

# THE ANNUAL REPORT FOR 2010

## Additional Annex Information

**Table A22. Coordinated research projects initiated in 2010**

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**Nuclear Power**

- Increasing Nuclear Power Plant Performance through Process Oriented Knowledge Management Approach

**Nuclear Fuel Cycle and Materials Technologies**

- Treatment of Irradiated Graphite to Meet Acceptance Criteria for Waste Disposal

**Nuclear Science**

- Spectroscopic and Collisional Data for Tungsten from 1 eV to 20 keV

**Food and Agriculture**

- Development of Irradiated Foods for Immuno-compromised Patients and Other Potential Target Groups
- Development of Molecular and Nuclear Technologies for the Control of Foot-and-Mouth Disease (FMD)
- Genetic Variation on the Control of Resistance to Infectious Diseases in Small Ruminants for Improving Animal Productivity
- Resolution of Cryptic Species Complexes of Tephritid Pests to Overcome Constraints to Sterile Insect Technique Application and International Trade
- Use of Enzymes and Nuclear Technologies to Improve the Utilization of Fibrous Feeds and Reduce Greenhouse Gas Emission from Livestock
- Use of Irradiated Vaccines in the Control of Infectious Transboundary Diseases of Livestock

**Human Health**

- Clinical Use of Myocardial SPECT Imaging and CT Angiography in Coronary Artery Disease
- Development of Advanced Dosimetry Techniques for Diagnostic and Interventional Radiology
- Nuclear Techniques to Assess Body Composition in Children and Adolescents as a Risk Factor in the Development of Chronic Diseases
- Resource Sparing Curative Radiotherapy for Locally Advanced Squamous Cell Cancer of the Head and Neck
- Safety and Optimization of Radiation Sterilization in Tissue Banking: Studies on Functional Properties of Irradiated Tissue Grafts
- Use of Sentinel Lymph Node in Breast, Melanoma, Head and Neck, and Pelvic Cancers

**Water Resources**

- Estimation of Groundwater Recharge and Discharge by Using the Tritium–Helium-3 Dating Technique
- Use of Environmental Isotopes in Assessing Water Resources in Snow, Glacier and Permafrost Dominated Areas under Changing Climatic Conditions

**Environment**

- Micro-analytical Techniques Based on Nuclear Spectrometry for Environmental Monitoring and Material Studies

**Radioisotope Production and Radiation Technology**

- Development of Gallium-68 Based PET Radiopharmaceuticals for Management of Cancer and Other Chronic Diseases
- Production and Utilization of Emerging Positron Emitters for Medical Applications with an Emphasis on Copper-64 and Iodine-124

- Radiation Treatment of Wastewater for Reuse with Particular Focus on Wastewaters Containing Organic Pollutants
- Radiometric Methods for Measuring and Modelling Multiphase Systems towards Process Management

**Table A23. Coordinated research projects completed in 2010**

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**Nuclear Power**

- Advances in Nuclear Power Process Heat Applications
- Analyses of and Lessons Learned from the Operational Experience with Fast Reactor Equipment and Systems
- Analytical and Experimental Benchmark Analyses of Accelerator Driven Systems (ADSs)
- Conservation and Application of High Temperature Gas Cooled Reactor (HTGR) Technology: Advances in HTGR Fuel Technology Development
- Review and Benchmark of Calculation Methods for Structural Integrity Assessment of Reactor Pressure Vessels During Pressurized Thermal Shocks
- Small Reactors without On-Site Refuelling

**Nuclear Science**

- Neutron Based Techniques for the Detection of Illicit Materials and Explosives
- Pathways to Energy from Inertial Fusion — An Integrated Approach

**Food and Agriculture**

- Development and Use of Rumen Molecular Techniques for Predicting and Enhancing Livestock Productivity
- Development of Mass Rearing for New World (*Anastrepha*) and Asian (*Bactrocera*) Fruit Fly Pests in Support of the Sterile Insect Technique
- Effects of Mutagenic Agents on the DNA Sequence in Plants
- Gene Based Technologies in Livestock Breeding: Characterization of Small Ruminant Genetic Resources in Asia
- Identification and Pyramiding of Mutated Genes: Novel Approaches for Improving Crop Tolerance to Salinity and Drought
- Improved and Harmonized Quality Control for Expanded Tsetse Production, Sterilization and Field Application
- Improving Sterile Male Performance in Fruit Fly Sterile Insect Technique Programmes
- Integrated Soil, Water and Nutrient Management in Conservation Agriculture
- Pyramiding of Mutated Genes Contributing to Crop Quality and Resistance to Stress Affecting Quality

**Human Health**

- Assessment of Nutrients Uptake from Biofortified Crops in Populations from Developing Countries
- Cost Effective Differential Diagnosis in Lung Cancer Using Gallium PET Generator Based Radiopharmaceuticals
- Development and Quality Control of Hospital Prepared Radiopharmaceuticals for Infection Imaging for Use in HIV/AIDS Positive Patients
- Improved Accuracy of Molecular and Immunological Markers for Prediction of Efficacy of Antimalarial Drugs

**Radioisotope Production and Radiation Technology**

- Development of a Reference Database for Ion Beam Analysis
- Development of Therapeutic Radiopharmaceuticals Based on <sup>177</sup>Lu for Radionuclide Therapy
- Development of Technetium-99m Radiopharmaceuticals for Sentinel Node Detection and Cancer Diagnosis

- Optimization of Digital Industrial Radiography Techniques for Specific Applications and Development of Procedures and Protocols

#### **Safety of Nuclear Installations**

- Evaluation of Uncertainties in Best Estimate Accident Analysis
- Use of Numerical Models in Support of Site Characterization and Performance Assessment Studies of Geological Repositories

#### **Radiation and Transport Safety**

- Appropriate Level of Regulatory Control for the Safe Transport of Naturally Occurring Radioactive Material

**Table A24. Publications issued in 2010**

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**Nuclear Power**

- Advanced Reactor Technology Options for Utilization and Transmutation of Actinides in Spent Nuclear Fuel — IAEA-TECDOC-1626
- Best Practices in the Management of an Operating Experience Programme at Nuclear Power Plants — IAEA-TECDOC-1653
- BN-600 Hybrid Core Benchmark Analyses — IAEA-TECDOC-1623
- Corrosion of Research Reactor Aluminium Clad Spent Fuel in Water — IAEA-TECDOC-1637
- Cost Aspects of the Research Reactor Fuel Cycle — IAEA Nuclear Energy Series No. NG-T-4.3
- Country Nuclear Power Profiles — 2010 Edition
- Decommissioning of Fast Reactors after Sodium Draining — IAEA-TECDOC-1633
- Energy, Electricity and Nuclear Power Estimates for the Period up to 2050: 2010 Edition — Reference Data Series No. 1
- Environmental Impact Assessment of Nuclear Desalination — IAEA-TECDOC-1642
- Good Practices in Heavy Water Reactor Operation — IAEA-TECDOC-1650
- High Temperature Gas Cooled Reactor Fuels and Materials — IAEA-TECDOC-CD-1645
- Information Technology for Nuclear Power Plant Configuration Management — IAEA-TECDOC-1651
- Integration of Analog and Digital Instrumentation and Control Systems in Hybrid Control Rooms — IAEA Nuclear Energy Series No. NP-T-3.10
- Introduction to the Use of the INPRO Methodology in a Nuclear Energy System Assessment — IAEA Nuclear Energy Series No. NP-T-1.12
- IRS Guidelines. Joint IAEA/NEA International Reporting System for Operating Experience — IAEA Services Series No. 19
- Nuclear Desalination Newsletter — No. 2, September 2010
- Nuclear Energy Development in the 21st Century: Global Scenarios and Regional Trends — IAEA Nuclear Energy Series No. NP-T-1.8
- Nuclear Power Newsletter, Vol. 7, Nos 1–4, March, June, September and December 2010
- Nuclear Power Plant Operating Experience from the IAEA/NEA International Reporting System for Operating Experience 2005–2008
- Nuclear Power Reactors in the World. 2010 Edition — Reference Data Series No. 2
- Nuclear Technology Review 2010
- Operating Experience with Nuclear Power Stations in Member States in 2009 — 2010 Edition (CD-ROM)
- Post-Irradiation Examination and In-Pile Measurement Techniques for Water Reactor Fuels — IAEA TECDOC-CD-1635
- Pressurized Thermal Shock in Nuclear Power Plants: Good Practices for Assessment — IAEA-TECDOC-1627
- Review of Fuel Failures in Water Cooled Reactors — IAEA Nuclear Energy Series No. NF-T-2.1
- Risk-informed In-service Inspection of Piping Systems of Nuclear Power Plants: Process, Status, Issues and Development — IAEA Nuclear Energy Series No. NP-T-3.1
- Setting Authorized Limits for Radioactive Discharges: Practical Issues to Consider. Report for Discussion — IAEA-TECDOC-1638
- Technical Features to Enhance Proliferation Resistance of Nuclear Energy Systems — IAEA Nuclear Energy Series No. NF-T-4.5

### **Nuclear Fuel Cycle and Materials Technologies**

- Advanced Fuel Pellet Materials and Fuel Rod Design for Water Cooled Reactors — IAEA-TECDOC-1654
- Assessment of Nuclear Energy Systems Based on a Closed Nuclear Fuel Cycle with Fast Reactors — IAEA-TECDOC-1639
- Best Practice in Environmental Management of Uranium Mining — IAEA Nuclear Energy Series No. NF-T-1.2
- Delayed Hydride Cracking of Zirconium Alloy Fuel Cladding — IAEA-TECDOC-1649
- Disposal Approaches for Long Lived Low and Intermediate Level Radioactive Waste — IAEA Nuclear Energy Series No. NW-T-1.20
- Evaluated Nuclear Data for Nuclides within the Thorium-Uranium Fuel Cycle
- Fuel Cycle and Waste Newsletter, Vol. 6, Nos 1 and 2, March and August 2010
- Lessons Learned from Nuclear Energy System Assessments (NESA) Using the INPRO Methodology. A Report of the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) — IAEA-TECDOC-1636
- OECD-IAEA Paks Fuel Project
- Technological Implications of International Safeguards for Geological Disposal of Spent Fuel and Radioactive Waste — IAEA Nuclear Energy Series No. NW-T-1.21
- Use of Reprocessed Uranium: Challenges and Options — IAEA Nuclear Energy Series No. NF-T-4.4
- Use of Reprocessed Uranium: Proceedings of a Technical Meeting held in Vienna, 29–31 August 2007 — IAEA-TECDOC-CD-1630

### **Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development**

- Nuclear Information and Knowledge Management Newsletter, No. 9, June 2010

### **Nuclear Science**

- Assessment of Partitioning Processes for Transmutation of Actinides — IAEA-TECDOC-CD-1648
- BN-600 Hybrid Core Benchmark Analyses. Results from a Coordinated Research Project on “Updated Codes and Methods to Reduce the Calculational Uncertainties of the LMFR Reactivity Effects” — IAEA-TECDOC-CD-1623
- IAEA eLearning Program: The Use of Radiation Detection Instruments — Training Course CD Series No. 46
- International Bulletin on Atomic and Molecular Data for Fusion, No. 68, December 2009
- Nuclear Data Newsletter, Nos 49 and 50, May and November 2010
- Nuclear Research and Development Institutes in Central and Eastern Europe
- Nuclear Research Applications and Utilization of Accelerators — Proceedings CD Series
- Radioelement Mapping — IAEA Nuclear Energy Series No. NF-T-1.3
- Status of Minor Actinide Fuel Development — IAEA Nuclear Energy Series No. NF-T-4.6
- Use of Nuclear and Non-nuclear Techniques for Humanitarian Demining and Explosives Detection — Proceedings CD Series

### **Food and Agriculture**

- Animal Production and Health Newsletter — Nos 51 and 52, January and July 2010
- Food and Environmental Protection Newsletter, Vol. 13, No. 2, July 2010
- Improving Livestock Production Using Indigenous Resources and Conserving the Environment — IAEA-TECDOC-Series-1640
- Insect Pest Control Newsletter No. 75, July 2010

- Mass Screening Techniques for Selecting Crops Resistant to Disease
- Plant Breeding and Genetics Newsletter Nos 24 and 25, January and July 2010
- Plant Mutation Reports, Vol. 2, No. 2, June 2010
- Soils Newsletter Vol. 33, No. 1, July 2010

### **Human Health**

- Appropriate Use of FDG-PET for the Management of Cancer Patients — IAEA Human Health Series No. 9
- Clinical Training of Medical Physicists Specializing in Radiation Oncology — Training Course Series No. 37
- Competency Based Hospital Radiopharmacy Training — Training Course Series No. 39
- Comprehensive Clinical Audits of Diagnostic Radiology Practices: A Tool for Quality Improvement. Quality Assurance Audit for Diagnostic Radiology Improvement and Learning (QUAADRIL) — IAEA Human Health Series No. 4
- IAEA Syllabus for the Education and Training of Radiation Oncologists — Training Course Series No. 36
- Implementation of the International Code of Practice on Dosimetry in Radiotherapy (TRS 398): Review of Testing Results — IAEA-TECDOC-CD-1455
- Patient Dose Optimization in Fluoroscopically Guided Interventional Procedures — IAEA-TECDOC-1641
- Planning a Clinical PET Centre — IAEA Human Health Series No. 11
- Radiation Biology: A Handbook for Teachers and Students — Training Course Series No. 42
- SSDL Newsletter Issue No. 58, June 2010
- Stable Isotope Technique to Assess Intake of Human Milk in Breastfed Infants — IAEA Human Health Series No. 7
- Transition from 2-D Radiotherapy to 3-D Conformal and Intensity Modulated Radiotherapy — IAEA-TECDOC-1588
- Trends and Practices in Diagnosis and Treatment of Hepatocellular Carcinoma — IAEA Human Health Series No. 10

### **Water Resources**

- Atlas of Isotope Hydrology: Morocco
- Nuclear and Isotopic Techniques for the Characterization of Submarine Groundwater Discharge in Coastal Zones — IAEA-TECDOC-CD-1595

### **Environment**

- A Procedure for Determination of Polonium-210 in Water Samples by Alpha Spectrometry — IAEA Analytical Quality in Nuclear Applications Series No. 12
- A Procedure for the Rapid Determination of Plutonium Isotopes and Americium-241 in Soil and Sediment Samples by Alpha Spectrometry — IAEA Analytical Quality in Nuclear Applications Series No. 11
- ALMERA Newsletter, No. 3, June 2010
- Almera Proficiency Test: Determination of Gamma Emitting Radionuclides in Simulated Air Filters IAEA-CU-2009-04 — IAEA Analytical Quality in Nuclear Applications Series No. 16
- Almera Proficiency Test: Determination of Naturally Occurring Radionuclides in Phosphogypsum and Water IAEA-CU-2008-04 — IAEA Analytical Quality in Nuclear Applications Series No. 15
- Handbook of Parameter Values for the Prediction of Radionuclide Transfer in Terrestrial and Freshwater Environments — Technical Reports Series No. 472



- HELCOM-MORS Proficiency Test Determination of Radionuclides in Fish Flesh Sample — IAEA Analytical Quality in Nuclear Applications Series No. 13
- Interlaboratory Comparison: Radionuclides in Irish Sea Water IAEA-443 — IAEA Analytical Quality in Nuclear Applications Series No. 10
- Reference Material IAEA-413: Major, Minor and Trace Elements in Algae — IAEA Analytical Quality in Nuclear Applications Series No. 14
- Reference Material IAEA-434: Naturally Occurring Radionuclides in Phosphogypsum — IAEA Analytical Quality in Nuclear Applications Series No. 17
- Water and Environment News, Issues 26 and 27, February and August 2010
- Worldwide Open Proficiency Test: Determination of Naturally Occurring Radionuclides in Phosphogypsum and Water IAEA-CU-2008-03 — IAEA Analytical Quality in Nuclear Applications Series No. 18
- X Ray Fluorescence in the IAEA and Its Member States Newsletter, No. 19, September 2010

#### **Radioisotope Production and Radiation Technology**

- Production of Long Lived Parent Radionuclides for Generators:  $^{68}\text{Ge}$ ,  $^{82}\text{Sr}$ ,  $^{90}\text{Sr}$  and  $^{188}\text{W}$  — IAEA Radioisotopes and Radiopharmaceuticals Series No. 2
- Technetium-99m Radiopharmaceuticals: Status and Trends — IAEA Radioisotopes and Radiopharmaceuticals Series No. 1

#### **Incident and Emergency Preparedness and Response**

- First Response to a Radiological Emergency: Training Materials — Emergency Preparedness and Response
- Joint Radiation Emergency Management Plan of the International Organizations EPR-JPLAN (2010) — Emergency Preparedness and Response
- NS Update, No. 14, March 2010
- Portable Digital Assistant for First Responders to a Radiological Emergency — Emergency Preparedness and Response
- Small Reactors without On-site Refuelling: Neutronic Characteristics, Emergency Planning and Development Scenarios. Final Report of an IAEA Coordinated Research Project — IAEA-TECDOC-1652

#### **Safety of Nuclear Installations**

- Ageing Management for Research Reactors — IAEA Safety Standards Series No. SSG-10
- Application of Configuration Management in Nuclear Power Plants — Safety Reports Series No. 65
- Deterministic Safety Analysis for Nuclear Power Plants — IAEA Safety Standards Series No. SSG-2
- Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants — IAEA Safety Standards Series No. SSG-3
- Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants — IAEA Safety Standards Series No. SSG-4
- Governmental, Legal and Regulatory Framework for Safety — IAEA Safety Standards Series No. GSR Part 1
- Licensing Process for Nuclear Installations — IAEA Safety Standards Series No. SSG-12
- Periodic Safety Review of Nuclear Power Plants: Experience of Member States — IAEA-TECDOC-1643
- Programmes and Systems for Source and Environmental Radiation Monitoring — Safety Reports Series No. 64
- Safety Analysis of WWER-440 Nuclear Power Plants: Potential Consequences of a Large Primary to Secondary System Leakage Accident — IAEA-TECDOC-1610
- Safety of Conversion Facilities and Uranium Enrichment Facilities — IAEA Safety Standards Series No. SSG-5

- Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities — IAEA Safety Standards Series No. SSG-7
- Safety of Uranium Fuel Fabrication Facilities — IAEA Safety Standards Series No. SSG-6
- Seismic Hazards in Site Evaluation for Nuclear Installations — IAEA Safety Standards Series No. SSG-9
- The Interface Between Safety and Security at Nuclear Power Plants — INSAG Series No. 24

#### **Radiation and Transport Safety**

- 12th Congress of the International Radiation Protection Association (IRPA12)— Proceedings Series
- Radiation Safety of Gamma, Electron and X Ray Irradiation Facilities — IAEA Safety Standards Series No. SSG-8
- Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material — IAEA Safety Standards Series No. TS-G-1.6

#### **Management of Radioactive Waste**

- Estimation of Global Inventories of Radioactive Waste and Other Radioactive Materials — IAEA-TECDOC-1591
- Progress in Radioactive Graphite Waste Management — IAEA-TECDOC-1647
- Radiological Conditions in Selected Areas of Southern Iraq with Residues of Depleted Uranium — Radiological Assessment Reports Series
- Radiation Protection and the Management of Radioactive Waste in the Oil and Gas Industry — Training Course Series No. 40

#### **Nuclear Security**

- Educational Programme in Nuclear Security — IAEA Nuclear Security Series No. 12
- Effective Nuclear Regulatory Systems: Further Enhancing the Global Nuclear Safety and Security Regime — Proceedings Series

#### **Miscellaneous**

- Handbook on Nuclear Law: Implementing Legislation

**Table A25. Training courses, seminars and workshops in 2010**

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**Nuclear Power**

- Electric Grid Reliability and Interface with Nuclear Power Plants  
Tunisia
- Electricity and Water Demand for Nuclear Energy Planning in GCC  
Headquarters
- Identifying the Contribution of Nuclear Energy in GCC Member States  
Oman
- Integrated Management Systems  
Bulgaria
- Management Systems  
United States of America
- National Training Course Lecture Series on Aspects of Reactor Design  
China
- National Training Course on MESSAGE Model for Elaborating Sustainable Energy Strategies  
Malaysia
- National Training Course on Nuclear Engineering and Reactor Physics  
China
- National Training Course on Nuclear Fuel Cycle and Non-Power Application of Nuclear Energy  
China
- National Training Course on Regulatory Skills to Implement Regulatory Functions and Processes  
Bangladesh
- National Training Course on Training Programmes and Commissioning for New Nuclear Power Plants  
China
- National Workshop on Improving the Management Systems Including Self-Assessment  
China
- Regional Training Course on Transition to IMS Approach Supporting the Development of a Strong Safety  
Culture  
China
- Regional Training Course on Workforce Planning for New and Expanding Nuclear Power Programmes  
Vietnam
- Regulatory Review and Assessment for Nuclear Facilities and Activities  
China
- Training of Scientists/Engineers as Part of Purchase Order No. PAK4046-91157N  
Headquarters

**Nuclear Fuel Cycle and Materials Technologies**

- Nuclear Fuel Management and Licensing  
Romania
- Spent Nuclear Fuel Shipment  
Serbia
- Uranium Mineral Resources  
Malawi
- Uranium Resources Evaluation and Reporting  
Uganda

### **Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development**

- Application of MESSAGE for Sustainable Energy System Planning  
Nigeria
- Elaboration of Sustainable Energy Strategies Using the MESSAGE Model  
Headquarters
- Electric System Expansion Planning and Sustainable development using WASP  
Mexico
- Energy Modelling and Policy Analysis  
South Africa
- Energy Supply Assessment Using the IAEA Energy Planning Tool MESSAGE  
Algeria
- Financial Evaluation of Future Energy Projects using FINPLAN Model  
Uganda
- Financial Viability  
Libyan Arab Jamahiriya
- FINPLAN  
Mauritania
- FINPLAN for Financial Analysis of Electricity Generation Projects  
Chile
- ICT Materials (Advanced)  
Egypt
- ICT Materials for Nuclear Analytical Techniques in Support of Environmental Monitoring  
Uganda
- Introducing and Expanding Nuclear Power Programmes  
United States of America
- Introduction to FINPLAN  
Libyan Arab Jamahiriya
- Introduction to the Assessment of Energy Supply Strategies Using MESSAGE  
Malawi
- Leadership and Management  
United States of America
- MAED-d  
Zimbabwe
- MAED-EI  
Botswana, Zimbabwe
- MESSAGE  
Tunisia
- National Training on Train the Trainers for Nuclear Power Plant Public Communicators  
Malaysia
- Neutronics, Thermohydraulics and Systems Modelling Computer Codes  
Ghana
- Pre-training on MESSAGE  
Malawi
- Regional Training Course on Energy and Water Demand Assessment  
Headquarters

- Regional Training Course on Financing Structures and Introduction to Management of Financial Risks for Nuclear Power Plants  
Headquarters
- Regional Training Course on Financing Structures for Nuclear Power Plants  
Headquarters
- Regional Training Course on Leadership and Management for Introducing and Expanding Nuclear Power  
United States of America
- Tracing Sustainable Energy Paths Using the IAEA's Set of Energy Indicators  
South Africa
- Training Course on Leadership and Management for Introducing and Expanding Nuclear Power Programmes  
United States of America
- Utilization of the Telecentre and Developing of ICT Materials  
Botswana
- WASP Model  
Tunisia, Uruguay

### **Nuclear Science**

- Advanced Analysis Techniques in Arts and Archaeology Using Micro-XRF  
United Arab Emirates
- Air Pollution Data Analysis and Interpretation  
Egypt
- Application of XRF Methodology in Cultural Heritage  
Seibersdorf
- Basic Maintenance and Repair of MEDISO Spirit Gamma Cameras  
Seibersdorf
- Basic Maintenance of Siemens ECAM Gamma Cameras  
Niger
- Basic Maintenance, Operation and Test of Spectroscopy Systems  
Ecuador
- Basic Maintenance, Use and Test of Radiation Protection Monitors Survey Meters  
Ecuador
- Enhancing the Air Pollution Monitoring Analytical Capabilities  
Sudan, United Republic of Tanzania
- Improving the Quality in Maintenance Services in Compliance with ISO Standards  
Sudan
- Innovation, Technology Transfer and Successful Technology Licensing  
Headquarters
- Joint EC-IAEA Nuclear Science Training Course with NUCLEONICA  
Monaco
- Maintenance of Harshaw TLD Reader Models 4500 and 6600  
Seibersdorf
- Marketing and Quality Management for Customer Oriented Services  
Colombia
- National Training Course on Implementation of Quality Systems Based on ISO Standards
- National Training Course on the Application of EDXRF Technique in the Analysis of Air  
Madagascar

- Nuclear Thermo-hydraulics  
Algeria
- Programming and DAQ Using LabView  
Ecuador
- Quality Management by Calibration of Test Instruments  
Zambia
- Quality Systems Based on the ISO/IEC Standards  
Ecuador
- Reactor Physics  
Algeria
- Refurbishment of Instruments Using LabView  
Sudan
- Regional Training Course on Calibration of Working Tools Applying Reference Equipment  
Argentina
- Regional Training Course on Reactor Management Systems  
Brazil
- Regional Training Course on Utilization of Ion Beam Techniques for Archaeology  
Syrian Arab Republic
- Siemens ECAM Gamma Cameras  
Peru
- Updating Knowledge in the Use of Programmable Logic Controllers  
Argentina, Costa Rica
- Upgrading Nuclear/Scientific Instruments  
Algeria

#### **Food and Agriculture**

- Analytical Laboratory in Assuring Food Safety and Consumer Protection  
Panama
- Animal Health in Molecular Diagnosis  
Seibersdorf
- Basic Molecular Markers and Data Analysis  
Kenya
- Bioinformatics Tools and Microsatellite Analyses  
Seibersdorf
- Determination of Inorganic Contaminants (Heavy Metals) in Fish and Seafood  
Argentina
- Early and Rapid Diagnosis of Transboundary Animal Diseases  
Bolivia
- Farmer Participation and Seed Multiplication  
Syrian Arab Republic
- Heavy Metal and PoPs Contaminants in Seafood (Organics)  
Chile
- Induced Mutations  
Uzbekistan
- Induced Mutations (TILLING) and DNA Markers  
Poland

- Linking Soil and Pesticide Behaviour at a Landscape Scale  
Headquarters, Seibersdorf
- Mutant Populations  
South Africa
- Mutation Induction and Breeding for Cereal  
Seibersdorf
- Mutation Induction and Breeding for Rust Resistance: Part 1  
Seibersdorf
- Mutation Induction and Breeding for Rust Resistance: Part 2  
China
- Newly Developed Mutant Lines Market Value and Impact in Populations' Livelihood  
South Africa
- Phytosanitary Treatment of Fresh Fruits by Ionizing Radiation  
Argentina
- Planning of Baseline Data Collection  
Burkina Faso
- PPR & NCD Diagnosis  
Sierra Leone
- Regional Training Course on Wheat and Barley Plant Breeding  
Syrian Arab Republic
- Screening Protocols for the Selection of Drought Tolerant In Vivo or In Vitro De  
Colombia
- Socio-economic and Impact Analysis  
Mali
- Surveillance of Tephritid Fruit Flies in Support of Planning  
Thailand
- Surveillance of Tsetse Flies  
Mozambique
- Surveillance Technology, ELISA, GIS  
Ghana
- TAD Epidemiological Surveillance  
Morocco
- Use of Environmental Radionuclides for Estimating Soil Erosion  
Chile

### **Human Health**

- Advanced Imaging Course  
Netherlands
- Assessment of Total Energy Expenditure and Physical Activity  
Cuba
- Basic Clinical Radiobiology  
Czech Republic
- Cardiovascular Treatment  
Headquarters
- Clinical Applications of PET  
South Africa

- Clinical Audit and Quality Assurance and Annual EANM Congress  
Headquarters
- Current Concepts in Radiation Oncology for Radiation Therapy Technologists  
Chile
- Data Interpretation, Write up, and Dissemination of Project Results  
Mali
- Data Management  
Cameroon, Morocco
- Diagnostic Radiology Quality Assurance, Dosimetry and Optimization  
Kenya
- Electron Dosimetry  
Egypt
- Evidence Based Treatment of Head and Neck Cancer  
Ghana
- Fractionation in Clinical Radiotherapy  
Nigeria
- From 2-D to 3-D Conformal Radiotherapy  
Slovakia
- Hospital Radiopharmacy  
Brazil
- IAEA Distance Assisted Training on line (DAT on line) for Nuclear Medicine Professionals  
South Africa
- IAEA National Workshop to Train Radiation Technology Trainers (RTTs)  
Israel
- IAEA/EANM Therapy Dosimetry Course  
Headquarters
- IAEA/ESTRO Course on Evidence Based  
Portugal
- IAEA/RCA Training Course on Reporting in Advanced Clinical Application of PET  
Australia
- IMRT and Other Conformal Techniques  
Belgium
- Internal Dosimetry for Medical Physicists  
Trieste
- Malaria  
Cameroon
- Medical Physics in Diagnostic Radiology  
Mexico
- Methodology of Clinical Research in Radiation Oncology  
Ethiopia
- Modern Radiation Oncology for Medical Physicists  
Vietnam
- Multidisciplinary Management of Cervical Cancer  
Guatemala
- National Training Course on Assessment of Body Composition Using Stable Isotope  
Kuwait



- National Training Course on Conformal Radiotherapy for Common Cancers  
Indonesia
- National Training Course on the Role of Medical Physicists in Nuclear Medicine  
Indonesia
- Nephro-Urology  
Czech Republic
- Nuclear Medicine in Endocrine Diseases Excluding Thyroid  
South Africa
- Performing an Acceptance Test of a Dual Head Gamma Camera  
Seibersdorf
- PET/CT  
Uruguay
- PET/CT Oncology  
Headquarters
- Practical Biokinetics for Medical Physicists Specializing in Nuclear Medicine  
Seibersdorf
- Quality Assurance in Diagnostic and Interventional Radiology  
Namibia
- Quality Assurance in Mammography  
Bosnia and Herzegovina
- Radiation Oncology  
Azerbaijan
- Radiotherapy Treatment  
Ireland
- RCA Regional Training Course on Advanced Clinical Applications of PET  
India
- RCA Regional Training Course on Medical Physics Aspects in Low and High Dose Rate Brachytherapy  
India
- Regional Training Course on Imaging in Ischaemic Heart Disease and Cardiac Failure for Advanced Users  
Iran, Islamic Republic of
- Regional Training Course on Quality Control for Nuclear Medicine and Preparation of  
Radiopharmaceuticals  
Uruguay
- Regional Training Course on Ventricular Function Evaluation with Gated SPECT and Radionuclide  
Ventriculography MUGA  
Thailand
- Technologist PET/CT Course  
Headquarters
- Tissue Banking Operation  
Argentina
- Train Radiation Technology Trainers  
Headquarters
- Transition from 2-D to 3-D in Radiotherapy Technology  
Argentina
- Tuberculosis  
Tunisia

- Vitamin A Methodology  
Ghana

#### **Water Resources**

- Advanced Sampling Techniques, Data Management and Interpretation  
Egypt
- Basic Isotope Hydrology  
Ethiopia, Uganda
- Fieldwork in Isotope Hydrology  
Bulgaria
- Groundwater Flow and Stable Isotopes  
Guatemala
- Isotope Data Analysis and Interpretation  
Ethiopia
- Isotope Hydrology  
Democratic Republic of the Congo, Ghana, Morocco
- Isotope Techniques for Assessment of Shallow Groundwaters  
United States of America
- Regional Training Course on Advanced Techniques for Isotope and Related Applications in Water Resources Management  
India

#### **Environment**

- Data Management  
Mexico
- Nutrients  
Tunisia
- Regional Training Course on Application of Isotope Techniques to Study Marine Coastal Pollution Issues  
Vietnam
- Regional Training Course on Applications of Natural Radioisotopes in Studies of Land Based Pollution in Marine Environments  
Philippines
- Sediment Core Dating Techniques  
Morocco

#### **Radioisotope Production and Radiation Technology**

- Basic Four NDT Methods  
Costa Rica
- Codes and Practices in Radiation Sterilization  
Zambia
- Digital Industrial Radiography (DIR)  
Malaysia
- Dosimetry for Industrial Radiation Processing  
Argentina
- Electron Beam Radiation Processing  
Poland
- Guidance for X Ray and Neutron Technology and Applications for Radiography  
South Africa

- Magnetic Particles Testing (MT) Level-2 and Liquid Penetrant Testing (PT) Level  
Brazil
- Methodology and Applications of Radiotracers in Oil Fields  
Nigeria
- Nanostructures  
Turkey
- National Training Course on Non-Destructive Testing of Non-Metallic Structures  
Indonesia
- NDT of Concrete Structures  
Democratic Republic of the Congo
- Product Irradiation and Process Validation  
Mexico
- Quality Control Support for Radiopharmaceutical Testing  
Sudan
- Radiation Processing of Natural Polymers and Radiation Synthesis of Medical Aids  
Algeria
- Radioisotopes  
Democratic Republic of the Congo
- Radiotracer and Sealed Sources Applications in Sediment Transport Study  
Cameroon
- RCA TC Demonstration on Upscaling of Radioactive Modification of Polymers for Agricultural  
Applications  
Vietnam
- Regional (ARCAL) Training Course on Radiographic Testing (RT) Level-2  
Brazil
- Regional Examinations to Qualify Personnel to Level I and II  
Tunisia
- Regional Training Course on Digital Industrial Radiography and Computed Tomography for Specific  
Industry Sector  
Republic of Korea
- Regional Training Course on Multiphase Flow Characterization in Petroleum and Chemical Industries Using  
Radiotracers  
Indonesia
- Regional Training Course on Technology Transfer of Radiation Processed Product to Industry: Case Study  
Philippines
- Regional Training Course on Uncertainty Measurement and Method Validation  
Germany
- Testing and Calibration Laboratories in SSDLs  
South Africa
- Training Course on Industrial Process Gamma Tomography for Multi-phase Process Investigation of  
Petroleum Plants  
Malaysia
- Ultrasonic Testing — Level 1  
Sudan
- Ultrasonic Testing — Level 2  
Brazil
- Use of Radioisotopes in Waste Water Treatment Plants  
Sudan

### **Emergency Preparedness**

- Exercise Preparation, Conduct and Evaluation  
Morocco
- First Medical Response  
Uzbekistan
- First Responders  
Peru
- First Response to a Radiological Emergency  
Chile, Singapore
- Medical Response to Radiation Injuries  
Ecuador
- National Training Course for the First Responders to a Radiological Emergency  
Headquarters
- National Training Course on Medical Response to Radiation Emergencies  
Iran, Islamic Republic of
- National Training Course on Research Reactor Emergency Response  
Chile
- Nuclear/Radiological Emergency  
The Former Yugoslav Republic of Macedonia
- Practical Response to Radiological and Nuclear Emergencies  
Sudan
- Preparedness for a Nuclear or Radiological Emergency  
Lithuania
- Radiation Emergency Preparedness  
Republic of Moldova, Uzbekistan
- Regional Training Course on Exercise Preparation, Conduct and Evaluation  
Vietnam
- Regional Training Course on the PCC Technique  
Argentina

### **Safety of Nuclear Installations**

- Authorization/Licensing Process for Nuclear Power Plants and Safety Related Modifications  
Nigeria
- European Nuclear Training and Tutoring Institute (ENSTTI), Summer Programme 2010  
France
- National Training Course on the Application of the Provisions of the Code of Conduct on the Safety of  
Research Reactors  
Headquarters
- Newly Appointed Regulatory Staff  
Namibia
- Occupational Radiation Protection for the Medical Area  
Uganda
- Radiation Protection and Regulatory Activities  
Seychelles
- RAIS 3.1 Web  
Headquarters

- Regional Training Course on Effective and Sustainable Regulatory Control of Radiation Sources  
Syrian Arab Republic
- Risk Informed Methods  
Ukraine
- Safety Assessment of Nuclear Power Plants  
United States of America
- Training on Review and Assessment Activities and Requirements by the Regulatory  
Nigeria
- Training on Systematic Competence Needs Assessment  
Vietnam

### **Radiation and Transport Safety**

- Authorization and Inspection of Radiation Sources  
Ethiopia, Ukraine
- Compliance Assurance for the Safe Transport of Radioactive Material  
Headquarters
- Course on Nuclear Safety  
Argentina
- Dosimetry for Neutrons  
Romania
- Industrial Radiography  
Uruguay
- Introduction to Radiation Principles and Radioprotection Radiation Safety  
Central African Republic, Niger
- Medical Protection in Paediatric and Pregnant Patients  
Mexico
- National Assessment of Occupational Exposure due to Intakes of Radionuclides  
Iran, Islamic Republic of
- National Induction Course on Radiation Protection  
Oman
- National Training Course for Regulators on Authorization and Inspection of Radiation Sources  
Jordan
- National Training Course on Authorization and Inspection of Cyclotron, Radioisotope Production Facilities and Industrial Irradiation  
Iran, Islamic Republic of
- National Training Course on Radiation Protection in Nuclear Medicine  
Iran, Islamic Republic of
- National Training Course on Radiation Protection in Radiotherapy  
Iran, Islamic Republic of
- National Training Course on Training Programme on Prevention of Accidental Exposure in Radiotherapy  
Philippines
- Newly Recruited Technical Staff of the Radiation Protection Association  
Zimbabwe
- Orphan Sources Search  
Tunisia
- Post-Graduate Educational Course on Radiation Protection and the Safety of Radiation Sources  
Belarus, Syrian Arab Republic

- Radiation Protection  
Malaysia
- Post-Graduate Educational Course Leading to the MS Degree in Radiation Protection  
Syrian Arab Republic
- Post-Graduate Training Course on Radiation Protection  
Malaysia
- Radiation Protection  
Greece, Morocco
- Radiation Protection and Safety of Radiation Sources  
Argentina
- Radiation Protection in Cardiology  
Algeria
- Radiation Protection in Hybrid Imaging  
Slovenia
- Radiation Protection in Medicine  
Kenya
- Radiation Safety for Custom Officers  
Côte d'Ivoire
- Radioactive Discharges  
Ghana
- RAIS  
Botswana
- Regional Training Course on Field Exercise and Decision Making Processes for Emergency Management  
Decision-makers  
Australia
- Regional Training Course on Occupational Radiation Protection  
Jordan
- Regional Training Course on Self-Assessment of National Regulatory Infrastructure and the Radiation Safety Information Management System  
Malaysia
- Regulators  
Lithuania
- Regulators on Authorization and Inspection of Radiation Sources  
Algeria
- Regulatory Control in Medical Practices  
Cuba
- Regulatory Skills to Implement Regulatory Functions and Processes  
Nigeria
- Training Course on Radiation Protection in Interventional Cardiology  
Philippines

#### **Management of Radioactive Waste**

- Decommissioning of Research Reactors and Other Small Nuclear Facilities  
Chile
- Decommissioning Skills  
United States of America
- Environmental Remediation Works  
Kazakhstan

- Geological Disposal  
Belgium, Japan
- Modular Design of Processing and Storage Facilities  
South Africa
- National Training Course on Safety and Licensing of Spent Fuel Dry Storage Facility (SNFDSF) for PHWRs  
Headquarters
- NORM Waste/Residues Management  
Syrian Arab Republic
- Regional Training Course on Development of a Near Surface Disposal Facility  
India
- Regional Training Course on Safety Assessment and Regulatory Framework of NORM  
Headquarters
- Safety Case for Predisposal Management and Centralized Storage of Radioactive Waste  
Thailand
- Predisposal Technologies  
Montenegro
- Generic Models  
Sweden
- Nuclear Waste Repository Systems  
United States of America
- Regional Training Course on Radioactive Waste Management Registry (RWMR) Software Applications  
Headquarters
- Radioactive Waste Management — Predisposal Technologies  
Tajikistan
- Radiological Characterization and Clearance of Wastes and Structures  
Cuba
- Radionuclides in Argillaceous and Fractured Media  
Switzerland
- Siting Licensing Design  
Colombia
- WMD PAEC Training Course on Implementation of LLW Repository Development Project  
Malaysia

#### **Nuclear Security**

- Combating Illicit Trafficking  
Cyprus
- Combating Illicit Trafficking in Nuclear and Other Radioactive Material  
Algeria, China
- Computer Security  
Lithuania
- Computer Security for Nuclear Facilities  
Republic of Korea
- Criminal or Unauthorized Acts Involving Nuclear and other Radioactive Materials  
Brazil
- Illicit Nuclear Trafficking Information Cooperation  
Tunisia

- Insider Threats  
Ukraine
- Nuclear Security Culture  
Ghana
- Physical Protection of Nuclear Material and Facilities  
Brazil
- Physical Protection of Radioactive Sources  
Morocco
- Physical Protection of Research Reactors  
Egypt
- Physical Protection Systems  
Russian Federation
- Regional Training Course on the Physical Protection of Nuclear Materials and Facilities  
China
- Security of Radioactive Sources  
Indonesia, Lithuania

#### **Management of Technical Cooperation for Development**

- 6th WNU Summer Institute  
United Kingdom
- Advanced National Training Course on Immunoassay Techniques  
Syrian Arab Republic
- BATAN Accelerator School 2010 — I and II  
Indonesia
- e-training Introduction to MESSAGE  
Jamaica
- International School of Nuclear Law  
France
- National Training Course on MESSAGE  
Jamaica
- National Training Course on Nuclear Industry Safety and Security Best Practices  
Mongolia
- Radiation Protection Applied to Nuclear Medicine Practice  
Mexico
- TRC on Operation and Maintenance — RS Self-Contained High Dose X Ray Irradiator  
Seibersdorf
- WNU RI School  
Republic of Korea
- Regional Course on Nuclear Law for Member States of the Asia and Pacific Region  
Malaysia



**Table A26. Relevant Agency web sites**

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Public web site

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

**Nuclear Power**

Nuclear energy

<http://www.iaea.org/OurWork/ST/NE/index.html>

Nuclear power

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

Nuclear power technology development

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

Nuclear power engineering

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

Nuclear energy knowledge resources

<http://www.iaea.org/inisnkm/nekr/index.html>

INPRO

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

Planning and economic studies

<http://www.iaea.org/OurWork/ST/NE/Pess/index.shtml>

International Nuclear Information System and Nuclear Knowledge Management

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

Nuclear energy databases

<http://www.iaea.org/OurWork/ST/NE/databases.html>

**Nuclear Fuel Cycle and Materials Technologies**

Nuclear fuel cycle and waste technology

<http://www.iaea.org/OurWork/ST/NE/NEFW/index.html>

Integrated Nuclear Fuel Cycle Information System (iNFCIS)

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

**Nuclear Science**

Portal for medical related nuclear data

<http://www-nds.iaea.org/medportal/>

Research Reactor Database

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

Information on ageing related operating experience from research reactors around the world (available to research reactor operators)

[http://www.iaea.org/OurWork/ST/NE/NEFW/rrg\\_operation.html](http://www.iaea.org/OurWork/ST/NE/NEFW/rrg_operation.html)

**Nuclear Applications**

Joint FAO/IAEA Programme on Nuclear Techniques in Food and Agriculture

<http://www-naweb.iaea.org/nafa/index.html>

Physical and chemical sciences

<http://www-naweb.iaea.org/napc/ih/index.html>

**Food and Agriculture**

Agency managed database for officially released mutant varieties

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

### **Human Health**

Programme of Action for Cancer Therapy (PACT)

<http://cancer.iaea.org/index.asp>

Guidance and educational resources to Member States

<http://nucleus.iaea.org/apps/HHW/root/content/MedicalPhysics>

Distance Assisted Training on-line (DATOL)

<http://nucleus.iaea.org/apps/HHW/root/content/Technologists/NuclearMedicine/Educationalresources/DistanceAssistedTrainingforNuclearMedicineTechnologists>

Training materials for distance learning

<http://www-naweb.iaea/nahu/default.asp>

### **Water Resources**

Isotope measurements from non-Agency projects on rivers and groundwater (available to Member States)

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

### **Environment**

Reference material web site

<http://nucleus.iaea.org/rpst/index.htm>

### **Incident and Emergency Preparedness and Response**

Early Notification and Assistance Conventions (ENAC) web site and the Nuclear Events Web-based System

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

Incidents and emergencies

<http://www-ns.iaea.org/tech-areas/emergency/>

### **Radiation and Transport Safety**

Radiation Safety Information Management System (RASIMS)

<http://rasims.iaea.org>

Radiation safety

<http://rpop.iaea.org/RPoP/RPoP/Content/index.htm>

Radiation, transport and waste safety

<http://www-ns.iaea.org/home/rtws.asp>

Nuclear installation safety

<http://www-ns.iaea.org/home/nis.htm>

### **Safeguards**

<http://www.iaea.org/OurWork/SV/Safeguards/index.html>

### **Management of Technical Cooperation for Development**

<http://www-tc.iaea.org/tcweb/default.asp>

### **Regional Sites**

Africa

<http://www-tc.iaea.org/tcweb/regionalsites/africa/default.asp>

Europe

<http://www-tc.iaea.org/tcweb/regionalsites/europe/default.asp>

Latin America

<http://www-tc.iaea.org/tcweb/regionalsites/latinamerica/default.asp>

TCPrise

<http://tcpride.iaea.org/Default.asp>

TC country profile

<http://tcpride.iaea.org/?TCCountryProfile>

**Standards, Guides and Conventions**

International standards, guides and codes

<http://www.iaea.org/Publications/Standards/index.html>

International conventions and agreements

<http://www.iaea.org/Publications/Documents/Conventions/index.html>

**Legal Assistance**

<http://ola.iaea.org/OLA/default.asp>

**Table A27. Facilities under Agency safeguards or containing safeguarded nuclear material on 31 December 2010**

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
<b>Power Reactors</b>		
Argentina	Atucha I Nuclear Power Plant	Lima
	Atucha II Nuclear Power Plant	Lima
	Embalse Nuclear Power Plant	Embalse
Armenia	Armenian NPP	Metsamor
	Armenian NPP 3	Metsamor
Belgium	Doel 3 NPP	Doel
	Doel 4 NPP	Doel
	Elbel. Doel 1	Doel
	Elbel. Tih. 1	Tihange
	Tihange 2 NPP	Tihange
	Tihange 3 NPP	Tihange
Brazil	Admiral Alva. Alberto-(Angra2)	Angra dos Reis
	Admiral Alva. Alberto-(Angra3)	Angra dos Reis
	Alm. Alv. Alberto (Angra1)	Angra dos Reis
	Pressurized Water Nuclear Inst.	Resende, Rio de Janeiro
Bulgaria	NPP Kozloduy 1–2	Kozloduy
	NPP Kozloduy 3–4	Kozloduy
	NPP Kozloduy 5–6	Kozloduy
Canada	Bruce A NGS	Tiverton, Ontario
	Bruce B NGS	Tiverton, Ontario
	Darlington NGD	Bowmanville, Ontario
	Gentilly II	Gentilly, Quebec
	Pickering NGS	Pickering, Ontario
	Point Lepreau	Point Lepreau, New Brunswick
China	QSNPP	Hai Yan, Zhe Jiang
Czech Republic	NPP Dukovany 1-2	Dukovany
	NPP Dukovany 3-4	Dukovany
	NPP Temelin	Temelin
Finland	Loviisa NPP	Loviisa
	TVO I	Olkiluoto
	TVO II	Olkiluoto
	TVO III	Olkiluoto
Germany	AVR	Juelich
	GKN	Neckarwestheim
	GKN II	Neckarwestheim
	HKG-THTR 300	Hamm
	KBR-Brokdorf	Brokdorf
	KKB-Brunsbuettel	Brunsbüttel
	KKE-Emsland	Lingen (EMS)
	KKG-B	Gundremmingen
	KKG-C	Gundremmingen
	KKG-Grafenrheinfeld	Grafenrheinfeld
	KKI-2-Isar	Essenbach
	KKI-Isar-Ohu	Ohu bei Landshut
	KKK-Kruemmel	Geesthacht
KKP-1	Philippsburg	
KKP-2	Philippsburg	
KKS-Stade	Stade	

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	KKU-Unterweser	Unterweser
	KKW GR2. 3 & 4	Lubmin
	KKW GR3. 5	Lubmin
	KKW Greifswald 1 & 2	Lubmin
	KKW Rheinsberg	Rheinsberg
	KW Muelheim-Kaerlich	Muelheim-Kaerlich
	KW-Biblis A	Biblis
	KW-Biblis B	Biblis
	KWG	Grohnde
	KWL-Lingen	Lingen
	KWO	Obrigheim
Hungary	Paks NPP I	Paks
	Paks NPP II	Paks
India	KAPS 1 & 2	Surat, Gujarat
	KKNPP	Kudankulam
	RAPS 1 & 2	Anushakti-Kota, Rajasthan
	RAPS 3 & 4	Rawatbhata, Rajasthan
	RAPS 5 & 6	Rawatbhata, Rajasthan
	TAPS	Tarapur, Mumbai
Iran, Islamic Republic of	Bushehr NPP	Bushehr, Halilem
	IR360	IR360
Italy	Centrale di Trino	Trino Vercellese
	Centrale Latina	Borgo Sabotino
	Cirene (on load)	
	CN del Garigliano	Sessa Aurunca (CE)
	ENEL-Caorso	Caorso
Japan	Fuku-I-1	Futaba-gun, Fukushima-ken
	Fuku-I-2	Futaba-gun, Fukushima-ken
	Fuku-I-3	Futaba-gun, Fukushima-ken
	Fuku-I-4	Futaba-gun, Fukushima-ken
	Fuku-I-5	Futaba-gun, Fukushima-ken
	Fuku-I-6	Futaba-gun, Fukushima-ken
	Fuku-N-1	Futaba-gun, Fukushima-ken
	Fuku-N-2	Futaba-gun, Fukushima-ken
	Fuku-N-3	Futaba-gun, Fukushima-ken
	Fuku-N-4	Futaba-gun, Fukushima-ken
	Genkai-1	Higashimatsuura-gun, Saga-ken
	Genkai-2	Higashimatsuura-gun, Saga-ken
	Genkai-3	Higashimatsuura-gun, Saga-ken
	Genkai-4	Higashimatsuura-gun, Saga-ken
	Hamaoka-1	Ogasa-gun, Shizuoka-ken
	Hamaoka-2	Ogasa-gun, Shizuoka-ken
	Hamaoka-3	Ogasa-gun, Shizuoka-ken
	Hamaoka-4	Ogasa-gun, Shizuoka-ken
	Hamaoka-5	Ogasa-gun, Shizuoka-ken
	Higashidoori-1	Shimokita-gun, Aomori-ken
	Ikata-1	Nishiuwa-gun, Ehime-ken
	Ikata-2	Nishiuwa-gun, Ehime-ken
	Ikata-3	Nishiuwa-gun, Ehime-ken
	Joyo	Higashi, Ibaraki-ken
	Kashiwazaki-1	Kashiwazaki-shi, Niigata-ken

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	Kashiwazaki-2	Kashiwazaki-shi, Niigata-ken
	Kashiwazaki-3	Kashiwazaki-shi, Niigata-ken
	Kashiwazaki-4	Kashiwazaki-shi, Niigata-ken
	Kashiwazaki-5	Kashiwazaki-shi, Niigata-ken
	Kashiwazaki-6	Kashiwazaki-shi, Niigata-ken
	Kashiwazaki-7	Kashiwazaki-shi, Niigata-ken
	Mihama-1	Mikata-gun, Fukui-ken
	Mihama-2	Mikata-gun, Fukui-ken
	Mihama-3	Mikata-gun, Fukui-ken
	Monju	Tsuruga-shi, Fukui-ken
	Ohi 1&2	Ohi-gun, Fukui-ken
	Ohi 3	Ohi-gun, Fukui-ken
	Ohi 4	Ohi-gun, Fukui-ken
	Ohma	Shimokita-gun, Aomori-prefect.
	Onagawa-1	Oshika-gun, Miyagi-ken
	Onagawa-2	Oshika-gun, Miyagi-ken
	Onagawa-3	Oshika-gun, Miyagi-ken
	Sendai-1	Sendai-shi, Kagoshima-ken
	Sendai-2	Sendai-shi, Kagoshima-ken
	Shika-1	Hakui-gun, Ishikawa-ken
	Shika-2	Hakui-gun, Ishikawa-ken
	Shimane-1	Yatsuka-gun, Shimane-ken
	Shimane-2	Yatsuka-gun, Shimane-ken
	Shimane-3	Yatsuka-gun, Shimane-ken
	Takahama-1	Ohi-gun, Fukui-ken
	Takahama-2	Ohi-gun, Fukui-ken
	Takahama-3	Ohi-gun, Fukui-ken
	Takahama-4	Ohi-gun, Fukui-ken
	Tokai	Tokai-mura, Ibaraki-ken
	Tokai-2	Tokai-mura, Ibaraki-ken
	Tomari-1	Fururu-gun, Hokkaido
	Tomari-2	Fururu-gun, Hokkaido
	Tomari-3	Fururu-gun, Hokkaido
	Tsuruga-1	Tsuruga-shi, Fukui-ken
	Tsuruga-2	Tsuruga-shi, Fukui-ken
Kazakhstan	BN-350	Aktau
Korea, Republic of	Kori-1	Pusan
	Kori-2	Pusan
	Kori-3	Pusan
	Kori-4	Pusan
	Shin Kori-1	Pusan
	Shin Kori-2	Pusan
	Shin Kori-3	Pusan
	Shin Kori-4	Pusan
	Shin Wolsong-1	Kyongju
	Shin Wolsong-2	Kyongju
	Ulchin-1	Ulchin
	Ulchin-2	Ulchin
	Ulchin-3	Ulchin
	Ulchin-4	Ulchin
	Ulchin-5	Ulchin
	Ulchin-6	Ulchin

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	Wolsong-1	Kyongju
	Wolsong-2	Kyongju
	Wolsong-3	Kyongju
	Wolsong-4	Kyongju
	Younggwang-1	Younggwang
	Younggwang-2	Younggwang
	Younggwang-3	Younggwang
	Younggwang-4	Younggwang
	Younggwang-5	Younggwang
	Younggwang-6	Younggwang
Lithuania	Ignalina NPP	Visaginas
Mexico	Central Laguna Verde Unit I	Muni. Al. Luc. Vercaruz
	Central Laguna Verde Unit II	Muni. Al. Luc. Veracruz
Netherlands	EPZ. Borssele	Borssele
	N.V. GKN-Dodewaard	Dodewaard
Pakistan	CHASNUPP 2	Kundian, District Mianwali
	CHASNUPP-1	Kundian, District Mianwali
	KANUPP	Karachi
Philippines	BNPP	Morong, Bataan
Romania	Cernavoda-3	Cernavoda
	Cernavoda-4	Cernavoda
	CNE Cernavoda 1	Cernavoda
	CNE Cernavoda NPP 2	Cernavoda
Slovakia	Javys NPP A-1	Jaslovské Bohunice
	Javys NPP V-1	Jaslovské Bohunice
	NPP Mochovce Units 1, 2	Mochovce
	NPP Mochovce Units 3, 4	Mochovce
	V-2 NPP	Jaslovské Bohunice
Slovenia	Krško (NEK)	Krško
South Africa	Koeberg Unit I	Cape Town
	Koeberg Unit II	Cape Town
Spain	Asco 2	Asco
	Asco NPP 1	Asco
	C.N. Almaraz 1	Almaraz
	C.N. Almaraz 2	Almaraz
	CN Cabrera	Almonacid de Zorita
	CN Trillo 1	Trillo
	CN Vandellos II	Vandellos
	He. Cofrentes	Cofrentes
	Nucl. S. M. Far.	Santa Maria de Garona
Sweden	Barsebaeck Unit 1	Loeddekoepinge
	Barsebaeck Unit 2	Loeddekoepinge
	Forsmark Unit 1	Oesthammar
	Forsmark Unit 2	Oesthammar
	Forsmark Unit 3	Oesthammar
	Oskarshamn Unit 1	Oskarshamn
	Oskarshamn Unit 2	Oskarshamn
	Oskarshamn Unit 3	Oskarshamn
	Ringhals Unit 1	Ringhals
	Ringhals Unit 2	Ringhals
	Ringhals Unit 3	Vaeröbacka
	Ringhals Unit 4	Ringhals

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
Switzerland	KKB Beznau-II	Beznau Doettingen
	KKB Ibeznu-I	Beznau Doettingen
	KKG-Goesgen	Goesgen-Daeniken
	KKL-Leibstadt	Leibstadt
	KKM Muehleberg	Muehleberg
Ukraine	Chernobyl NPP	Chernobyl
	Khmelnitski 1	Neteshin
	Khmelnitski 2	Neteshin
	Rovno 1 & 2	Kuznetsovsk
	Rovno 3	Kuznetsovsk
	Rovno 4	Kuznetsovsk
	STH. Ukraine 1	Yuzhnoukrainsk
	STH. Ukraine 2	Yuzhnoukrainsk
	STH. Ukraine 3	Yuzhnoukrainsk
	Zaporozhe 1	Energodar
	Zaporozhe 2	Energodar
	Zaporozhe 3	Energodar
	Zaporozhe 4	Energodar
	Zaporozhe 5	Energodar
	Zaporozhe 6	Energodar
Vietnam		Vinh Hai Comm. Ninh Hai Dist.
	Ninh Thuan 1 Plant Unit 1	Phuoc Dinh Comm. Thuan Nam Dt.
	Ninh Thuan 1 Plant Unit 2	Phuoc Dinh Comm. Thuan Nam DT.
	Ninh Thuan 2 Plant Unit 1	Vinh Hai Comm. Ninh Hai Dist.
<b>Research Reactors and Critical Assemblies</b>		
Algeria	Es Salam Reactor	Ain Oussera
	NUR Reactor	Draria-BP29 Wilaya de Tipaza
Argentina	Argentine Reactor 0 (RA-0)	Cordoba
	Argentine Reactor 1 (RA-1)	Centro Atomico Constituyentes
	Argentine Reactor 3 (RA-3)	Centro Atomico Ezeiza
	Argentine Reactor 4 (RA-4)	Rosario
	Argentine Reactor 6 (RA-6)	Centro Atomico Bariloche
	Argentine Reactor 8 (RA-8)	Pilcaniyeu
Australia	HIFAR	Lucas Heights, Sutherland
	Moata	Lucas Heights, Sutherland
	Opal	Lucas Heights, NSW
Austria	Atom. Oest. Univ.	Vienna
Bangladesh	Atomic Energ. Res. Estab.	Dhaka
Belarus	Sosny	Minsk
Belgium	BR1-Cen	Mol
	BR2	Mol
	Cen-Venus	Mol
	Thetis-Rijkuniv.	Gent
Brazil	Argonauta Reactor-IEN	Rio de Janeiro
	IPEN/MB01 Critical Assem.	São Paulo
	IPR-R1 Reactor-CDTN	Belo Horizonte
	Research Reactor IEA-R1	São Paulo
Bulgaria	IRT-2000	Sofia
Canada	Biology, Chemistry, Physics	Chalk River, Ontario
	DIF	Chalk River, Ontario



State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	Ecole Polytechnique	Montreal, Quebec
	McMaster Nuc. Reactor	Hamilton, Ontario
	NRU Reactor	Chalk River, Ontario
	NRX Reactor	Chalk River, Ontario
	Slowpoke Alberta	Uni. Of Alberta, Edmonton
	Slowpoke Dalhousie	Halifax, Nova Scotia
	Slowpoke Kingston	Kingston, Ontario
	Slowpoke Saskatchewan	Saskatoon, Saskatchewan
Chile	La Reina Reactor	Santiago
	Lo Aguirre Experimental React.	Santiago
China	HTR-10	Nankou, Beijing
Colombia	IAN-R1 R. Reactor	Bogotá
Czech Republic	LR-0	Řež
	LVR-15	Řež
	VR-1	Prague
Democratic Republic of the Congo	Triga II Reactor	Kinshasa
Denmark	Danish Decommissioning - DR3	Roskilde
Egypt	ET RR-1	Inshas
	MPR (Multipurpose Reactor)	AEA Nucl. Res. Centre, Inshas
Estonia	A.L.A.R.A.	Paldiski
Finland	FIR 1	Espoo
Georgia	Decom. IRT-M	Tbilisi
Germany	AKR-2	Dresden
	BER-II	Berlin
	FH-Furtw.	Furtwangen
	FRM	Garching
	FRM-II	Garching
	GKSS FRG-1, FRG-2	Geesthacht
	KFA-FRJ2	Juelich
	Labor-ST	Zittau
	SUR100	Hannover
	SUR-100	Stuttgart
	SUR100 FHU	Ulm
	SUR100-RWTH	Aachen
	SUR100-TUB	Berlin
	TRIGA Mainz	Mainz
Ghana	GHARR-1	Legon-Accra
Greece	GRR-1	Attikis
Hungary	Budapest Res. Reactor	Budapest
	Training Reactor	Budapest
Indonesia	P3TkN	Bandung
	PPNY	Yogyakarta
	RSG-GAS	Serpong
Iran, Islamic Republic of	HWZPR	Esfahan
	IR-40	Arak
	LWSCR	Esfahan
	MNSR	Esfahan
	Tehran Res. Reac. (TRR)	Tehran
Israel	Israel R. R.-1(IRR-1)	Soreq
Italy	AGN-201	Palermo

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	Camen-RTS-1	San Piero a Grado
	CEC-Complexe-Essor	Ispra
	CNEN-RB-3	Montecucolino
	RB-1	Montecucolino
	Tapiro-Casaccia	Santa Maria di Galeria
	Triga-RC1 Mark II	Santa Maria di Galeria
	Univ. Pavia	Pavia
Jamaica	CNS	Kingston
Japan	DCA	Oarai-machi, Ibaraki-ken
	FCA	Tokai-mura, Ibaraki-ken
	HTR	Kawasaki-shi, Kanagawa-ken
	HTTR	Higashi, Ibaraki-ken
	JMTR	Higashi, Ibaraki-ken
	JMTRC	Higashi-gun, Ibaraki-ken
	JRR-2	Tokai-mura, Ibaraki-ken
	JRR-3	Tokai-mura, Ibaraki-ken
	JRR-4	Tokai-mura, Ibaraki-ken
	KINKI	Higashiosaka-shi, Osaka-fu
	KUCA	Osaka
	KUR	Sennan-gun, Osaka
	Musashi Reactor	Kawasaki-shi, Kanagawa-ken
	NCA	Kawasaki-shi
	NSRR	Tokai-mura, Ibaraki-ken
	Rikkyo	Nagasaka, Kanagawa-ken
	TCA	Tokai-mura, Ibaraki-ken
	TODAI	Tokai-mura, Ibaraki-ken
	TTR	Kawasaki-shi, Kanagawa-ken
	VHTRC	Tokai-mura, Ibaraki-ken
Kazakhstan	Kurchatov Test Reactor	Kurchatov
	WWR-K	Almaty
Korea, Republic of	Hanaro	Taejon
	Kyung Hee	Suwoon
Latvia	IRT	Salaspils
Libyan Arab Jamahiriya	IRT-Tajura	Tajura
Malaysia	Puspati	Bangi, Selangor
Mexico	Triga Mark III	Ocoyoacac
Morocco	MA-R1	Rabat, Agdal
Netherlands	HFR-Petten	Petten
	IRI. HOR	Delft
	LFR-Petten	Petten
Nigeria	NIRR-1	Ahmadu Bello University, Zaria
Norway	HBWR	Halden
	JEEP-II	Kjeller
Pakistan	PARR-1	Rawalpindi
	PARR-2	Rawalpindi
Peru	CNIP RP-10 R. Reactor	Lima
	RP-0 R. Reactor	Lima
Philippines	PRR-1	Quezon City, Diliman
Poland	Anna and Agata	Otwock Swierk
	Maria	Otwock-Swierk
Portugal	RPI	Sacavém

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
Romania	Nat. Inst. R & D	Magurele
	Triga-II	Pitesti-Colibasi
Serbia	RA-RB	Vinca
Slovenia	Triga II	Ljubljana
South Africa	Safari-I Research Reactor	Pelindaba
Sweden	Studsvik-RR	Studsvik
Switzerland	AGN 211-P	Basel
	Crocus	Lausanne
	Proteus	Wuerenlingen
Syrian Arab Republic	MNSR	
Tajikistan	Argus Research Reactor	Physical-Tech. Inst., Dushanbe
Thailand	ONRC	Ongkharak, Nakon Nayon
	TRR-1	Bangkok
Turkey	Cekmece Nucl. Res. and Training Centre	Istanbul
	ITU-TRR-Triga Mark II	Istanbul
Ukraine	IR-100 Res. Reactor	Sevastopol
	WWR-M Res. Reactor	Kiev
Uzbekistan	IIN-3M	Tashkent
	WWR-SM	Ulugbek
Venezuela	RV-1 IVIC R. Reactor	Altos de Pipe
Vietnam	Da Lat	Da Lat, Lam Dong
<b>Conversion Plants</b>		
Algeria	Pilot Uranium Conversion Plant	Draria Nuclear Research Center
Argentina	UF <sub>6</sub> Production Plant	Pilcaniyeu
	UO <sub>2</sub> Conversion Plant	Cordoba
Brazil	UOC to UF <sub>6</sub> Conversion	Iperó, São Paulo
Canada	Blind River	Blind River, Ontario
	Port Hope	Port Hope, Ontario
Chile	Lab. Experiment. De Conversion	Santiago
Iran, Islamic Republic of	UCF	Esfahan
Japan	JCO	Tokai-mura, Ibaraki-ken
	Ningyo R&D	Tomata-gun, Okayama-ken
	PCDF	Tokai-mura, Ibaraki-ken
Korea, Republic of	DUF4 Conv. Pl.	Taejon
Mexico	Fuel Fabrication Pilot Plant	Salazar
Romania	Nat. Uranium Company	Feldioara
South Africa	Conversion Plant (U Plant)	Pelindaba
	HEU/LEU Conversion Plant	Pelindaba
Sweden	RMA	Stenstorp
<b>Fabrication Plants</b>		
Algeria	UDEC	Draria Nuclear Site
Argentina	Exp.Pl. Fuel Mat.& Powder Met.	Centro Atómico Constituyentes
	Fuel. Fab. Plant - Fecn	Centro Atómico Ezeiza
	Res. Reac. Fuel Elem. Fab. Plant	Centro Atómico Constituyentes
	Res. Reac. Fuel Fab. Plant	Centro Atómico Ezeiza
Belgium	FBFC Int.	Dessel

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	FBFC Int.	Dessel
	N.V. BN	Dessel
Brazil	Fuel Fabrication Plant-Fec	Resende
Canada	Fuel Eng. Met. Che. Op.	Chalk River, Ontario
	Fuel Fabrication Facility	Chalk River, Ontario
	G. E. C Inc., Toronto	Toronto, Ontario
	G. E. C. Inc., Peterborough	Peterborough, Ontario
	Zircatec, Port Hope	Port Hope, Ontario
Chile	Unidad de Metalur. Fisica (Umf)	Santiago
Egypt	FMPP (Fuel Manuf. Pilot Plant)	Inshas, Cairo
	R&D-NFL	Inshas Nucl. Res. Center, Cairo
France	Melox. Marcoule	Chusclan
Germany	Adv. Nuclear Fuels	Lingen
	Siemens MOX II	Hanau
India	NFC	Hyderabad
	NFC-NU	Hyderabad
Indonesia	IEBE	Serpong
	IPEBRR	Serpong
Iran, Islamic Republic of	FMP	Isfahan
	Fuel Fabrication Laboratory	Esfahan Nuc. Tech. Cntr (ENTC)
Italy	FN-Bosco Marengo	Bosco Marengo
Japan	GNF-J	Yokosuka-shi, Kanagawa-ken
	J-MOX	Oaza Obuchi, Rokkasho-mura
	MNF	Tokai-mura, Ibaraki-ken
	NFI Kumatori-1	Sennan-gun, Osaka
	NFI Tokai-1	Tokai-mura, Ibaraki-ken
	NFI Tokai-2	Tokai-mura, Ibaraki-ken
	PPFF	Tokai-mura, Ibaraki-ken
	PPFF	Tokai-mura, Ibaraki-ken
Kazakhstan	Ulbinski Metallurgical Plant	Ust-Kamenogorsk
Korea, Republic of	KNFFP	Taejon
Romania	SN NFP Subsidiary	Mioveni
South Africa	LEU Fuel Fabrication Plant	Pelindaba
	MTR Fuel Fabrication Plant	Pelindaba
Spain	ENUSA Fab. Juzbado	Juzbado
Sweden	Westinghouse Electric	Vaesteras/Finnslaetten
Turkey	Nuclear Fuel Pilot Plant	Istanbul
<b>Reprocessing Plants</b>		
Egypt	Hydrometallurgy Unit	Inshas, Cairo
France	AREVA NC - UP2 and UP3	La Hague
Germany	WAK/VEK	Eggenstein-Leopoldshafen
India	PREFRE	Tarapur, Mumbai
Iran, Islamic Republic of	Mix Facility	End of North Karegar in Tehran
Italy	Impianto EUREX	Saluggia
	SOGIN-Trisaia	Rotondella
Japan	CPF	Tokai-mura, Ibaraki-ken
	RETF	Tokai-mura, Ibaraki-ken
	RRF	Ibaraki-ken
	RRP	Kamikita-gun, Aomori-ken
	SCF	Tokai-mura, Ibaraki-ken

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	TRP	Tokai-mura, Ibaraki-ken
<b>Enrichment Plants</b>		
Argentina	Mock-up Laboratory	Pilcaniyeu
	Uranium Enrichment Plant	Pilcaniyeu
Australia	Silex	
Brazil	Isotopic Enrich. Lab. (LEI)	Iperó, São Paulo
	Laser Spectroscop. Lab.(Ar/Las)	San José dos Campos
	U-235 Centrifuge Enrich. Plant	Resende
	Uran. Enrich. Pilot Plant (USIDE)	Iperó, São Paulo
China	Shaanxi	Han Zhang, Shaanxi Province
France	Georges Besse II	Bollene
Germany	UTA 1 and UTA 2	Gronau
Iran, Islamic Republic of	FEP	Natanz
	FFEP	20 km northeast of Qom City
	PFEP	Natanz
Japan	CTF	Kitakami-gun , Aomori-ken
	NEP	Tomata-gun, Okayama-ken
	REP	Kamikita-gun, Aomori-ken
Netherlands	Urenco Nederland	Almelo
South Africa	KLD	Pelindaba
United Kingdom	Urenco E22, E23, A3	Capenhurst
<b>Separate Storage Facilities</b>		
Argentina	Cent. St. Irr. Sp. Fiss. M.(DCMFEI)	Centro Atómico Ezeiza
	Cent. Store Sp. Fiss. Mat.(DCMFE)	Centro Atómico Constituyentes
	Irrad. Res. React. Fuel Store.	Centro Atómico Ezeiza
	Nuclear Material Storage	Centro Atómico Constituyentes
	Storage Bunker	Centro Atómico Ezeiza
Armenia	SSFS	Metsamor
Australia	Vault Storage	Lucas Heights, Sutherland
Belgium	Belgoprocess	Dessel
	Belgoprocess	Dessel
	Elbel. DL. DS	Beveren
	Wet Store	Tihange
Brazil	Aramar Store	Iperó
Bulgaria	DSFSF KNPP 2	Kozloduy
	SFSF Kozloduy 1	Kozloduy
Canada	Acel Research	Pinawa, Manitoba
	DP Dry Storage	Tiverton, Ontario
	DWMF	Darlington, Ontario
	FPSF	Chalk River Laboratories
	Gentilly I	Gentilly, Quebec
	NMSF	Chalk River, Ontario
	Port Hope LLRW Storage	Port Hope, Ontario
	PUFDSF	Pickering, Ontario
	Spent Fuel Canister Storage	Chalk River, Ontario
	Waste Storage Facility	Chalk River, Ontario
	Waste Storage Facility	Chalk River, Ontario
	WUFDSF	Tiverton, Ontario

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
Czech Republic	ISFS Dukovany	Dukovany
	ISFS Temelin	Temelin
	Radioactive Waste Rep. Richard	Litomerice
	VAO, HLWS	Řež
Denmark	DD Storage	Roskilde
	DD Waste	Roskilde
Finland	SF Repository	Olkiluoto
	TVO-KPA-Store	Olkiluoto
Germany	Adv. Nucl. Fuels-UF <sub>6</sub> Lager	Lingen
	BE-ZL-Gundremmingen	Gundremmingen
	BZA Ahaus	Ahaus
	BZL Biblis	Biblis
	Energiewerke Nord GmbH	Lubmin
	EWN. ZLN	Lubmin
	GKN-ZL	Neckarwestheim
	HDB	Eggenstein-Leopoldshafen
	Kernmateriallager 87	Rosendorf
	KFA. AVR. BL	Juelich
	KFA-AVR	Juelich
	KFK-FR-2	Eggenstein-Leopoldshafen
	KKG BELLA	Grafenrheinfeld
	KKI-BELLA	Essenbach
	NCS-Lagerhalle	Hanau
	PTB-Spaltstofflager	Hanau
	SBZ	Brunsbuettel
	SZL	Lingen
	SZL-Kruemmel	Geesthacht
	TBH (B) 87.2	Rosendorf
TBL-G	Gorleben	
TNH Lager Leese	Landesbergen-Leese	
ZL-KBR	Brokdorf	
ZL-KKU	Stadland	
ZL-KWG	Emmerthal	
ZL-Philippsburg	Philippsburg	
Hungary	Cent. Isotope Store	Budapest
	MVDS	Paks
India	TAPS AFR	Tarapur, Mumbai
Indonesia	TC and ISFSF	Serpong
Iran, Islamic Republic of	KWS	Karaj
Iraq	Tuwaittha Location C	Tuwaittha
Italy	Dep. Avogadro	Torino
	Essor Nuclear Plant	Ispra
	Essor Storage	Ispra
	Joint Research Centre	Ispra
	Nucleco S.p.A.	Rome
Japan	Fugen	Tsuruga-shi, Fukui-ken
	Fuku-I-CSFS	Futaba-gun, Fukushima-ken
	JAERI Mutsu	Mutsu-shi, Aomori-ken
	KUFFS	Sennan-gun, Osaka
	NFI Kumatori-2	Sennan-gun, Osaka
	RFSC	Mutsu-shi, Aomori-ken

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
Kazakhstan	Baikal-1 DSFS	Kurchatov
	BN-350 Temp. Storage	Aktau
Korea, Republic of	Ulbinski Thorium Storage	Ust-Kamenogorsk
	Acrylonitrile Plant	Ulsan
	NMSF	KAERI Site In Taejon
	Uranium Residue Storage Fac.	Kaeri-Daejeon
Lithuania	SNFS-1	Visaginas
	SNFS-2	Visaginas
Netherlands	Covra	Vlissingen-Oost
	Habog	Vlissingen
Poland	Zuop	Swierk
Portugal	Inst. de Armazenagem	Sacavem
Romania	CNE Cernavoda IDSFS	Cernavoda
Russian Federation	IUEC Storage Facility	Angarsk
Slovakia	Javys ISFS	Jaslovské Bohunice
	Javys Nuclear Store	Jaslovské Bohunice
South Africa	Bulk Storage Facility	Pelindaba
	E-Building	Valindaba
	HEU Storage Vault	Pelindaba
	Koeberg Castor Storage Fac.	Cape Town
	Thabana Pipe Store	Pelindaba
	Waste Storage Facility	Pelindaba
	Y-Plant Storage Facility	Pelindaba
	Z-Plant	Pelindaba
Spain	ATI	Almonacid de Zorita
	CN Trillo	Trillo
Sweden	Clab Store	Oskarshamn
Switzerland	Saphir	Paul Sherrer Institut
	Zwibez Kernkraftwerk Beznau	Kernkraftwerk Beznau
	Zwilag	Wuerenlingen Aargau
USA	KAMS Storage	Savannah River Site
Ukraine	Chernobyl NPP-SFS	Chernobyl
	Chernobyl SNFSF-2	Chernobyl
	Khmelnitski FF Storage	Neteshin
	Rovno FF Storage	Kuznetsovsk
	Sth. Ukraine FF Storage	Yuzhnoukrainsk
	Zaporozhe FF Storage	Energodar
United Kingdom	Zaporozhe SFS	Energodar
	SMP Export	Sellafield
	SNM Store 9	Sellafield
	Thorp Product Store	Sellafield
<b>Other Facilities</b>		
Algeria	AURES I	Birine Nucl. Site (Ain Oussara)
Argentina	Alpha Laboratory	Centro Atómico Constituyentes
	Enriched Uranium Recovery Lab.	Centro Atómico Ezeiza
	Fission Products Division	Centro Atómico Ezeiza
	Lapep	Centro Atómico Ezeiza
	Triple Altura Laboratory (LTA)	Centro Atómico Ezeiza
	Uranium Powder Fab. Plant	Centro Atómico Constituyentes
Australia	R&D Labs	Lucas Heights, Sutherland
Belgium	Belgoprocess	Mol

State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
	CEN-Lab-Pu	Mol
	I. R. E.	Fleurus
	IRMM. Geel	Geel
	SCK-CEN Lab.	Mol
Brazil	(Ladesi)-Copesp	São Paulo
	Fuel Development & Tech. Fac.	São Paulo
	Labgene	Iperó, Aramar, São Paulo
	Nucl. Fuel & Instr. Devel. Lab.	São Paulo
	Nuclear Mat. Lab.-Labmat	Iperó
	Reprocess. Proj. (IPEN-CNEN/SP)	São Paulo
Czech Republic	Lab. & Stores, Centr. Anal. Lab	Řež
	UJP	Prague
Denmark	Danish Decommiss. — Hotcell	Roskilde
Egypt	Molybdenum Production Unit	Inshas, Cairo
	NCB	Inshas
Georgia	Razmnozhitel-1	Tbilisi
	Sukhumi Inst.	Sukhumi
Germany	Inst. Kernchemie	Mainz
	JRC-ITU	Eggenstein-Leopoldshafen
	KFA-HZ	Juelich
	Lab. Juelich	Juelich
	PKA Gorleben	Gorleben
	WAK-Heisse Zellen der HVT	Eggenstein-Leopoldshafen
Indonesia	RMI	Serpong
Iran, Islamic Republic of	JHL	Tehran Nucl. Res. Center, Tehran
Italy	CNEN-ISTEC	Santa Maria di Galeria
	Impianto Plutonio	Santa Maria di Galeria
	OPEC 2-CAS	Santa Maria di Galeria
Japan	FMF	Higashi, Ibaraki-ken
	IRAF	Higashi-gun, Ibaraki-ken
	JAERI Oarai R&D	Higashi, Ibaraki-ken
	JAERI Tokai	Tokai-mura, Ibaraki-ken
	JNC Oarai R&D	Higashi, Ibaraki-ken
	JNC Tokai R&D	Tokai-mura, Ibaraki-ken
	Kumatori	Sennan-gun, Osaka
	Mitsui Iwakuni-Ohtake	Kuga-gun, Yamaguchi-ken
	Mitsui Osaka	Takai-shi, Osaka-fu
	NDC Fuel Hot Lab	Tokai-mura, Ibaraki-ken
	NERL	Tokai-mura, Ibaraki-ken
	NFD	Higashi, Ibaraki-ken
	NRF	Tsukuba-shi, Ibaraki-ken
	Showa	Kawasaki-shi, Kanagawa-ken
	Sumitomo-Chiba	Sodegaura-shi, Chiba-ken
	UML	Higashi, Ibaraki-ken
Korea, Republic of	ACPF	At Kaeri Site, Daejon
	DFDF	Taejon
	HFFL	Taejon
	IMEF	Taejon
	KAERI R&D Facility	Taejon
	PIEF	Taejon
	PRIDE	Kaeri-Daejeon



State <sup>a</sup>	Facility abbreviated name	Location <sup>a</sup>
Libyan Arab Jamahiriya	Tajura Uranium R&D Facility	Tajura
Netherlands	JGL	Petten
Norway	Research Laboratories	Kjeller
South Africa	Decontam. & Waste Recovery Pl.	Pelindaba
	Hot Cell Complex	Pelindaba
	NU and DU Metals Plant	Pelindaba
Spain	C.A. El Cabril	El Cabril
Switzerland	CERN	Switzerland
	E.I.R.	Wuerenlingen
Ukraine	Chernobyl Conditioning	Chernobyl
	Chernobyl Unit 4 Shelter	Chernobyl
	KHFTI	Kharkov
	Sevastopol Subcritical Assembly	Sevastopol

<sup>a</sup> An entry in this column does not imply the expression of any opinion whatsoever on the part of the Agency concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.

**Note:** The Agency was also applying safeguards at facilities in Taiwan, China

**Note:** Additionally under Agency safeguards were 496 locations outside facilities (LOFs) in 97 States and in Taiwan, China.