Convention over the past few years, and expressed that they would actively carry out forward-looking, strategic, macro and comprehensive research, so as to provide technical support for the Coordination Group's decision-making.

The meeting achieved its desired goals and was a great success. It is of great significance to China's comprehensive and in-depth implementation of the Stockholm Conventions.

Policies and Regulations

MEP and Other 9 Ministries Jointly Issued the Notice of Banning the Production and Use of DDT and Other Pesticide POPs in China

On April 16th, 2009, MEP along with National Development and Reform Commission (NDRC), Ministry of Industry and Information Technology, Ministry of Housing and Urban-Rural Development, Ministry of Agriculture, Ministry of Commerce, Ministry of Health, General Administration of Customs, General Administration of Quality Supervision, Inspection and Quarantine, and State Administration of Work Safty jointly issued a notice，announcing the banning of the production, circulation, use, import and export of DDT, chlordane, mirex and hexachlorobenzene (except emergency use of DDT in vector control) from May 17th, 2009.

China signed the Stockholm Convention on Persistent Organic Pollutants on May 23rd, 2001. Following the requirements of the Convention,

after its ratification, the Chinese Government submitted a notice to the Convention Secretariat to apply for 8 specific exemptions for four kinds of POPs including DDT, chlordane, mirex and hexachlorobenzene. These exemptions are the production and use DDT for dicofol production, the production and use of chlordane and mirex for termite control, and the production and use of HCB for production of PCP sodium. The first phase of these specific exemptions would expire 5 years after the Convention takes effect for China, which is May 17th, 2009.

In order to implement the Convention, the State Council approved the NIP in April 2007. In the NIP, it is clearly stated that China will stop the production, use, import and export of DDT, chlordane, mirex and hexachlorobenzene (except for emergency use of DDT for disease vector control) by 2009. To this end, Foreign Economic Cooperation Office of MEP (FECO/MEP), along with relevant departments, has actively carried out programmes and projects, on alternative technology assessment and technology demonstration, improvement of relevant management policies and technical standards, and various forms of publicity enhancement and training campaigns, which laid a solid foundation for the successful phase-out of POPs pesticides in China.

Convention Implementation Developments

12th Contact Officer Meeting of the Convention Coordination Group Held

The 12th contact officer meeting of the Coordination Group was held on March 16th, 2009. The Coordination Group' s contact officers and representatives from Ministry of Environmental Protection , the Ministry of Foreign Affairs, NDRC, the Ministry of Housing and Urban-Rural Development, the Ministry of Industry and Information Technology, the Ministry of Agriculture, the Ministry of Commerce, and the Ministry of Health participated in the meeting. During the meeting, "the 2008 work summary and 2009 work program of the Coordination Group" (draft) submitted by CIO was reviewed; the notice on banning the production, circulation, use, import and export of DDT, chlordane, mirex and Hexachlorobenzene were discussed; and arrangements for the 4th coordinators' meeting and 1st Expert Committee were made. Mr. Zhaiqing, the director general of CIO,and Mr. Yu Lifeng, deputy director general of CIO attended the meeting.

During the meeting, it was agreed that 2008 is the key year for the full implementation of NIP. MEP together with all the other member ministries of the Coordination Group completed the key tasks planned for 2008, and effectively promoted the phase-out, reduction and control of POPs. Meanwhile, the member ministries put forward a number of constructive suggestions for the work in 2009, and expressed that they would work closely with and support MEP, and fulfill the Coordination Group's duties of Convention implementation in 2009.

Emission Factors of Waste Open Burning in Developing Countries to be Determined

The conclusion seminar on the international cooperation project "The Hazardous Substances Generated from Wastes Open Burning in Developing Countries" was held in Tsinghua University on April 3rd, 2009. The project is directed by United Nations Environment Program (UNEP), co-financed by Sweden and the United States, and jointly carried out by China, Mexico, Sweden and the United States. Its objective is to determine the emission factor for the unintentional production of UP-POPs during the open burning of municipal waste in developing countries.

The project, which was launched in February 2007, will for the first time propose UP-POPs emission factor for the open burning of municipal waste based on real situations in developing countries through waste characteristics analysis, and laboratory simulation of municipal waste open burning.

POPs Survey Passed Assessment and Acceptance

On April 22nd, 2009, the assessment and acceptance meeting for national POPs survey was held by MEP in Beijing. The assessment and acceptance committee agreed that the survey had laid a solid foundation for strengthening POPs environmental regulation and provided guidance and basis for further reduction and control of POPs.

The committee is composed of 13 members including experts and representatives from relevant departments of MEP, and is led by academician Wei Fusheng. The committee reviewed the overall progress of the survey, and the outcomes of the project.

The committee agreed that this systematic national survey on POPs pollution sources is well-prepared and effectively organized, the data collected is extensive, real and reliable, the results is abundant, reliable and scientific, and POPs pollution sources traced to enterprises, to individual equipment, and to the exact point.

In order to make full use of the survey results, promote the prevention and control of POPs pollution, and establish a long-standing management mechanism, the committee recommended to update and improve data regularly; to combine this survey with the national survey of pollution sources and soil , so as to facilitate the formulation of management policies and international Convention implementation; to further carry out target-oriented monitoring, and to strengthen in-depth study of emission factors.

Project Progress

Thermal Desorption Unit for PCB Contaminated Soil to be Constructed by the End of the Year

On March 23rd-25th, 2009, the contract negotiation meeting for Thermal Desorption Unit (TDU) procurement was held between FECO/MEP delegation and the consortium consisting of US Beaudin, BRISEA and Beijing Construction Engineering Group in Hangzhou City, Zhejiang Province. The equipment is under the China polychlorinated Biphenyl (PCBs) Management and Disposal Demonstration Project for treatment of PCBs contaminated soil.

In order to properly resolve the PCBs historical issues in China, and to fulfill the country's obligations under the Stockholm Convention, MEP cooperated with the World Bank and launched the China PCBs Management and Disposal Demonstration Project in 2006. The main objective of the project is to strengthen China's PCBs-related policies, regulations and standards system, establish China's technical strength in PCB waste monitoring, cleanup, transportation and disposal, which include the procurement of a TDU to dispose PCBs-contaminated soil, and to carry out the cleanup, treatment and disposal of PCBs equipment storage sites in the demonstration province.

Following the World Bank's International Competitive Bidding procedures, FECO determined in early 2009 that the Consortium of Beaudin, BRISEA and Beijing Construction Engineering Group won the bid at the price of 3,732,453 USD. In the three days of negotiation, thorough discussions were made between the two sides on relevant technical and commercial issues and the contract execution details, including equipment spare parts, technical service and support during warranty period, the supporting equipment and personnel needed to be provided by the Chinese side, trial operation and final acceptance. At the same time, the meeting also clarified the individual responsibilities and tasks of each member of the Consortium so as to ensure smooth and effective execution of the contract.

The TDU to be purchased will take up an area of about 5,000 square meters, with a daily handling capacity of 70 tons for soil containing PCBs less than or equal to 20,000 ppm, and the PCBs concentration after treatment will be less than 1.0ppm. The device will be delivered by the end of the year, and environmentally sound waste disposal will be firstly used in the demonstration province to treat tens of thousands of tons of PCBs soil. Experts from USEPA and IMELS were invited to take part in the negotiation and provide technical assistance for FECO.

Meeting for Engineering Demonstration Project under China Sustainable Environmental Management of Medical Waste Project Successfully Held

On April 15th, 2009, the explanatory meeting for Engineering Demonstration Project under GEF China Sustainable Environmental Management of Medical Waste Project (Medical Waste Project) was organized by FECO. During the meeting, the overall design and implementation arrangements of the medical waste project were introduced. Further explanation was made on the specific requirements for the bidder and tender documents specified in the bidding documents of the demonstrated centralized rotary kiln incineration, continuous pyrolysis incineration, intermittent pyrolysis incineration, high temperature steam, chemical disinfection, microwave disinfection, the technical and financial requirements. Clarifications and explanations were made on the bidding documents raised by potential bidders. The meeting deepened the participants' understanding of the medical waste project and the bidding document, so that interested agencies can prepare high quality proposals in line with the requirements in the bidding document. A total of over 70 representatives from UNIDO as the international implementation agency, the Ministry of Health, project technical experts, and nearly 20 potential bidders attended the meeting.

The medical waste project is the first dioxin emission reduction project jointly developed by MEP and UNIDO. The overall objective of the project is to carry out BAT/BEP demonstration and replication in medical waste disposal in China,

integrate the concept of medical waste life cycle management into China's medical waste management and disposal practice, improve the country's medical waste management and disposal level and capability, and avoid and reduce the maximum extent of the generation and emission of dioxin POPs and other toxic substances. Integrated with China's National Hazardous Waste and Medical Waste Disposal Facility Construction Plan, the project will carry out BEP demonstration in health care system, select typical medical waste treatment technologies for BAT/BEP demonstration, and promote the demonstration experiences across the country, so as to achieve the goal of the POPs Convention. The project will also support the improvement of policies and standards, management, supervision and control capacity-building, R&D of relevant key technologies, publicity and other activities, thus providing support and assistance for the project demonstration and replication.

UNIDO POPs Project Mission in Sichuan, Chongqing and Zhejiang

On April 16th-21st, 2009, UNIDO and FECO organized a project mission in Sichuan, Chongqing and Zhejiang. The mission covered three projects, namely Sino-Norwegian Capacity Building and Rapid Technical Assistance and Response of Environmental Impact Assessment and Environmentally Sound Management for Medical Waste, Ruins and Soil of the Polluted Disaster Areas (Sino-Norwegian Medical Waste Project), the Environmentally Sound Management and Disposal of China Pesticide POPs Wastes and other POPs Wastes Project (POPs Wastes Project), and the Demonstration Project of Dioxin Emission Reduction in the Municipal Waste Incineration (Municipal Waste Project). The mission was compoised by UNIDO project manager Mr. Peng Zhengyou, managers in charge from division five of FECO and project experts.

The objective of Sino-Norwegian Medical Waste Project is to establish medical waste rapid response mechanism in the Sichuan disaster areas, carry out medical waste non-combustion disposal and management demonstration, and strengthen the local policies on medical waste supervision and monitoring and management capacity. To promote the smooth implementation of the projects, the mission had extensive discussions with the Sichuan Environmental Protection Bureau (EPB) on the project implementation plans, reviewed the medical waste management and disposal in the Jiuzhaigou county and Songpan County of Aba Tibetan Autonomous Prefecture, and reached agreements with the local government on specific project tasks.

To facilitate the implementation of the POPs Waste Projects, the mission exchanged views with Chongqing EPB on POPs waste management, and visited Chongqing Hazardous Waste Management and Disposal Center's hazardous waste landfill site and incineration facility, the management of POPs waste temporary storage, and a Chongqing POPs waste contaminated site. The mission initially learsnt the general situation of Chongqing hazardous waste and POPs waste management and disposal.

At present, the Municipal Waste Project is at the stage of development and preparation. The mission visited the municipal waste landfill site and incineration plant of Jiuzhaigou County, and exchanged views with the county on its municipal waste management and disposal, operation of its facilities and the difficulties faced by the county. In addition, the mission also visited the dioxin laboratory in the Thermal Power Engineering Institute of Zhejiang University, Reports on the R&D of selective dioxin catalytic reduction degradation catalyst (SCR project) were made by the Department of Materials Engineering. The research findings of the SCR project will provide technical support to the development and implementation of Municipal Waste Project.

Improvement of DDT-based Production of Dicofol and Introduction of Alternative Technologies including IPM for Leaf Mites Control in China Successful Launched

On April 8th-9th, 2009, the inception workshop on Improvement of DDT-based Production of Dicofol and Introduction of Alternative Technologies including IPM for Leaf Mites Control in China, a GEF full-size demonstration project, was held by FECO/MEP in Beijing. The project is jointly developed by FECO and

UNDP, with the goal of eliminating DDT pollution in the production and use of Dicofol, and promoting the realization of the goal of basically phasing out DDT for that use in 2009 as stated in NIP.

The project will help farmers understand and adapt to the new mites control technologies, provide guidance to non-closure manufacturers in scientific management and control of the potential environmental risks of waste production sites, and supervise the companies with production in closed-system to comply with the Convention and relevant national policies and standards through management capacity building, improvement of policies and standards, IPM technology demonstration, publicity and education, waste disposal and site assessment, closed production management and supervision activities, so as to minimize the ban's impact on agricultural production, farmers and related manufacturers, control the potential environmental and health risks of abandoned production sites, and avoid non-compliance. The duration of the project is January 2009 - December 2012.

A total of 50 representatives and experts from MEP, Ministry of Industry and Information Technology, the Ministry of Finance, the Ministry of Agriculture, AQSIQ, the demonstration areas, enterprises, GEF China office and UNDP were present at the meeting. Mr. Yu Lifeng, Chief Financial Osfficer of FECO attended the meeting and delivered opening remarks.

Sino-Canadian Research Project on BAT/BEP in China Non-Wood Pulp Paper Manufacturers Approved

During March 2009 4th-10th, FECO, the World Bank, China Paper Industry Association, and relevant domestic experts had a meeting on the Sino-Canadian research project on Best Available Techniques (BAT) / Best Environmental Practices (BEP) in China non-wood pulp paper enterprises. During the meeting, the project implementation plan, procurement plan, TOR of the main activities were discussed. Through concerted efforts, the project was officially approved on March 10th. Funded by the Canadian POPs Trust Fund, the project's implementation period is March-December 2009.

The project plans to evaluate the technology, economics, management, and the potential environmental impact of non-wood pulp production, and help the paper industry and enterprises identify and apply BAT / BEP for dioxin emissions reduction. The main project activities include baseline investigation of non-wood pulp paper making enterprises and monitoring of dioxin emissions, review and assessment of BAT / BEP in typical non-wood pulp production process; stakeholder consultation, monitoring and assessment plans, and etc.

The implementation of the project will be of great significance in terms of promoting comprehensive emissions reduction of dioxin and other pollutions in paper industry, and the sustainable development of the industry. The project outputs will provide technical support to the preparation for GEF-China paper industry dioxin emission full-size project.

GEF Council Approves China Environmentally Sound Management and Disposal of Obsolete POPs Pesticides and Other POPs Wastes Full-Size Project

On April 30th, 2009, the Global Environment Facility (GEF) endorsed the final project document and approved the China Environmentally Sound Management and Disposal of Obsolete POPs Pesticides and Other POPs Wastes (POPs Waste Project) jointly developed by FECO and the United Nations Industrial

Development Organization (UNIDO). The total budget is USD 42,059,000, among which GEF grant accounts for USD 10.19 million. The implementation period is from June 2009 to June 2014.

The POPs Waste Project aims to comprehensively improve China's environmentally sound management and disposal capacity of POPs wastes. The project will carry out environmentally sound management and disposal of obsolete POPs pesticides, technology demonstration for environmentally sound disposal of dioxin-rich fly ash and environmental risk assessment of storage POPs waste stockpile and storage sites. Meanwhile, the project will also support the improvement of POPs waste policies and regulations, disposal technical standards and related capacity-building activities.

On May 17th, 2009, China will ban the production, use, import and export of all POPs pesticides. The implementation of the POPs waste project will play a positive role in promoting proper solution to potential environmental risks posed by the stockpile, waste and contaminated sites after the phase-out of POPs pesticides.

New POPs

Investigation Report on Application of PFOS (Salt) in Textile Industry Highly Recognized

Entrusted by FECO/MEP, the evaluation on the Investigation Report on the Application of PFOS (salt) (PFOS) in Textile Industry was held by China Dyeing and Printing Association on March 10th, 2009. A total of 30 people, including Mr. Zhao Penggao from Department of Resource Conservation and Environmental Protection of NDRC, Mr. Liu Zhipeng from the Energy-Saving Department of the Ministry of Industry and Information Technology, representatives from textile dyeing and printing industry's auxiliary agent major production and application enterprises attended the meeting.

During the meeting, the investigation report by China Printing and Dyeing Association was basically acknowledged, and it was pointed out that PFOS finishing agent is comparatively less used in China, and its value only accounts for a very small proportion of the textile industry. Tsherefore, it is proposed to ban the use of PFOS in China's textile industry in view of improving the environment and raising the quality of people's life. In addition, considering the stock and trade needs, it was hoped that a transitional period of 1-2 years could be given before the ban.

It was also recommended to develop national unified PFOS detection methed as early as possible, including the research on detection technology and methods in the national key research projects, the R&D of alternatives to perfluoroalkyl finishing agent in national key technological projects.

Investigation Report on the Application of PFOS (Salt) in Electroplating Industry Gained Recognition by the Industry

Entrusted by FECO/MEP, the evaluation on the Investigation Report on the Application of PFOS (salt)

in electroplating industry was organized by Beijing Electroplating Association on March 23rd, 2009. A total of 24 participants, including Mr. Wang Guang from the Department of Resource Conservation and Environmental Protection of NDRC, Mr. Liu Zhipeng from the Energy-Saving Department of the Ministry of Industry and Information Technology, and representatives and experts from electroplating industry's main application enterprises attended the meeting.

In the meeting, it was concluded that the investigation report prepared by Beijing Electroplating Association was relatively complete, and truly reflected China's PFOS application in electroplating industry. The report was basically approved. In view of PFOS's threat to the environment and human body, the meeting recommended the authorities to accepted the inclusion of PFOS in the controlled list during the COP4 in May. Due to the fact that the PFOS alternative technology in the plating industry is not yet mature, the meeting recommended applying for specific exemption. At the same time, it was suggested relevant departments should provide policy and special funding support to PFOS alternative products and testing technology.

Chinese Scientists Made Progress in Immunotoxity of Perfluorinated Compounds

The Dai Jiayin research team from Animal Ecology and Biology Conservation Laboratory, Institute of Zoology, Chinese Academy of Sciences (CAS) has made progress in the research of immunotoxicity, The research article Alterations of Cytokines and MAPK Signaling Pathways Are Related to the Immunotoxic Effect of Perfluorononanoic Acid was published in Toxicological Sciences (IF = 3.814).

Perfluorinated compounds (PFCs) are new kinds of POPs, and are widely used in civil and industrial products. PFCs are persistent, bioaccumulative, toxic, and long-distance migratory. At present, various kinds of PFCs have been detected in environmental samples, wild animals' serum and tissue samples (including living creatures in the Arctic Circle) collected from around the world and human bodies. PFCs have also caused widespread pollution in China, for instance, the PFOS (salt) concentration in the serum of people in some provinces is significantly higher than that of the developed countries; PFOA and PFOS are detected in most of China's captive pandas and many other endangered species; seven kinds of PFCs including deca-perfluorocarboxylic acid were detected in fish bodies of contaminated areas. The wide range of toxicity and its impact on the ecological environment and human health have drawn widespread concern, therefore, research on PFCs has become one of the hot topics in the field of environmental science and ecotoxicology research.

The research team found that the exposure of PFNA (nine carbon PFCs) can lead to atrophy of rats' lymphoid organ, affect lymphocyte's secretion of cytokines, stimulate the increase of serum glucocorticoid (GC) levels, thereby creating a certain degree of immunotoxicity. In addition, PPARα, PPARγ of the thymocytes increase, MAPK kinase (JNK and p38) is significantly increased in the gene and protein levels, and anti-apoptotic Bcl2 gene is inhibited, which eventually leads to apoptosis of a large number of lymphocyte. This study preliminarily revealed the immunotoxicity and the functional molecular mechanism of PFCs compounds.

Research Developments

Ministry of Science and Technology Plans to Invest 13.50 Million RMB in R&D and Demonstration of POPs Contaminated Soil Remediation Technology from the 863 Plan

On March 6th, 2009, the Ministry of Science and Technology released the application guideline for 863 plan's key technology R&D and comprehensive demonstration of typical industrial contaminated soil remediation in the field of resources and environment technology.

With China's accelerated urbanization and execution of the industrial restructuring policies, the remediation of industrial contaminated sites to ensure the safe living environment has become the country's new hot spot of environmental protection. It is urgent to conduct research and develop technology and equipment with independent intellectual property rights (IPR) for industrial contaminated sites and soil remediation based on the characteristics of industrial contaminated sites and remediation needs, and carry out demonstration projects, so as to promote the development of China's soil remediation industry, and support China's industrial contaminated sites remediation, re-development and utilization.

According to National Mid- and Long-Term Plan for Scientific and Technological Development (2006-2020) and the overall arrangements on resources, environment and technology in 863 Project under the Eleventh Five-Year Plan, the project on key technology research and integrated demonstration of typical industrial contaminated sites remediation will be launched in 2009.

The key project will have four tasks, among which task one will focus on the remediation of the contaminated soil left behind after the current closure and relocation of plants producing typical organochlorine pesticides (such as DDT, BHC, chlordane, mirex, and etc.). Combined with the purpose of site reutilization and remediation goal, and through R&D of key technologies and systematic integration, the task aims at developing cost-effective key technology and equipment for remediation of organochlorine pesticides contaminated soil with China's independent intellectual property rights, and carrying out demonstration to enhance China's technical capacity in remediating organochlorine pesticides contaminated sites. Task three will focus on the soil remediation of China's PCBs contaminated sites. Combined with the purpose of site reutilization and remediation goal, the task will develop high-performance thermal desorption remediation technology and equipment for highly PCBs contaminated sites with China's independent intellectual property rights, and enhanced bioremediation technologies for mid- and low- concentration of PCBs contaminated sites, so as to establish an integrated system for PCBs contaminated sites remediation, and carry out demonstration to enhance China's technical capacity for soil remediation of PCB contaminated sites. The country will set aside a special fund of 13.5 million RMB for the two POPs tasks, along with a 13.5 million RMB counter-part funding from the implementing agencies, the total investment will reach 27 million RMB.

Field Research on POPs Emission and Characterization in High-Risk Region under 973 Program Completed

The Research on POPs Emission and Characterization in High-Risk Region by National Center for Environmental Analysis and Measurements has officially entered into the implementation stage. The project is one of the sub-projects of the regional POPs pollution status and evolution trend under the Key Basic Research Development Program (973 Program) of the national Eleventh Five Year Plan. On March 30th-31st, director Huang Yeru, the head of National Center for Environmental

Analysis and Measurements led the project team to Taizhou City, Zhejiang Province for on-site research. With the support of Zhejiang Environmental Monitoring Center, local EPB of Taizhou, Solid Waste Management Center of Taizhou EPB, and the EPBs from different districts, the project team went to Wenling and Luqiao to study the actual situation of the two dismantling areas of the waste electrical equipment, listened to the introduction of the dismantling activities and pollution status in the region from the local administrative departments, and visited the mechanical dismantling park for imported waste electrical equipment.

According to the field research, the project team further refined the implementation plan, indentified two major monitoring areas, developed and refined site monitoring plan and the overall objective of the research. This research will monitor the dismantling area for imported wastes, waste mechanical equipment and the comparison area. Study on the pollution level, distribution pattern and pollution characteristics of PentaBDE (PBDEs) and other POPs in air and soil were to be carried out.

UNEP's First POPs Analysis and International Comparison Project in Asia Launched in Beijing

The inception workshop for Asia's first POPs analysis and international comparison project was held on April 6th-8th, 2009 in Beijing. The workshop was sponsored by the United Nations Environment Program (UNEP), and undertaken by the Research Center for Eco-Environmental Sciences of CAS and the Stockholm Convention technology transfer promotion center for Asia-Pacific region in Tsinghua University.

Dr. Heidelore Fiedler, the UNEP science officer, as well as over 50 professionals from the POPs analysis laboratories of Sweden, Japan, India, Vietnam and China, attended the workshop. Dr. Heidelore Fiedler introduced the objectives and main activities of Asian POPs analysis and comparison project funded by the Norwegian Government. Dr. Albert van Bavel from Örebro University of Sweden introduced the organization and experiences of international POPs analysis and comparison activities. Dr. Takumi Takasuga from Japan's Shimadzu Corporation presented Japan's experiences in dioxins, PCBs, POPs pesticides, and new POPs. Representatives from POPs analysis labs also introduced their own laboratories and exchanged experiences in POPs analysis.

According to the project arrangements, the samples for international comparison will be sent to participating laboratories in June 2009. All participants should submit the test results by October 2009. The implementation of the project is of great significance for the standardization of POPs laboratories in China and Asia, and the improvement of the POPs analysis level.

Regional Convention Implementation Progress

China's Largest Cement Kiln Project in Trial Operation, Capable of Disposing Guangzhou's 2/3 Municipal Sewage Sludge

Guangzhou Yuebao Cement Co., Ltd.'s sludge disposal project started its trial operation on March 10th, 2009 in Guangzhou. The project is currently the largest sludge co-processing cement kiln project, and is the key project in cement industry under the Tenth Five-Year Plan, and also the Guangzhou's key project. The disposal capacity is designed to be 600 tons/day, and can dispose 2/3 of Guangzhou's municipal sewage sludge daily.

The project is to dry the sludge with the waste gas from the cement kiln, and the dried sludge is then incinerated in the cement kiln incineration, which can substitute for part of raw materials and fuel, and achieve the complete environmentally-sound disposal of sludge. After the reception, transportation, drying and high temperature disposal with the cement kiln, the original toxic and harmful sludge can be decomposed to be the alternative fuel for coal, and every 3 tons of semi-dry sludge can replace 1 ton of coal. The slag after combustion can be the raw material for cement production. The project takes, environmentally sound management, and scientific utilization resources of municipal sludge disposal as its objective, and has achieved no leakage zero-emission during sludge treatment process, and produced environmental friendly cement products. The water used throughout the disposal process can be recycled and will not pollute nearby water bodies. The waste gas is used for the combustion. According to the introduction from the company's staff in charge, the combustion temperature in the decomposition chamber is stabilized at a range of 850℃-900 ℃, which can ensure the full combustion of the harmful organic substances in the sludge, and avoid emission of dioxins and other toxic gases and secondary pollution.

Pilot Disposal Facility in Construction for Fly Ash from Municipal Waste Incineration in Beijing

The pilot project for disposing fly ash from municipal waste incineration designed by Beijing Scientific Research Institute of Building Material was kicked off in Beijing Jinyu Group's Liulihe Cement Company in Fangshan District. At present, the civil works have been completed and equipment is being installed.

Fly Ash is the residual material collected by the flue gas purification system in the municipal waste incinerators, and it contains dioxin and many other organic pollutants and heavy metals, which are included in the "National Catolog of Hazardous Wastes." Currently, the decontamination and sound treatment and utilization of fly ash have become one of the important topics in the final disposal of municipal waste incineration. According to the implementation plan of Beijing's municipal waste disposal facilities construction program under the Eleventh Five-Year Plan, the city will build 4 garbage incineration plants to treat municipal waste. With the completion of the waste incineration plant, the treatment of fly ash has also been put on the agenda.

Beijing Liulihe Cement Company is the city's first company that has passed the clean production evaluation, and also the first batch of pilot enterprises indentified by Beijing Municipal Development and Reform Commission to develop circular economy. Through scientific and technological improvement, the company vigorously develops circular economy, and takes the lead in building a waste fly ash disposal project in China.

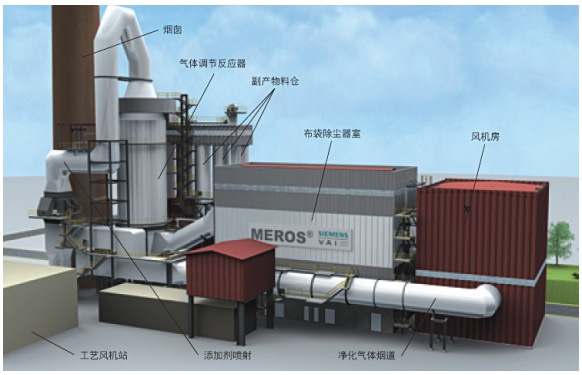
Under this project, the fly ash from waste incineration is firstly pre-treated with water, and then calcined with high temperature in the cement kiln as cement raw materials, so as to completely decompose dioxin and solidify heavy metals in cement clinker, thus ultimately achieving the sound decontamination and utilization of fly ash.

World's Advanced Sintering Emission Integrated Treatment Facility to be Built in Maanshan Iron & Steel Company

The integrated sintering emission treatment facility with Siemens VAI's advanced MEROS (maximum reduction of sintering emissions) technology will go into operation in Ma'anshan Iron & Steel Company's second iron plant in April 2009. The project is also the first MEROS-applied sintering waste gas treatment facilities outside Europe. The total investment is 207.99 million RMB, and each of the two sintering equipment in the second iron plant of Ma'anshan Iron & Steel (Group) Company will install the MEROS device.

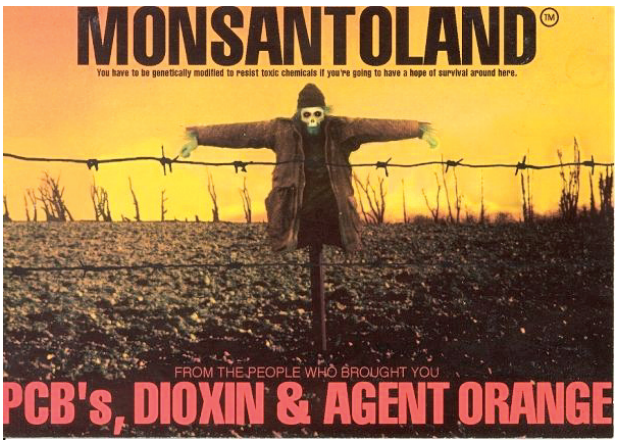
MEROS Technology is a new high-performance exhaust gas purification technique. The adsorbents and desulphurization agents are injected into the exhaust stream, and mixed with heavy metals, sulfur dioxide, dioxins and other acid gases. The airflow is moisturized and cooled down through the gas conditioning reactor, thus promoting the chemical reaction. Dust particles are captured by the bag filter. In order to increase efficiency and reduce costs for the waste gas purification, part of the dust is recovered back to the exhaust stream, so that the unused additives can contact the exhaust gas for the second time. In the meantime, the technology also has a flexible layout and high purification efficiency, and it is also stable and reliable. The previous application of MEROS in Linz steel plant shows that the dust emissions in the waste gas treated were reduced by 99%, and the dust concentration emitted is less than 5 mg/Nm^3; mercury and lead emissions decreased by 97% and 99%; and removal rate of dioxins and furans (PCDD / Fs) reached over 97%, and emission concentration is less than 0.1 ng TEQ/Nm^3.

Ma'anshan Iron & Steel (Group) Company is one of the China's leading iron and steel enterprises, and also the largest industrial enterprise in Anhui Province. The company's annual production capacity is about 1,500 million tons. Its products mainly include shaped steel, wire and medium plate. In addition, it is also China's largest train wheel manufacturer. In recent years, the company increased its efforts in energy conservation and emissions reduction, and launched a series of environmental protection projects, including power generation by low temperature afterheat of sintering, dehumidification of blast furnace, coke dry quenching (CDQ), integrated utilization of water resources, and dezincification of zinc dust at the bottom of furnace, The total investment reaches 1,688 million RMB. The completion of the MEROS facility will substantially reduce the company's emissions of sulfur dioxide, particulate matter and dioxin, and make great contribution to energy conservation and emission reduction.



Global View

Monsanto Company Won the PCBs Pollution Case



On April 14th, 2009, the jury in Alabama, United States, reached a verdict that the previous Monsanto Company won the polychlorinated biphenyls (PCBs) pollution case. The plaintiff alledged that the company's production of PCBs caused pollution, which led to their arthritis and diabetes.

Monsanto is now affiliated to Pharmacia, which produced PCBs in the region before the 1970s, and had been dumping chemical waste into the local rivers. The production of PCBs lasted for about 40 years, and its products were often used for the production of lubricants and coolant. United States Environmental Protection Agency (EPA) included PCBs as probable carcino-genic substances.

Five citizens from Anniston, Alabama filed a personal lawsuit against Monsanto. According to Frank Davis, the plaintiff lawyer, five plaintiffs are senior citizens suffered from arthritis or diabetes. Over 3,000 people prosecuted Monsanto in the past, but this case by the five citizens are the first one that reached a verdict.

Augusta Dowd, the defense lawyer said in a statement: "The jury believes that the five plaintiffs in this case failed to prove that their common disease is caused by contact with PCBs discharged by one of the factories in Anniston many years ago." The five plaintiffs aged between 67 to 89, many of their health factors such as obesity, diet, smoking, family history and so on may be the reasons for their illness.

Dowd said that Pfizer's Pharmacia is the case's nominal defendant, but Monsanto is obligated to defend the case. The court hearing continued for two weeks, with the main focus on PCBs actually caused the diabetes and arthritis, or were PCBs only related to these two diseases.

Conference Summary

First Conference on Development of China's Bromo-Industrial Chain Held

With the spread of financial crisis, and the nomination of PBDEs for inclusion in the list of new POPs, the development of China's bromo-

industrial chain has experienced a severe test, and the prices of bromine in China have shown abnormal fluctuations in 2008. Soaring oil prices along with the ever scarce energy and other challenges, bromine production costs increased, which led to a 30 percent decrease of bromine production compared with the figure in the previous year. Many less competitive enterprises face elimination or marginalization. Even world-famous Bromine chemical companies are not in an optimistic situation. The Paul Blair and the Chemtura from the United States, and Dead Sea Bromine from Israel, also joined the companies that look to the future with caution.

The conference was held by China ChemNet on March 20th-21st, 2009, bringing together experts from the bromine chemical industry, to discuss the difficulties that the companies now face, to further promote mutual understanding and communication among companies in the industry, and to identify the development direction of China's bromine industry so as to promote long-standing and healthy development of the sector.

Seminar on Environmental Protection and Technological Development in China's Paper Industry Successfully Held

On April 23rd-25th, 2009, entrusted by FECO/MEP, the Seminar on Environmental Protection and Technological Development of China's Paper Industry was held by the Chinese Association of Paper Industry in Beijing. At the meeting, progress and requirements of China's implementation of the Stockholm Convention on Persistent Organic Pollutants, and relevant national environmental and industrial policies were introduced. and extensive discussion and communication were made on the industrial impact of the new pollutant discharge standard to be implemented in pulp and paper industrial, the application of BAT/ BEP in pulp paper industry, pollutants treatment technology for pulp and paper production as well as emission reduction and energy conservation measures. A total of over 120 delegates from MEP, the Swedish Environmental Protection Agency, the Swedish Embassy in China, pulp and paper enterprises from home and abroad attended the meeting.

The meeting played a positive role in the publicity and training of dioxin emission reduction in China's pulp and paper industry, and China's implementation of NIP for the Stockholm Convention, and also laid the basis for the follow-up development and implementation of dioxin reduction projects in pulp and paper industry.

Upcoming Meeting

Stockholm Convention COP4 to be Held

The Fourth Meeting of the Conference of the Parties (COP) to the Stockholm Convention on Persistent Organic Pollutants will be held at the International Convention Center in Geneva, Switzerland on 4th-8th May, 2009. Apart from some regular topics like funding mechanism, technical assistance, effectiveness evaluation and compliance mechanism, the Conference will also evaluate the 9 new substances including PFOS, its salts and PFOSF, PeCB, lindane, commercial PentaBDE and commercial octaBDE, and will decide whether to include these substances in the Convention's Annex A (elimination), B (restriction), or C (unintentional production).

China will send a 17-member delegation led by MEP, and consisted of representatives from the Ministry of Foreign Affairs, the Ministry of Finance, the Ministry of Agriculture, Tsinghua University, Peking University, China Research Academy and Environmental Sciences, and etc. to participate in this meeting.

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