



UNEP

CARIBBEAN CURRENTS

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Welcome...

...to *CARIBBEAN CURRENTS*, Volume Seven, Number Four. This newsletter is edited by INFOTERRA/USA in its capacity as the Regional Service Centre (RSC) for INFOTERRA National Focal Points (NFPs) in the English and French-speaking Caribbean. Although the *CURRENTS* is assembled at INFOTERRA/USA, the content belongs to you, the readers. You are encouraged to send in any questions, comments, problems, or interesting issues relevant to the Region for inclusion in the *CURRENTS*. Please see the Guidelines for Contributions on page 9 for more information.

Each issue features a Directory of NFPs in the Region so that anyone with international environmental questions can contact their nearest resource. Please feel free to contact one another as well as your RSC for assistance or materials.

Please don't hesitate to share *CARIBBEAN CURRENTS* with your friends and colleagues, and to make copies as needed. The Currents should serve as an informational forum for anyone who lives, works, or is involved in environmental issues in the English and French-speaking Caribbean Region.

Nuclear Emergency Plans

This issue's topic is the second of two parts on the transshipment of nuclear waste. Companies in France and the United Kingdom are reprocessing nuclear fuel from power plants in Japan and shipping the substance, weapons-ready mixed-oxide, or MOX, from Europe to Japan by way of the Caribbean Sea. There is concern regarding the safety of this cargo and the environmental and economic consequences if an accident occurs releasing the nuclear waste into the sea. This issue profiles two nuclear emergency projects.

If you have any comments on any topic, or would like to contribute a short article or have a resources guide to share, please submit your contribution following the guidelines on page 9. Thank you for your assistance.

Radiation Emergency Response Plans

Edited by
April Wright, INFOTERRA/USA

The last issue focused on questions regarding the shipment of spent MOX fuel from Europe to Japan. Opponents to this shipment of nuclear waste through the Caribbean fear for the region's economic security and environmental integrity. In addition, these shipments of weapons-usable plutonium, make the region vulnerable to potential terrorist attacks. Despite protests by the Caribbean Community, the shipment of MOX fuel continues. There is, therefore, a need for a viable radiation emergency plan for the region. Following are brief profiles of two radiation emergency response projects.

Federal Radiological Emergency Response Plan (United States)

After the nuclear accident at Three Mile Island in 1979, President Carter charted a plan for US Federal agencies to work with state and local governments in responding to peacetime radiological emergencies. The Federal Radiological Emergency Response Plan covers any peacetime radiological emergency that has actual, potential, or perceived radiological consequences within the United States, its Territories, possessions, or territorial waters and that could require a response by the Federal Government. The level of the Federal response to a specific emergency is based on the type and/or amount of radioactive material involved, the location of the emergency, the impact on or the potential for impact on the public and environment, and the size of the affected area.

Title 44 Part 351 Subparts A, B, and C of the US Code of Federal Regulations (CFR) outlines the Federal Radiological Emergency Planning and Preparedness plan. It assigns Federal agencies, lead by the Federal Emergency Management Agency, roles in assisting state and local governments in their radiation emergency plan activities. Assignments set out in 44 CFR 351 are specific to radiological accidents at fixed nuclear facilities and transportation accidents involving radioactive materials.

The agency that is responsible for leading and coordinating all aspects of the Federal response is referred to as the Lead Federal Agency and is determined by the type of emergency (Nuclear Regulatory Commission website). The US Environmental Protection Agency (EPA), for example, is the Lead Federal Agency in an emergency involving the transport of radioactive materials not licensed or owned by a Federal Agency or an Agreement State. [An Agreement State is "a State that has entered into an Agreement under the Atomic Energy Act of 1954, as amended, in which NRC has relinquished to such States the majority of its regulatory authority over source, byproduct, and special nuclear material in quantities not sufficient to form a critical mass" (Federal Radiological Emergency Response Plan, Appendix B: Definitions; full document is available from the US Nuclear Regulatory Commission website at <http://www.nrc.gov/NRC/AEOD/ER/index.html>)]. The EPA is responsible for establishing Protective Action Guidelines for "all aspects of radiological emergency planning in coordination with appropriate Federal agencies" (40 CFR 351.22). EPA's three major responsibilities in the FRERP flow from the Agency's overall mission: to protect human health and the environment. First, "EPA establishes guidelines for protecting the public from radiation exposure, such as when to evacuate or relocate citizens. Second, EPA monitors and assesses radioactivity in the environment from an accident to define the extent of exposure from that accident. Third, EPA coordinates the Federal response to an emergency if a nuclear accident occurs in a foreign country or if a domestic emergency involves unregulated material" (US EPA *Ready to Respond Booklet*. Available at

<http://www.epa.gov/radiation/rert/ready.htm> accessed 8 October 1999).

The United States relies upon cooperative efforts of several government agencies in implementing its Federal Radiation Emergency Response Plan. The US EPA specifically addresses accidents involving the transport of radioactive materials.

International Nuclear Emergency Exercise (INEX)

The Organization for Economic Cooperation and Development Nuclear Energy Agency (OECD NEA) devised the International Nuclear Emergency Exercise program in response to interest in emergency planning and preparedness by OECD Member Countries. The program stems from several NEA emergency plans already in place. So far, the International Nuclear Emergency Exercise (INEX) program consists of INEX 1, a series of three workshops, and INEX 2.

INEX 1 focused on the international scope of nuclear accidents. The exercise aimed to examine communication and response processes in the Threat, Release and Post-Release phases of the exercise. More specifically, the processes under examination included the following:

- the process for alerting and communicating with neighbouring countries and the international community in the case of a nuclear accident, taking into consideration bilateral/multilateral agreements and international obligations;

- the process for reaching conclusions on the need for national interventions or protective measures;

- actions proposed in relation to the export and import of contaminated food and feeding stuffs; and

- the process for identifying the need for and requesting assistance to cope with a radiological emergency.

Three followup workshops based upon the experiences of participants in INEX 1 were implemented by the NEA Expert Group on Nuclear Emergency Matters. The Group was established after the completion of INEX 1 so that the NEA would have a “standing group” to investigate nuclear emergency issues. The workshops covered the following topics: Implementation of Short-Term Countermeasures after a Nuclear Accident; Agricultural Aspects of Nuclear and/or Radiological Emergency Situations; and Emergency Data Management. Summaries of these workshops are available on the OECD NEA website.

INEX 2 is, based upon experiences from INEX 1 and the three workshops, “a series of regional, command-post exercises with the simultaneous real-time participation of many countries.” The initial objectives of the regional activities include the exchange of information according to real time; the coordination of public information components including press releases and public briefings; and the evaluation of decision making during the pre-release and immediate post-release phases of an accident using realistic data (OECD NEA Website. Available at <http://www.oecdnea.org/html/rp/inex.html>. Accessed 12 October 1999).

"For each Regional Exercise, all participating countries will produce Country Exercise Summary Reports and will attend a Regional Exercise Summary Meeting, from which generic conclusions and recommendations will be drawn. This will form the basis for the Final Regional Exercise Report" (INEX). The Swiss Regional INEX 2 Exercise took place in November 1996 and was the first to be completed. Thirty countries and 3 international organizations participated in this exercise. The Regional Exercise Final Report is available at no cost from NEA (NEA Document #0283; Ordering Reference Number: 66 1999 02 3P). A listing of other Nuclear Energy Agency publications related to radiation protection is available on the Internet at <http://www.oecdnea.org/html/rp/pub.html>.

Sources

Organization for Economic Cooperation & Development Nuclear Energy Agency INEX website. Available from <http://www.oecdnea.org/html/rp/inex.html>/ *Accessed 12 October 1999.*

US Environmental Protection Agency's Radiological Emergency Response Program website. Available from <http://www.epa.gov/radiation/rert/> *Accessed 8 October 1999.*

US Nuclear Regulatory Agency's Emergency Response website. Available from <http://www.nrc.gov/NRC/AEOD/ER/index.html>/ *Accessed 12 October 1999.*

Selected Bibliography: Radiation Emergency

Main Title

Lost Source Exercise 1997: An Exercise of Radiological Response through Cooperation and Coordination of Local, State and Federal Agency Resources under the National Contingency Plan.

Personal Author

Belanger, B. ; Steuteville, B. ; Chawaga, D. ; Weinstein, E. ;

Corp Author

Nuclear Regulatory Commission, Washington, DC. Office for Analysis and Evaluation of Operational Data. ; Environmental Protection Agency, Philadelphia, PA. Region III.

Year Published

1998

STOCKNumber

NUREG-1634

Main Title

EPA Counter-Terrorism (CT) Strategy, Work Plan, and Executive Sumamry.

Corp Author

Environmental Protection Agency, Washington, DC. Office of Emergency and Remedial Response.

Year Published

1998

STOCKNumber

PB98-963224

Main Title

Technical Bases for Yucca Mountain Standards.

Corp Author

National Research Council, Washington, DC. Board on Radioactive Waste Management.; Environmental Protection Agency, Washington, DC.

Year Published

1995

STOCKNumber

PB96-197801

Main Title

Radiation Safety at Superfund Sites.

Corp Author

Environmental Protection Agency, Washington, DC. Office of Emergency and Remedial Response.

Year Published

1995

STOCKNumber

PB95-963235

Main Title

Radiation Site Cleanup Regulations: Technical Support Document for the Development of Radionuclide Cleanup Levels for Soil. Review Draft.

Personal Author

Wolbarst, A. B. ; Mauro, J. ; Anigstein, R. ; Back, D. ; Bartlett, J. W. ;

Corp Author

Environmental Protection Agency, Washington, DC. Office of Radiation and Indoor Air.

Year Published

1994

STOCKNumber

PB96-185558

Main Title
Science, radiation protection, and the NCRP
Personal Author
Sinclair, Warren K.
Publisher
National Council on Radiation Protection and Measurements,
Year Published
1993

Main Title
Research needs for radiation protection recommendations of the National Council on Radiation and Measurements.
Publisher
National Council on Radiation Protection and Measurements
Year Published
1993

Main Title
Limitation of exposure to ionizing radiation recommendations of the National Council on Radiation Protection and Measurements.
Publisher
National Council on Radiation Protection and Measurements
Year Published
1993

Main Title
Implementing Protective Actions for Radiological Incidents at Other Than Nuclear Power Reactors. Proceedings of a Workshop. Held in Montgomery, Alabama on September 25-26, 1991.
Corp Author
Office of Radiation Programs, Washington, DC.
Year Published
1991
STOCKNumber
PB92-192764

Most of these US government publications are available from the National Technical Information Service (NTIS) at:

NTIS
5285 Port Royal Rd.
Springfield, VA 22161
Fax: (703) 321-8547
E-mail: orders@ntis.fedworld.gov
Website: <http://www.ntis.gov>

OECD Nuclear Energy Agency Radiation Protection Publications

NEA87

"The Radiological Impact of the Chernobyl Accident in OECD countries", OECD/NEA, Paris, 1987.

NEA88a

"Emergency Planning Practices and Criteria after the Chernobyl Accident", OECD/NEA, Paris, 1988.

NEA88b

"Radioactive Material and Emergencies at Sea", OECD/NEA, Paris, 1988.

NEA89a

"Radiation Protection Research and Development Activities after the Chernobyl Accident", OECD/NEA, Paris, 1989.

NEA89b

Emergency Planning in case of Nuclear Accident", Proceedings of an NEA Workshop, OECD/NEA, Paris, 1989.

NEA89c

"The Influence of Seasonal Conditions on the Radiological Consequences of a Nuclear Accident", Proceedings of an NEA Workshop, OECD/NEA, Paris, 1989.

NEA89d

Intervention Levels for Protection of the Public", OECD/NEA, Paris, 1989.

NEA90a

"Emergency Preparedness for Nuclear-Powered Satellites", OECD/NEA, Paris, 1990.

NEA90b

"Protection of the Population in the Event of a Nuclear Accident, a Basis for Intervention", OECD/NEA, Paris, 1990.

NEA91a

"The Influence of Seasonal and Meteorological Factors on Nuclear Emergency Planning", OECD/NEA, Paris, 1991.

NEA91b

"Off-site Nuclear Emergency Exercises", Proceedings of an NEA Workshop, OECD/NEA, Paris, 1991.

NEA95a

"Short-Term Countermeasures", Proceedings of an NEA Workshop, June 1994, Stockholm, OECD/NEA, Paris, 1995.

NEA95b

"INEX 1: An International Nuclear Emergency Exercise", OECD/NEA, Paris, 1995.

NEA96a

"Agricultural Aspects of Nuclear and/or Radiological Emergency Situations", Proceedings of an NEA Workshop, June 1995, OECD/NEA, Paris, 1996.

NEA96b

"Emergency Data Management", Proceedings of an NEA Workshop, Zurich, September 1995, OECD/NEA, Paris, 1996.

To order, please refer to the OECD Nuclear Energy Agency website or to the OECD NEA address listed in this publication on page 10.



INTERNET SITES ON RADIATION PROTECTION

A few of many sources of electronic information on radiation protection.

INTERNATIONAL ATOMIC ENERGY AGENCY

<http://www.iaea.org/>

This site contains information about IAEA, conferences sponsored by the Agency, research activities, links to information on their databases and links to daily news articles about nuclear energy.

OECD NUCLEAR ENERGY AGENCY

<http://www.oecdnea.org/html/rp/pub.html>

This site provides a list of radiation protection related publications put out by OECD which are available on the Internet.

US NUCLEAR REGULATORY AGENCY

<http://www.nrc.gov/NRC/radprotect.html>

This site provides information on the Agency and links to the Nuclear Emergency Plan and useful related resources.

US FEDERAL EMERGENCY MANAGEMENT AGENCY

<http://www.fema.gov>

FEMA is an independent agency of the United States government which administers comprehensive emergency response programs.

OCEANS AND LAW OF THE SEA WEBSITE

<http://www.un.org/Depts/los/index.htm>

This site provides information on the Law of the Sea Convention.

INTERNATIONAL MARITIME ORGANIZATION

<http://www.imo.org/>

This site provides information on conventions and activities of this United Nations affiliate.

NUCLEAR INFORMATION AND RESOURCE SERVICE

<http://www.nirs.org/>

The organization is intended to be a "networking center for citizens and environmental activists concerned about nuclear power, radioactive waste, radiation and sustainable energy issues." The site provides links to radiation related organizations.

INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

<http://www.icrp.org>

This organization "is an advisory body providing recommendations and guidance on radiation protection." The site provides links to the Commission's publications and information on its activities.

Current Conferences Radioactive Waste and Emergency Management



March 13-17, 2000 -- *International Conference on the Safety of Radioactive Waste Management*, Cordoba, Spain. Contact: Mr. E. Warnecke, International Atomic Energy Agency, Telephone: 43 1 22676; Fax: 43 1 26007; Email: e.warnecke@iaea.org.

April 5-6, 2000 -- *Annual Meeting: Ionizing Radiation Science & Protection in the 21st Century*, Arlington, VA. Contact: National Council on Radiation Protection and Measurements, E-mail: ncrp@ncrp.com.

June 11-15, 2000 -- *Federal Emergency Management Agency Technology Partnerships*, Colorado Springs, CO. Contact: John Thornton, E-mail: john_thornton@nrel.gov

RELATED JOURNALS

Hazardous Emergency Response (ISSN 1062-8069) - Legislation, enforcement & technology of emergency response to spills of hazardous materials.

Hazardous Substances and Public Health (No ISSN) - US Dept. of Health & Human Services Agency for Toxic Substances & Disease Registry publication covers issues of and corrective measures for hazardous waste as it effects human health.

Nuclear Waste News (ISSN 0276-2897) - Management of radioactive waste from energy production, weapons production and medicine.

Radioactive Waste Management (ISSN 0275-3707) - Put out by the US Dept. of Energy and covers spent-fuel transport & storage, radioactive effluents from nuclear facilities & techniques of processing wastes, their storage and ultimate disposal.

Guidelines for Contributions to *CARIBBEAN CURRENTS*

Any organization or individual operating or involved in the English and French-speaking Caribbean Region is welcome to contribute to the newsletter. Contributions should be addressed to:

Caribbean Currents Coordinator
INFOTERRA/USA
U.S. Environmental Protection Agency
Headquarters Library, 3404
401 M Street, S.W.
Washington, D.C. 20460
UNITED STATES
Telephone: (202) 260-5917; Fax: (202) 260-3923; E-mail: library-infoterra@epa.gov

Please note that submissions should meet the following criteria:

- They are relevant to environmental issues
- They must be of interest to or directly involve the Region
- They must not endorse or recommend any product or commercial service, explicitly or implicitly
- They must be received by the posted deadline (see below)

Please feel free to contact the *CARIBBEAN CURRENTS* coordinator if you are interested in submitting an article. Please note that once your article is submitted, it is subject to editing as needed. Final decisions on editing and inclusion of any contributions are left to the INFOTERRA/USA Manager.

DEADLINE FOR CONTRIBUTIONS TO Vol. 8, No. 1: December 8, 1999

Welcome to The *CARIBBEAN CURRENTS* Bulletin Board

Each issue, we will publish questions or concerns of interest to CURRENTS readers. Anyone who has materials or information that they are seeking or that they feel will be helpful should feel free to contribute. We will post queries and offerings of general interest on the Bulletin Board. You may respond by contacting the reader who has placed the item, or the RSC.

Bulletin Board



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Related Organizations

US Department of Energy
Energy Information Administration
Telephone: (202) 586-8800
Fax: (202) 426-1278
Website: [http://www.eia.doe.gov/
fuelnuclear.html](http://www.eia.doe.gov/fuelnuclear.html)

International Atomic Energy Agency
Vienna International Centre
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Fax: 43 1 20607
E-mail: iaeo@iaea1.iaea.or.at
Website: <http://www.iaea.or.at>

Caribbean Currents is available on the Internet at <http://www.epa.gov/earlink1/currents/>

About the NFP Directory

This directory reflects changes and additions to the INFOTERRA Directory of National Focal Points distributed by INFOTERRA/PAC, dated November 1998. Please check this information to verify that it is correct and up-to-date. If you have any changes or corrections, please notify the RSC as soon as possible. We will be happy to relay the information to the PAC.

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