FOURTH UNECE REGIONAL IMPLEMENTATION MEETING ON SUSTAINABLE DEVELOPMENT

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Agenda item 6. Chemicals

Keynote address by the United States of America[1]

SUSTAINABLE DEVELOPMENT IN THE CHEMICALS SECTOR

Sustainable Development in the chemicals sector is a matter of sound chemicals management; and sound chemicals management reflects the sustainable development paradigm. Knowledge of chemicals and their use has often contributed to economic development and since the use of chemicals can have significant impacts, both positive and negative, on human health and the environment, we believe that sound chemicals management, as we envision and pursue it, contributes to sustainable development.

The United States is actively engaged in chemicals management, both at the domestic and international levels as the safe and effective management of chemicals helps ensure protection of the environment and public health. Several major regulatory and voluntary initiatives are underway domestically, including our active efforts to evaluate and register new chemicals and pesticides. The United States is also a strong supporter of UNEP's Strategic Approach to International Chemicals Management (SAICM), an international framework to promote the goal that by 2020 chemicals are produced and used in ways that minimize significant adverse impacts on human health and the environment. We look forward to working through the UNCSD to further enhance the role and efforts of SAICM and to share information on our successful programs and practices.

Among the critical challenges for sound chemicals management, I would like to highlight the increasing chemical manufacturing and use in developing countries, including greater basic chemical production; increasing product development and production; and increasing food production with the requisite increases in chemical fertilizer and pesticide usage. Sound chemicals management is critical to protecting the environment where they are produced and used to be sure. However, in a world where products are distributed globally and are the consequent health effects, and where we understand that environmental consequences are often transnational sound chemicals management is a pursuit we all must commit countries to domestically and internationally. In addition to the globalization of chemicals we face additional challenges, especially in the UNECE region, from the ongoing need for and development of new chemicals and products including them for example newer safer fire retardants as well as legacy chemicals such as lead paints, asbestos and hazardous waste sites.

Using the five objectives of SAICM as an organizing principle I will now highlight a selection of U.S. programs that demonstrate the way in which we are addressing sound chemicals management. I have tried to select examples that show the wide array of tools which the U.S. utilizes.

[1] The text is presented as received from the author.

The SAICM objectives are risk reduction, knowledge and information, governance, capacity-building and technical cooperation, and illegal international traffic. While some of these examples highlight our partnership with some of the major groups, including the private sector, workers, academia and NGOs, these examples are U.S. Government programs and are not meant to represent the vast number of programs of sponsored by the major groups. Even for the U.S. government time only allows me to be illustrative and I would encourage you to visit the U.S. national report to the CSD, which should be posted early in 2010.

The U.S Environmental protection Agency(EPA) has the primary role in sound chemicals management. US EPA Office of Prevention, Pesticides, and Toxic Substances protects public health and the environment from potential risk of pesticides and toxic chemicals. The US EPA's Office of Pollution Prevention and Toxics (OPPT) manages programs to evaluate new and existing chemicals and their risks, takes appropriate action, finds ways to prevent or reduce pollution, and implements stewardship programs to encourage companies to reduce and prevent pollution. The US EPA Office of Pesticide Programs (OPP) registers pesticides for use in the US and establishes maximum residue levels for pesticide on food, coordinates issues ranging from worker protection to prevention of misuse of pesticides, and participates in partnerships, such as the Pesticide Environmental Stewardship Program.

Risk reduction

Managing and Reducing Risks to Industrial Chemicals

Reviewing New Industrial Chemicals. Through the New Chemicals Program, US EPA manages the potential risk from chemicals new to the marketplace by setting conditions, up to and including a ban on production or import, on the manufacture, processing, use and disposal of a new chemical before it enters into commerce or on a "significant new use" of an existing or new chemical. Anyone who plans to manufacture or import a new chemical substance for a non exempt commercial purpose is required to provide US EPA with notice before initiating the activity. Notice is also required before beginning any activity that EPA has designated as a "significant new use".

Nanoscale Materials. US EPA has received and reviewed numerous new chemical notices under TSCA for nanoscale materials including carbon nanotubes and fullerenes. US EPA has taken steps to control or limit exposures to these nanoscale materials.

Managing Existing Industrial Chemicals

US EPA has announced a comprehensive approach to enhancing the current existing chemicals management program. The enhanced program includes the following activities:

- Initiating regulatory risk management actions on lead, mercury, formaldehyde, polychlorinated biphenyls (PCBs), glymes and nanoscale materials.
- Developing action plans designed to target US EPA risk management efforts on chemicals of concern. These action plans will be based on US EPA's review of available hazard, exposure, and use information, and will outline the risks that each chemical may present and specific steps that US EPA will take to address those concerns, also increasing public access to information about chemicals and engage stakeholders in prioritizing chemicals for future risk management through public notices and public meetings.

PFOA Stewardship Program. Eight major companies committed voluntarily to reduce facility emissions and product content of perfluorooctanoic acid (PFOA) and related chemicals on a global basis by 95% no later than 2010, and to work toward eliminating emissions and product content of these chemicals by 2015. The voluntary stewardship program has also been complemented by regulatory actions.

EPA is taking additional action on targeting mercury, lead and asbestos.

Managing and Reducing Risks to Pesticides

Reviewing New Pesticides. US EPA ensures that pesticides, when used according to label directions, can be used with a reasonable certainty of no harm to human health and without posing unreasonable risks to the environment. Before selling or distributing a pesticide in the US a registration must be obtained from US EPA. US EPA requires more than 100 different scientific studies and tests from applicants. Where pesticides may be used on food or feed crops, US EPA also sets tolerances for the amount of the pesticide that can remain in or on foods. For antimicrobial pesticides that make public health claims and all other pesticides that make public health claims, US EPA requires special tests to ensure their efficacy to control disease-causing microbes. US EPA also regulates biopesticides, which are naturally occurring substances that control pests (biochemical pesticides), and microorganisms that control pests (microbial pesticides).

Reassessment and Risk Management of Currently Registered Pesticides. Under the Registration Program US EPA reviews each registered pesticide every 15 years to make sure that as the ability to assess risks evolves and as policies and practices change, all pesticide products in the marketplace can still be used safely.

US EPA also regulates storage and disposal of pesticides and their containers, and provides guidance to household consumers, farmers, registrants, retailers, and commercial applicators.

US EPA places particular emphasis on children in making regulatory decisions about pesticides. Risk assessments include evaluations for children in various age groups, since children's eating and activity patterns change as they grow up.

Some Pesticide Field Programs include:

- School Integrated Pest Management (IPM) reduces pesticide risk and exposure to children in school facilities.
- Worker Protection Standards (WPS) are designed to protect employees on farms, forests, nurseries, and greenhouses from occupational exposures to agricultural pesticides.
- National Strategies for Health Care Providers Pesticide Initiative is aimed at improving the training of health care providers in the recognition, diagnosis, treatment, and prevention of pesticide poisonings among those who work with pesticides. The latest edition of US EPA's handbook *Recognition and Management of Pesticide Poisonings* is available in English and Spanish.

Chemical Risk Reduction through Pollution Prevention

Sustainable Futures is a partnership among US EPA, the chemical industry, and other stakeholders, which offers models for quickly and cost effectively screening chemicals for hazards and/or risks early in the development process. Participation in the program can allow companies to more quickly commercialize environmentally preferable new chemicals and identify safer alternatives for existing chemicals. Participants in the training sessions also included government scientists from Australia, Europe (Poland, Germany, Slovakia, and the Netherlands) and Japan, and scientists from several consulting firms.

Design for the Environment (DfE) Program works in partnership with a broad range of stakeholders focusing on industries that combine the potential for chemical risk reduction and improvements in energy efficiency with a strong motivation to make lasting, positive changes. Of note is the Furniture Flame Retardancy Partnership, which fosters informed substitution by providing objective information about hazards associated with flame retardant chemicals, allowing furniture manufacturers to select safer substitutes for flame retardants.

Sector-Focused Pollution Prevention Programs

Sector Strategies Program develops comprehensive strategies to improve environmental protection, energy efficiency, and resource management in major US manufacturing and business sectors. The *2008 Sector Performance Report* presents current data on the chemical manufacturing sector.

Environmentally Sound Electronics Design and Lifecycle Management:

- Electronic Product Environmental Assessment Tool (EPEAT) helps purchasers buy environmentally preferable electronics by providing a list of registered products, participating manufacturers and guidance.

Knowledge and Information

Information Collection and Access

The High Production Volume (HPV) Challenge Program "challenges" companies to make health and environmental effects data publicly available on chemicals produced or imported in the US in quantities of 1 million pounds or more per year. Under the program, companies have sponsored more than 2,250 HPV chemicals, including 860 chemicals sponsored through international efforts. This represents 93% of the total volume of chemicals in commerce in the US. The High Production Volume Information System (HPVIS) is a database that provides access to information on HPV chemicals.

Nanoscale Materials Stewardship Program (NMSP) was launched in January 2008 to help provide a firmer scientific foundation for regulatory decisions by encouraging submission and development of information, including risk management practices, for nanoscale materials.

ACToR (Aggregated Computational Toxicology Resource) is a collection of more than 200 sources of publicly available data that are searchable by chemical name and by chemical structure.

Envirofacts is a single point of access to US EPA environmental data with information about environmental activities that may affect air, water, and land anywhere in the US.

Toxics Release Inventory (TRI) is the US pollutant release and transfer registry or PRTR. US EPA's TRI database is publicly available and contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. The Program is also working to ensure that the TRI data and information are useful and meaningful to the public and a variety of stakeholders both inside and outside the Agency.

- The Toxicology and Environmental Health Information Program (TEHIP) evolved from the Toxicology Information Program (TIP) that was established in 1967 at the National Library of Medicine (NLM) in response to recommendations made in the 1966 report "Handling of Toxicological Information," prepared by the President's Science Advisory Committee. The TIP objectives were to: (1) create automated toxicology data banks, and (2) provide toxicology information and data services. In the mid-1990's, the mission of TIP was expanded to include environmental health. TEHIP, by creating, organizing, and disseminating toxicology and environmental health information, now serves as a premier information portal for resources in these subject areas.

Materials and Waste Exchanges are markets for buying and selling reusable and recyclable commodities, diverting materials out of landfills.

Tools and Methods for Analyzing Chemical Properties and Exposure

Risk-Screening Environmental Indicators (RSEI) is a screening tool that analyzes risk factors to put Toxics Release Inventory (TRI) release data into a chronic health context. RSEI is often used by government regulators, communities, journalists, industry and others to examine trends, identify important emissions situations for follow-up, support community-based projects and initially screen potential impacts of emissions.

Pesticides Knowledge & Information

- *Pesticides publications.* US EPA posts an alphabetical listing of the status of each pesticide in the registration and reregistration review processes. Also, US EPA posts a collection fact sheets on health and safety, regulatory action, and specific pesticides. In addition, US EPA provides printed information on pesticides through the National Service Center for Environmental Publications.

The National Agriculture Center provides information on how to comply with US pesticides laws.

- The National Pesticide Information Center provides objective, science-based information about pesticides to enable people to make informed decisions about pesticides and their use.

Pesticide-Related Harmonized Test Guidelines. US EPA recommends the pesticide registrant provide data from tests conducted according to Harmonized Test Guidelines, to minimize variations among the testing procedures that must be performed. US EPA publishes many pesticide analytical methods and procedures.

Risk Assessment Tools

- Risk Assessments and Integrated Risk Information System (IRIS). US EPA provides information on risk assessments, including tools, guidance and guidelines. IRIS is a compilation of electronic

reports on specific substances found in the environment and their potential to cause human health effects.

Endocrine Disruptor Screening Program. US EPA is validating methods or assays to identify and characterize the endocrine activity of pesticides, commercial chemicals, and environmental contaminants, specifically in relation to estrogen, androgen, and thyroid hormones. The validation framework includes reduction of animal use, refine procedures involving animals to make them less stressful, and replace animals where scientifically appropriate.

Pollution Prevention Technical Assistance & Information Sharing

Pollution Prevention Resource Exchange (P2Rx) is a consortium of eight regional centers that provide pollution prevention information, networking opportunities and other services to States, local governments and technical assistance providers (e.g. manufacturing extension partnerships, cooperative extension and nonprofit organizations).

Compliance Assistance Centers help businesses, local governments, and federal facilities to understand and comply with environmental requirements and save money through pollution prevention.

- *US EPA Office of Pollution Prevention and Toxics Tribal Program* works in partnership with tribal governments

Governance

Selection of Relevant United States Laws

The Toxic Substances Control Act (TSCA) provides authorities to require the development and submission of data relating to the health and environmental effects of commercial and industrial chemicals, and to regulate such chemicals when they present an unreasonable risk to human health and the environment. Under TSCA, US EPA has established reporting, record-keeping, testing, and control-related requirements for new and existing chemicals.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulates the sale, distribution and use of pesticides in the US. FIFRA authorizes US EPA to review and register pesticides for specified uses, and to suspend or cancel the registration of a pesticide if subsequent information shows that continued use would pose unreasonable risks.

- The Federal Food, Drug, and Cosmetic Act (FFDCA) authorizes US EPA to set maximum residue levels, or tolerances, for pesticides used in or on foods or animal feed.

The Food Quality Protection Act of 1996 (FQPA) amended FIFRA and FFDCA setting tougher safety standards for new and old pesticides, and to make uniform requirements regarding processed and unprocessed foods.

- The Resource Conservation and Recovery Act (RCRA) gives US EPA the authority to control hazardous waste from the “cradle-to-grave:” generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also provides a framework for the management of non-

hazardous solid wastes. The 1986 amendments to RCRA address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants into the environment. Through CERCLA, US EPA was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup.

The Emergency Planning & Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), is designed to help local communities protect public health, safety, and the environment from chemical hazards.

The Pollution Prevention Act (PPA) established pollution prevention as the national policy for controlling pollution at its source. US EPA works to reduce pollution before it occurs by supporting innovative changes in the production and use of raw materials.

The National Environmental Policy Act (NEPA) policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment.

The Clean Air Act is the law that defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer.

The objective of the *Federal Water Pollution Control Act*, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards.

Public Involvement Tools and Resources. Public involvement encompasses the full range of activities used to engage the public in the decision-making processes. Public involvement is a progression that starts with outreach to build awareness and interest. It evolves to information exchange, through collaboration and recommendation to agreement and decision-making.

Illegal International Traffic

Importing and Exporting Industrial Chemicals. The US government can refuse entry into the US of a shipment of any chemical substance or mixture that fails to comply with the Import Certification requirements of the Toxic Substances Control Act (TSCA). TSCA also requires a person who exports or intends to export a chemical substance or mixture that is subject to certain TSCA regulatory actions to notify US EPA of the export. For most enforcement cases under TSCA, the Agency pursues an administrative civil penalty action in order to expeditiously receive a monetary penalty and remedy the violation.

Importing and Exporting Pesticide Products. All pesticides which are intended to be used in the US must first be registered with US EPA. All registered pesticides sold or distributed within the US for export to other countries must bear the product label approved by US EPA. Pesticides that are not registered for use in the US may be manufactured in the US and exported subject to certain conditions. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires that exporters of unregistered pesticides first obtain a statement signed by the foreign purchaser indicating the purchaser's awareness of the unregistered status of such pesticide in the US. The requirement is shipment-specific for a particular exporter, product and purchaser. To ensure that government officials in the receiving country are informed of the shipment, US EPA transmits a copy of the statement to the Designated National Authority (DNA) under the UN program on Prior Informed Consent. This process is useful in tracking unused or abandoned pesticides in developing countries, particularly DDT in Africa.

INTERNATIONALLY-FOCUSED AGENCIES AND PROGRAMS

The use and release of certain chemicals can be of serious concern if they have significant impacts on human health or the environment. Some chemicals and pollutants can cross national and international boundaries and move long distances through air and water. Because of this, negotiation and implementation of international agreements and collaborative activities are essential to ensuring environmental protection in the United States as well as our partners throughout the world—particularly the developing nations who have weak protocols and tracking mechanisms.

Risk reduction

The United States participates in the Strategic Approach to International Chemicals Management (SAICM), and has provided support to the overall implementation of SAICM, including the first regional meeting of the Group of Latin American and the Caribbean, as well as financial and technical support to projects under the Quick Start Program. The US has also contributed to international cooperation on several emerging policy issues within SAICM.

The United States engages international partners, multilaterally and bilaterally, to address key mercury issues including data collection and inventory development, source characterization, and best practices for emissions and use reduction and has been a catalyst in the development of the UNEP Global Mercury Partnerships designed to achieve reductions in use and emissions of mercury globally.

The U.S is an active party addressing Ozone-Depleting Substances (ODSs) through the Montreal Protocol on Substances that Deplete the Ozone Layer and its multilateral fund.

The US Administration is working with our Congress to complete ratification of:

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, The Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Hazardous Chemicals and Pesticides and the Stockholm Convention on Persistent Organic Pollutants.

The United States also participates in the Partnership for Clean Fuels and Vehicles, which has successfully eliminated lead from gasoline in most countries and is working to reduce sulfur and

other emissions, and the Partnership for Clean Indoor Air which reduces health risks from indoor burning of coal and other fuels which emit air toxics as well as criteria pollutants.

The U.S. is a party to the Convention on Long-Range Transboundary Air Pollution (LRTAP), and several of its protocols.

The Great Lakes Binational Toxics Strategy (GLBTS). Since 1997, Environment Canada (EC) and US EPA, along with stakeholders from industry, academia, state/provincial and local governments, Tribes, First Nations, and environmental and community groups have worked together toward the goal of virtually eliminating persistent toxic substances, such as mercury, PCBs and dioxin from discharging into the Great Lakes environment. US Canada Air Quality Agreement is a 15 year old bilateral agreement addressing transboundary air pollution originally focused on the problem of acid rain.

Knowledge and Information

Globally Harmonized System (GHS) for the Classification and Labeling of Chemicals provides comprehensive standardized system for internationally-recognizable chemical hazard communication.

US EPA worked with UNEP to develop the Chemical Information Exchange Network (CIEN), which improves access to chemicals management information by developing an in-country network of government officials and stakeholders, providing Internet connectivity where needed, and providing training on accessing chemicals management information and developing country-specific web resources.

USAID has developed *Comparative Risk Assessments (CRA)* to help ascertain which chemical pollutant is projected to cause the most mortality and morbidity and thence offer a roadmap for a developing country or region to address potential chemical abuses. CRA was conducted in Bangkok; Cairo; Lima, Peru; Caspian Sea; and others. These proved useful in targeting Aid monies to the right cleanup and coordinating other donors as well. In Egypt USAID targeted on removal of lead from the atmosphere including removing lead from gasoline and cleaning a lead smelter in Cairo.

Materials and Waste Exchanges. USAID's Ecoasia program has the objective of reducing chemical pollutants and promoting best practices. It aims to build upon existing standards and efforts in the region to harmonize test procedures and specifications.

Organization for Economic Cooperation and Development (OECD) Information tools:

- OECD High Production Volume (HPV) Chemicals Program
- The US supports the development of the OECD eChemPortal
- The OECD Clearing House on New Chemicals
- The OECD Test Guidelines Program develops protocols for studies to assess physicochemical properties, environmental fate, ecotoxicity, and health effects endpoints. A foundation of the OECD chemicals program is the Mutual Acceptance of Data (MAD) agreement among OECD countries to accept for review studies generated in accordance with OECD Test Guidelines and Principles of Good Laboratory Practice regardless of where the study was performed.

- The primary objective of the OECD Principles of Good Laboratory Practice (GLP) is to ensure the generation of high quality and reliable test data related to the safety of industrial chemical substances and preparations in the framework of harmonizing testing procedures for the Mutual Acceptance of Data (MAD).
- OECD Working Party on Manufactured Nanomaterials (WPMN) is engaged in a variety of projects to further the understanding of the properties and potential risks of nanomaterials,

Pollutant Release and Transfer Registries (PRTRs):

- OECD PRTRs.
- North American Commission for Environmental Cooperation (CEC) annually publishes the *Taking Stock: North American Pollutant Releases and Transfers* report, which is a consolidation of PRTR data from the Canadian the US and Mexico.
- The US works with UNITAR to facilitate development of PRTRs in Central America, and the development of a PRTR in Chile.

Governance

US EPA works with a number of countries to improve environmental governance through training and capacity building. In the context of bilateral programs, US EPA conducts training on enforcement and compliance, development of environmental laws, environmental inspections, and environmental impact assessment.

Capacity-Building and Technical Cooperation

The United States, Canada and Mexico developed a strategy for regional implementation of SAICM in North America under the Sound Management of Chemicals (SMOC) initiative of the Commission for Environmental Cooperation (CEC).

Under the Central America and Dominican Republic Free Trade Agreement (CAFTA-DR), the US is working with CCAD and governments in the region on:

- Regional SAICM implementation – building upon national priorities;
- Developing mercury inventories and eliminating mercury in the health care sector;
- Improving chemical security and management;
- Working with stakeholders to adapt the US program on pesticide safety in the region.

Promoting Shared Scientific and Technical Expertise on Pesticides. US EPA interacts with other countries and international organizations to share scientific and technical expertise on pesticides, lessen the resource burden on governments and the regulatory community, and maintain high standards for the protection of human health and the environment.

This US sponsored with UNEP the Workshop on Managing Perfluorinated Chemicals and Transitioning to Safer Alternatives held in Geneva, Switzerland**,** to explore opportunities for managing PFCs and making a transition from PFOS, PFOA, PFOS and PFOA precursors, and related higher homologue chemicals to safer alternatives.

The United States also sponsored the Workshop on Continuing PCB Management in the Latin American and Caribbean Countries in Panama City, to advance towards the goal of eventually eliminating PCBs from the region.

- The US is co-sponsoring a series of regional workshops on nanomaterial health and safety issues, as recommended at SAICM Second International Conference on Chemicals Management (ICCM-2), which are planned to be held jointly under the auspices of UNITAR, the SAICM Secretariat and the OECD.

- USAID has a long history of developing local capacity and developing and supporting **Clean Production Centers** (CPCs) throughout the world, which re-design local industrial processes to reduce materials, energy, and materials and pave the way for replication of these technologies in economies of the developing world. CPCs are created as a response to the enormous shift in the manufacturing base from the G7 countries to the developing world. Often working with other bilateral partners, UNEP and UNIDO, USAID has supported centers in many geographical regions including Asia, Eurasia, Latin America and Caribbean, the Near East, Africa, and Eastern Europe. Plants improve processes related to leather tanneries, smelting, lead/copper mining, dairy, food processing, steel manufacturing, fishmeal, pulp and paper, brewery, fruit and vegetables, and hotels and hospitality, among many others.

Combating Illegal International Traffic

- The US supports UNEP's Green Customs Initiative, which builds the capacity of customs officials to combat illegal trade in ozone-depleting substances and other hazardous chemicals.

- US EPA developed, adapted and delivered a *Survey Training Course for Customs Officers and Inspectors* on trade in hazardous wastes (Basel Convention), ozone-depleting substances (Montreal Protocol), chemicals covered by the Rotterdam and Stockholm Conventions, and endangered species (CITES). The effort was carried out in close cooperation with international and regional organizations with the aim to influence or establish the necessary policy, legal, enforcement, and managerial authorities to interdict non-compliant shipments.

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