

IAEA ANNUAL REPORT 2014

Additional Annex Information

THE ANNUAL REPORT FOR 2014

Additional Annex Information

Table A25. Coordinated research projects initiated in 2014

Nuclear Power

- Understanding and Prediction of Thermal-Hydraulics Phenomena Relevant to SCWRs
- Modular High Temperature Gas-cooled Reactor Safety Design
- Application of Wireless Technologies in Nuclear Power Plant Instrumentation and Control Systems
- Application of Advanced Low Temperature Desalination Systems to Support NPPs and Non-electric Applications

Nuclear Fuel Cycle and Materials Technology

- Reliability of High Power, Extended Burnup and Advanced PHWR Fuels
- Fuel Modelling in Accident Conditions (FUMAC)

Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development

- Assessing the National and Regional Economic and Social Effects of Nuclear Programmes

Nuclear Science

- Development of Molecular Concentration Mapping Techniques Using MeV Focussed Ion Beams
- Advanced Moderators for Intense Cold Neutron Beams in Materials Research
- Plasma-wall Interaction with Reduced-activation Steel Surfaces in Fusion Devices
- Experiments with Synchrotron Radiation for Modern Environmental and Industrial Applications

Food and Agriculture

- Minimizing Farming Impacts on Climate Change by Enhancing Carbon and Nitrogen Capture and Storage in Agro-Ecosystems
- Early and Rapid Diagnosis and Control of TADs — Second Phase — African Swine Fever (ASF)
- Dormancy Management to Enable Mass-rearing and Increase Efficacy of Sterile Insects and Natural Enemies

Human Health

- Radiation Therapy Planning of Non-Small Cell Lung Cancer based on PET/CT (diagnostic component)
- Use of 18F-FDG PET/CT for Imaging TB Patients and Related Conditions (HIV/AIDS, Tuberculosis): Focus on Drug Resistant Extrapulmonary Tuberculosis
- Randomized Phase III Clinical Trial of Stereotactic Body Radiation Therapy Versus Transarterial Chemoembolization in Hepatocellular Carcinoma
- Evidence-Based Assessment of Radiotherapy Demand and Quality of Radiotherapy Services
- Radiation Therapy Planning of Non-Small Cell Lung Cancer based on PET/CT (radiation oncology component)

Water Resources

- Application and Development of Isotope Techniques to Evaluate Human Impacts on Water Balance and Nutrient Dynamics of Large River Basins

Radioisotope Production and Radiation Technologies

- Nanosized Delivery Systems for Radiopharmaceuticals
- Instructive Surfaces and Scaffolds for Tissue Engineering Using Radiation Technology

Table A26. Coordinated research projects completed in 2014

Nuclear Fuel Cycle and Materials Technology

- Spent Fuel Performance Assessment and Research (SPAR-III)

Nuclear Science

- Prompt Fission Neutron Spectra of Actinides

Food and Agriculture

- Strategic Placement and Area-Wide Evaluation of Water Conservation Zones in Agricultural Catchments for Biomass Production, Water Quality and Food Security
- Improving Nutritional Quality by Altering Concentrations of Enhancing Factors Using Induced Mutation and Biotechnology in Crops
- Applying GIS and Population Genetics for Managing Livestock Insect Pests
- Development and Evaluation of Improved Strains of Insect Pests for SIT

Human Health

- Development of Advanced Dosimetry Techniques for Diagnostic and Interventional Radiology
- Optimization of Radiotherapy in Low Resource Settings: Paediatric Cancer Patients
- Food Fortification and Biofortification to Improve Micronutrients Status during Early Life
- Management of Severe Acute Malnutrition during Early Life
- Addressing Nutritional Requirements by Stable Isotope Techniques

Radioisotope Production and Radiation Technology

- Application of Large Sample Neutron Activation Analysis Techniques for Inhomogeneous Bulk Archaeological Samples and Large Objects

Table A27. Publications issued in 2014**Nuclear Power**

- Ageing Management for Nuclear Power Plants, Safety Guide — IAEA Safety Standards Series No. NS-G-2.12 (in Russian)
- Alternative Contracting and Ownership Approaches for New Nuclear Power Plants — IAEA TECDOC Series No. 1750
- Approaches to Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL) Final Report — IAEA TECDOC Series No. 1736
- Benchmark Analyses on the Control Rod Withdrawal Tests Performed during the PHÉNIX End-of-Life Experiments — IAEA TECDOC Series No. 1742
- BN-600 MOX Core Benchmark Analysis: Results from Phases 4 and 6 of a Coordinated Research Project on Updated Codes and Methods to Reduce the Computational Uncertainties of the LMFR Reactivity Effects — IAEA TECDOC Series No. 1700
- Climate Change and Nuclear Power 2014
- CORR Guidelines: Preparing and Conducting Review Missions of Construction Project Readiness for Nuclear Power Plants — IAEA Services Series No. 24
- Country Nuclear Power Profiles: 2014 Edition — IAEA-CNPP/2014/CD
- Energy, Electricity and Nuclear Power Estimates for the Period up to 2050, 2014 Edition — Reference Data Series, Edition 34, No. 1
- Evaluation of Advanced Thermohydraulic System Codes for Design and Safety Analysis of Integral Type Reactors — IAEA TECDOC Series No. 1733
- INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Economics — IAEA Nuclear Energy Series No. NG-T-3.12
- INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Infrastructure — IAEA Nuclear Energy Series No. NG-T-4.4
- International Safeguards in the Design of Nuclear Reactors — IAEA Nuclear Energy Series No. NP-T-2.9
- Managing Environmental Impact Assessment for Construction and Operation in New Nuclear Power Programmes — IAEA Nuclear Energy Series No. NG-T-3.11
- Nuclear Power Newsletter Vol. 11, Nos 1, 2 and 3, January, May and September 2014
- Nuclear Power Reactors in the World, 2014 Edition — Reference Data Series, Edition 34, No. 1
- Operating Experience with Nuclear Power Stations in Member States in 2013, 2014 Edition (CD-ROM)
- Options to Enhance Proliferation Resistance of Innovative Small and Medium Sized Reactors Economics — IAEA Nuclear Energy Series No. NP-T-1.11
- Preparation of a Feasibility Study for New Nuclear Power Projects — IAEA Nuclear Energy Series No. NG-T-3.3
- Project Experiences in Research Reactor Ageing Management, Modernization and Refurbishment — IAEA TECDOC Series No. 1748
- Review of Seismic Evaluation Methodologies for Nuclear Power Plants Based on a Benchmark Exercise — IAEA TECDOC Series No. 1722
- Technical Requirements in the Bidding Process for a New Research Reactor Projects — IAEA Nuclear Energy Series No. NP-T-5.6
- Third International Conference on Nuclear Power Plant Life Management: Proceedings of an International Conference held in Salt Lake City, USA, 14–18 May 2012 — Proceedings Series

Nuclear Fuel Cycle and Materials Technology

- Classification of Radioactive Waste, General Safety Guide — IAEA Safety Standards Series No. GSG-1 (in Russian)
- Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries, Specific Safety Guide — IAEA Safety Standards Series No. SSG-17 (in Arabic, French and Spanish)
- Fuel Cycle and Waste Newsletter, Vol. 10, No. 1, March 2014
- Operation and Licensing of Mixed Cores in Water Cooled Reactors — IAEA TECDOC Series No. 1720
- Pressurized Heavy Water Reactor Fuel: Integrity, Performance and Advanced Concepts Reactors — IAEA TECDOC Series (CD-ROM) No. 1751CD
- Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2009), Proceedings of an International Symposium, Vienna, Austria, 22–26 June 2009 — IAEA TECDOC Series No. 1739
- Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2009), Proceedings of an International Symposium, Vienna, Austria, 22–26 June 2009 — IAEA TECDOC Series (CD-ROM) No. 1739CD

Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development

- Hands-on Training Courses Using Research Reactors and Accelerators — Training Course Series No. 57
- Managing Human Performance to Improve Nuclear Facility Operation — IAEA Nuclear Energy Series No. NG-T-2.7
- Managing Organizational Change in Nuclear Organizations — IAEA Nuclear Energy Series No. NG-T-1.1
- Nuclear Engineering Education: A Competence Based Approach to Curricula Development — IAEA Nuclear Energy Series No. NG-T-6.4
- Use of a Graded Approach in the Application of the Management System Requirements for Facilities and Activities — IAEA TECDOC Series No. 1740

Nuclear Science

- Applications of Research Reactors — IAEA Nuclear Energy Series No. NP-T-5.3
- Atomic and Plasma–Material Interaction Data for Fusion, Vol. 16
- Benchmark Analyses of Sodium Natural Convection in the Upper Plenum of the Monju Reactor Vessel — IAEA TECDOC Series No. 1754
- Compendium of Neutron Beam Facilities for High Precision Nuclear Data Measurements — IAEA TECDOC Series No. 1743
- Cost Estimation for Research Reactor Decommissioning — IAEA Nuclear Energy Series No. NW-T-2.4
- Development and Applications of Residual Stress Measurements Using Neutron Beams — Technical Reports Series No. 477
- Heat Transfer Behaviour and Thermohydraulics Code Testing for Supercritical Water Cooled Reactors (SCWRs) — IAEA TECDOC Series No. 1746
- In-pile Testing and Instrumentation for Development of Generation-IV Fuels and Materials — IAEA TECDOC Series (CD-ROM) No. 1726CD
- Nuclear Data Newsletter, Nos 57 and 58, May and November 2014
- X Ray Fluorescence in the IAEA and its Member States Newsletter, Nos 25 and 26, September 2013 and April 2014

Environment

- A Procedure for the Sequential Determination of Radionuclides in Environmental Samples: Liquid Scintillation Counting and Alpha Spectrometry for ^{90}Sr , ^{241}Am and Pu Radioisotopes — IAEA Analytical Quality in Nuclear Applications Series No. 37
- A Procedure for the Sequential Determination of Radionuclides in Phosphogypsum: Liquid Scintillation Counting and Alpha Spectrometry for ^{210}Po , ^{210}Pb , ^{226}Ra , Th and U Radioisotopes — IAEA Analytical Quality in Nuclear Applications Series No. 34
- ALMERA Proficiency Test: Determination of Natural and Artificial Radionuclides in Soil and Water — IAEA Analytical Quality in Nuclear Applications Series No. 32
- Communication and Stakeholder Involvement in Environmental Remediation Projects — IAEA Nuclear Energy Series No. NW-T-3.5
- Experiences and Lessons Learned Worldwide in the Cleanup and Decommissioning of Nuclear Facilities in the Aftermath of Accidents — IAEA Nuclear Energy Series No. NW-T-2.7
- Guidelines for Using Fallout Radionuclides to Assess Erosion and Effectiveness of Soil Conservation Strategies — IAEA TECDOC Series No. 1741
- Guidelines for Using Fallout Radionuclides to Assess Erosion and Effectiveness of Soil Conservation Strategies — IAEA TECDOC Series (CD-ROM) No. 1741CD
- Handbook of Parameter Values for the Prediction of Radionuclide Transfer to Wildlife — Technical Reports Series No. 479
- Lessons Learned from Environmental Remediation Programmes — IAEA Nuclear Energy Series No. NW-T-3.6
- Modelling of Biota Dose Effects: Report of Working Group 6 Biota Dose Effects Modelling of EMRAS II Topical Heading Reference Approaches for Biota Dose Assessment, Environmental Modelling for Radiation Safety (EMRAS II) Programme — IAEA TECDOC Series No. 1737
- National and Regional Surveys of Radon Concentration in Dwellings: Review of Methodology and Measurement Techniques — IAEA Analytical Quality in Nuclear Applications Series No. 33
- Remediation of Land Contaminated by Radioactive Material Residues: Proceedings of an International Conference held in Astana, Kazakhstan, 18–22 May 2009 — Proceedings Series
- The Environmental Behaviour of Radium: Revised Edition — Technical Reports Series No. 476
- Worldwide Open Proficiency Test for X Ray Fluorescence Laboratories PTXRFIAE08: Determination of Minor and Trace Elements in Natural Soil — IAEA Analytical Quality in Nuclear Applications Series No. 38
- Worldwide Open Proficiency Test for X Ray Fluorescence Laboratories PTXRFIAEA09: Determination of Major, Minor and Trace Elements in a River Clay — IAEA Analytical Quality in Nuclear Applications Series No. 36

Food and Agriculture

- Animal Production and Health Newsletter Nos 59, 60 and 61, January and July 2014
- Food and Environmental Protection Newsletter, Vol. 17, Nos 1 and 2, January and July 2014
- Insect Pest Control Newsletter No. 83, July 2014
- Optimizing Productivity of Food Crop Genotypes in Low Nutrient Soils — IAEA TECDOC Series No. 1721
- Optimizing Productivity of Food Crop Genotypes in Low Nutrient Soils — IAEA TECDOC Series (CD-ROM) No. 1721CD
- Plant Breeding and Genetics Newsletter, Nos 32 and 33, January and July 2014
- Radiation Processed Materials in Products from Polymers for Agricultural Applications Soils — IAEA TECDOC Series No. 1745
- Soils Newsletter, Vol. 36, No. 2, January 2014
- Soils Newsletter, Vol. 37, No. 1, July 2014

Human Health

- A Handbook for the Education of Radiation Therapists (RTTs) — Training Course Series No. 58
- A Handbook for the Education of Radiation Therapists (RTTs) — Training Course Series (CD-ROM) No. 58CD
- Diagnostic Radiology Physics: A Handbook for Teachers and Students — Non-serial Publication
- Dosimetry in Diagnostic Radiology for Paediatric Patients — IAEA Human Health Series No. 24
- Guided Intraoperative Scintigraphic Tumour Targeting (GOSTT): Implementing Advanced Hybrid Molecular Imaging and Non-imaging Probes for Advanced Cancer Management — IAEA Human Health Series No. 29
- IAEA Syllabus for the Education and Training of Radiation Oncologists Endorsed by the American Society for Radiation Oncology (ASTRO) and the European Society for Therapeutic Radiology and Oncology (ESTRO) — Training Course Series No. 36 (in Arabic, French, Russian and Spanish)
- Introduction to Body Composition Assessment Using the Deuterium Dilution Technique with Analysis of Saliva Samples by Fourier Transform Infrared Spectrometry) — IAEA Human Health Series No. 12 (in Spanish)
- Justification of Practices, Including Non-medical Human Imaging — IAEA Safety Standards Series No. GSG-5
- PET/CT Atlas on Quality Control and Image Artefacts — IAEA Human Health Series No. 27
- Postgraduate Medical Physics Academic Programmes — Training Course Series No. 56
- Quantitative Nuclear Medicine Imaging: Concepts, Requirements and Methods — IAEA Human Health Reports No. 9
- Radiotherapy Facilities: Master Planning and Concept Design Considerations — IAEA Human Health Reports No. 10
- Roles and Responsibilities, and Education and Training Requirements for Clinically Qualified Medical Physicists — IAEA Human Health Series No. 25 (in Spanish)
- SSDL Newsletter Issue No. 62, December 2013
- Stable Isotope Technique to Assess Intake of Human Milk in Breastfed Infants — IAEA Human Health Series No. 7 (in Spanish)
- Strategies for the Management of Localized Prostate Cancer: A Guide for Radiation Oncologists — IAEA Human Health Reports No. 11
- The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Industrial Radiography — IAEA TECDOC Series No. 1747
- The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Interventional Cardiology — IAEA TECDOC Series No. 1735

Water Resources

- A Procedure for the Rapid Determination of Ra-226 and Ra-228 in Drinking Water by Liquid Scintillation Counting — IAEA Analytical Quality in Nuclear Applications Series No. 39

Radioisotope Production and Radiation Technology

- Detection of Harmful Algal Toxins Using the Radioligand Receptor Binding Assay: A Manual of Methods — IAEA TECDOC Series No. 1729

Emergency Preparedness and Response

- A Framework for an Integrated Risk Informed Decision Making Process— INSAG Series No. 25 (in Russian)

- Communication with the Public in a Nuclear or Radiological Emergency — EPR-Public Communications 2012, Emergency Preparedness and Response Series (in Arabic and Russian)
- Considerations in Emergency Preparedness and Response for a State Embarking on a Nuclear Power Programme — EPR-Embarking 2012, Emergency Preparedness and Response Series (in Spanish and Arabic)
- Cytogenetic Dosimetry: Applications in Preparedness for and Response to Radiation Emergencies — EPR-Biodosimetry 2011, Emergency Preparedness and Response Series (in Arabic, Russian and Spanish)
- Environmental Sensitivity in Nuclear Emergencies in Rural and Semi-natural Environments: Report of Working Group 8, Environmental Sensitivity of EMRAS II, Topical Heading Approaches for Assessing Emergency Situations — IAEA TECDOC Series No. 1719
- IEC Information Newsletter No. 46, Q4-2013
- IEC Information Newsletter No. 47, Q1-2014
- IEC Information Newsletter No. 48, Q2-2014
- Lessons Learned from the Response to Radiation Emergencies (1945–2010) — EPR-Lessons Learned 2012, Emergency Preparedness and Response Series (in French and Spanish)
- Medical Preparedness and Response for a Nuclear or Radiological Emergency — Emergency Preparedness and Response Series (CD-ROM), EPR-MEDICAL/T-2014/CD
- Operations Manual for Incident and Emergency Communication — EPR-IEComm 2012, Emergency Preparedness and Response Series (in Arabic and Spanish)
- Portable Digital Tool for Assisting First Responders to a Radiological Emergency — EPR-First Responders/PDA-2009, Emergency Preparedness and Response Series (in Russian)
- Severe Accident Management Programmes for Nuclear Power Plants, Safety Guide— IAEA Safety Standards Series No. NS-G-2.15 (in Russian)
- The Radiological Accident in Lia, Georgia — Non-serial Publication
- The Use of the International Nuclear and Radiological Event Scale (INES) for Event Communication: Guidelines and Good Practices for Setting Up a National Framework on the Effective Use of INES for Event Communication, INES-Event communication — Non-serial Publication
- Transfer of Tritium in the Environment after Accidental Releases from Nuclear Facilities: Report of Working Group 7 Tritium Accidents of EMRAS II Topical Heading Approaches for Assessing Emergency Situations — IAEA TECDOC Series No. 1738

Safety of Nuclear Installations

- Chemistry Programme for Water Cooled Nuclear Power Plants, Specific Safety Guide — IAEA Safety Standards Series No. SSG-13 (in Russian)
- Commissioning for Nuclear Power Plants — IAEA Safety Standards Series No. SSG-28
- Criticality Safety in the Handling of Fissile Material — IAEA Safety Standards Series No. SSG-27
- Decommissioning of Facilities, General Safety Requirements Part 6 — IAEA Safety Standards Series No. GSR Part 6
- Deterministic Safety Analysis for Nuclear Power Plants, Specific Safety Guide — IAEA Safety Standards Series No. SSG-2 (in Russian)
- Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants, Specific Safety Guide — IAEA Safety Standards Series No. SSG-3 (in Russian)
- Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants, Specific Safety Guide — IAEA Safety Standards Series No. SSG-4 (in Russian)
- Development of a Regulatory Inspection Programme for a New Nuclear Power Plant Project — IAEA Safety Reports Series No. 81
- Education and Training in Radiation, Transport and Waste Safety Newsletter, Nos 3 and 4, May and August 2014

- Evaluation of Seismic Safety for Existing Nuclear Installations, Safety Guide — IAEA Safety Standards Series No. NS-G-2.13 (in Russian)
- Guidelines for the Review of Research Reactor Safety: Revised Edition — IAEA Services Series No. 25
- Improving the International System for Operating Experience Feedback — INSAG Series 23 (in Russian)
- International Conference on Topical Issues in Nuclear Installation Safety: Defence in Depth — Advances and Challenges for Nuclear Installation Safety — IAEA TECDOC Series (CD-ROM) No. 1749CD
- IRIS Guidelines 2014 Edition — IAEA Services Series No. 28
- Managing Regulatory Body Competence Project — IAEA Safety Reports Series No. 79
- Monitoring and Surveillance of Radioactive Waste Disposal Facilities — IAEA Safety Standards Series No. SSG-31
- Near Surface Disposal Facilities for Radioactive Waste, Specific Safety Guide — IAEA Safety Standards Series No. SSG-29
- Nuclear Safety Infrastructure for a National Nuclear Power Programme Supported by the IAEA Fundamental Safety Principles — INSAG Series 22 (in Russian)
- Progress in Methodologies for the Assessment of Passive Safety System Reliability in Advanced Reactors — IAEA TECDOC Series No. 1752
- Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards — IAEA Safety Standards Series No. GSR Part 3
- Regulatory Practices on Ageing Management and Long Term Operation of Nuclear Power Plants in the Ibero-American Region: Results of the FORO/IAEA Programme on Nuclear and Radiation Safety in Ibero-America — Non-serial Publication
- Safe Management of the Operating Lifetimes of Nuclear Power Plants — INSAG Series 14 (in Russian)
- Safety Classification of Structures, Systems and Components in Nuclear Power Plants — IAEA Safety Standards Series No. SSG-30
- Safety of Nuclear Fuel Cycle Facilities — IAEA Safety Standards Series No. NS-R-5 (Rev. 1)
- Safety Reassessment for Research Reactors in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant — IAEA Safety Reports Series No. 80
- SALTO Peer Review Guidelines: Guidelines for Peer Review of Safety Aspects of Long Term Operation of Nuclear Power Plants — IAEA Services Series No. 26
- Strengthening the Global Nuclear Safety Regime — INSAG Series 21 (in Russian)
- The Management System for Nuclear Installations, Safety Guide — IAEA Safety Standards Series No. GS-G-3.5 (in Russian)

Radiation and Transport Safety

- Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material: 2012 Edition — IAEA Safety Standards Series No. SSG-26
- Control of Transboundary Movement of Radioactive Material Inadvertently Incorporated into Scrap Metal and Semi-finished Products of the Metal Recycling Industries. Results of the Meetings Conducted to Develop a Draft Code of Conduct — Non-serial Publication
- Implications for Occupational Radiation Protection of the New Dose Limit for the Lens of the Eye — IAEA TECDOC Series No. 1731
- Medidas de seguridad radiológica implementadas durante los XVI Juegos Panamericanos y IV Juegos Parapanamericanos: Guadalajara, México, 2011 — Non-serial Publication
- Model Regulations for the Use of Radiation Sources and for the Management of the Associated Radioactive Waste — IAEA TECDOC Series No. 1732
- Radiation Safety in Industrial Radiography, Specific Safety Guide — IAEA Safety Standards Series No. SSG-11 (in Spanish)

- Regulatory Control for the Safe Transport of Naturally Occurring Radioactive Material (NORM) — IAEA TECDOC Series No. 1728
- SARIS Guidelines 2014 Edition — IAEA Services Series No. 27
- Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material (2009 Edition) — IAEA Safety Standards Series No. TS-G-1.6 (Rev. 1)

Management of Radioactive Waste

- Characterization of Swelling Clays as Components of the Engineered Barrier System for Geological Repositories — IAEA TECDOC Series No. 1718
- Management of Disused Sealed Radioactive Sources — IAEA Nuclear Energy Series No. NW-T-1.3
- Mobile Processing Systems for Radioactive Waste Management — IAEA Nuclear Energy Series No. NW-T-1.8
- Modular Design of Processing and Storage Facilities for Small Volumes of Low and Intermediate Level Radioactive Waste including Disused Sealed Sources Management — IAEA Nuclear Energy Series No. NW-T-1.4
- Planning and Design Considerations for Geological Repository Programmes of Radioactive Waste — IAEA TECDOC Series No. 1755
- Treatment of Radioactive Gaseous Waste — IAEA TECDOC Series No. 1744

Nuclear Security

- Application of Nuclear Forensics in Combating Illicit Trafficking of Nuclear and Other Radioactive Material — IAEA TECDOC Series No. 1730
- Establishing a National Nuclear Security Support Centre — IAEA TECDOC Series No. 1734
- International Physical Protection Advisory Service (IPPAS) Guidelines — IAEA Services Series No. 29
- Nuclear Security Systems and Measures for Major Public Events — IAEA Nuclear Security Series No. 18 (in Russian)
- Nuclear Security: Enhancing Global Efforts — Proceedings of an International Conference held in Vienna, Austria, 1–5 July 2013 — Proceedings Series
- Objective and Essential Elements of a State's Nuclear Security Regime — IAEA Nuclear Security Series No. 20 (in Arabic, Chinese, French, Spanish and Russian)
- Radiological Crime Scene Management — IAEA Nuclear Security Series No. 22-G
- The Interface between Safety and Security at Nuclear Power Plants — INSAG Series 24 (in Russian)

Nuclear Verification

- Safeguards Implementation Practices Guide on Facilitating IAEA Verification Activities — IAEA Services Series No. 30

Legislative Assistance

- Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols — IAEA Services Series No. 21

Table A28. Training courses, seminars and workshops held in 2014

Assessment and Management of Marine and Terrestrial Environments

- Advanced Training Course on Marine Radioactivity
Germany
- TC on Coincidence Summing, Geometry & Self-attenuation Corrections in Gamma-Ray Spectrometry
Jordan
- Approaches to the Recovery of Contaminated Land
Austria
- Managerial and Tech Requirements of ISO 17025 with the Focus on Gamma-Ray Spectrometry
Austria
- QA/QC in Chemistry/Radiochemistry
Tunisia
- Data Base Building and Management and Statistical Treatment of Data
Austria
- RTC on Establishment of Transfer Factors and Dose Assessment for Marine Organisms
Malaysia
- RTC on Monitoring the Radio. Impacts of Nuclear Discharges to Pacific Island Mar.
Fiji
- Effective Utilization of XRF Spectrometers for an Optimized & Accurate APM Analysis
New Zealand
- RTC on the Analysis of Radionuclides in the Marine Environment
Germany
- Trace Elements Analysis in Marine Samples
Jordan
- Air Particulate Matter
Portugal
- Methods of Assessing Transboundary Transport
Hungary
- Risk Assessment for Uranium Production Legacy Sites
Austria
- AB-Toxin Extraction
Costa Rica

Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development

- MAED
Angola, Burundi, Lesotho, Uganda
- Interregional e-Training Course on Future Energy Demand Analysis
Austria
- NTW on Managerial & Technical Requirements of ISO 17025
Austria
- Energy demand Analysis Using the IAEA's Analytical Tool MAED
The former Yugoslav Republic of Macedonia
- MESSAGE
Cameroon, Mali, Tunisia, Uganda
- Financial Analysis of Future Power Projects Applying IAEA's FINPLAN Model
Nicaragua

- Energy Balance Studio and Energy Scenarios Simulation
Sudan
- Regional Training Course on Innovative Approaches for Nuclear Knowledge Management
Republic of Korea
- FINPLAN
Sudan
- Electricity Sector Analysis using the IAEA tool WASP
Zimbabwe

Emergency Preparedness

- TC on Medical Response to Nuclear and Radiological Emergencies
Austria
- NTC for First Responders to a Radiological Emergency
Jordan
- Developing a Capacity for Response to Radiological Emergencies
Madagascar
- RTC on Basic Elements of Nuclear & Radiological Emergency Preparedness & Response
Austria
- Practical TRC on Rapid Determination of Radiostrontium in Milk
Republic of Korea
- RTC on Public Communications during an Emergency
Tajikistan
- First Response to a Radiological Emergency
Dominican Republic
- TC on Medical Preparedness & Response for Nuclear or Radiological Emergency at the Scene
United Arab Emirates
- NTC on Medical Preparedness & Response for a Nuclear or Radiological Emergency
United Arab Emirates

Executive Management, Policy Making and Coordination

- 4th Session of the Nuclear Law Institute
Austria
- International School of Nuclear Law
France

Food and Agriculture

- Development of Analytical Techniques and Applications for Greenhouse Gases
Chile
- National Training Course
Ecuador
- Techniques and Organization of Artificial Insemination Field Services in Cattle
Eritrea
- Operation and Utilization of NIRS for Feed Analysis
Eritrea
- Use of Fallout Radionuclides and Compound-Specific Stable Isotope Techniques
Austria
- Techniques and Organization of Artificial Insemination Field Services in Cattle
Myanmar

- NTC on Mutation Breeding and Efficiency Enhancing Technologies
Oman
- Use of Mutation Induction in Crop Breeding for Abiotic Stresses
Peru
- GIS for Area-Wide Fruit Fly Programmes in the Indian Ocean
United Republic of Tanzania
- Soil and Water Resources
Zimbabwe
- Methodologies and Mechanisms for Screening against Biotic and Abiotic Stresses
Namibia
- Mutation Induction and In Vitro Techniques
South Africa
- Analytical Method Validation and Exposure
South Africa
- Livestock Data Collection and Analysis for Breeding Improvement
Tunisia
- GIS and Data Management Applied
Ethiopia
- Irrigation and Fertilizer Management
Egypt
- RTC on the Use of C-13 in Soil Organic Matter Studies and in the Assessment of Plant Tolerance
China
- RTC on Best Practices for the use of Irradiation as a Phytosanitary Treatment
Philippines
- RTC on Mutation Breeding and Efficiency Enhancing Techniques
Austria
- RTC on Taxonomy and Identification of Fruit Fly Pest Species Exotic to the Middle East
Austria
- RTC on Application of Stable Isotope and Trace Element Analyses for Food Traceability
Philippines
- RTC on Application of Stable Isotope and Trace Element Analysis
Sri Lanka
- RTC on Livestock Data Collection and Analysis for Breeding Improvement
Jordan
- RTC on Genetic Characterization of Indigenous Livestock Breeds Using DNA Markers
Austria
- Training on Mass Rearing and SIT-related Activities
Brazil
- RTC on Fruit Fly Monitoring and Suppression including MAT & SIT for Southeast Asia
Indonesia
- RTC on Efficient Water and Fertilizer Use Using New Techniques
United Arab Emirates
- Separating Evapotranspiration (ET) into Evaporation (E) and Transpiration (T)
United Arab Emirates
- RTC on Molecular Methods for Characterization of Mutant Germplasm
Colombia

- Plant Improvement via In Vitro Mutagenesis for Improvement of Avocado Production
Mexico
- Mutation Breeding Techniques
Cuba
- Use of Compound-Specific Stable Isotope (CSSI) Techniques
Chile
- RTC on the Use of ^{15}N Based Techniques
Uruguay
- Disease Diagnosis due to the New World Screw Worm (NWSW)
Panama
- Regional Training Course on Biomonitoring
Chile
- Application of Immunoassay Techniques for Reproductive Hormone Analysis in Ruminants
Thailand

Human Health

- Small Field Dosimetry in Radiotherapy
Argentina
- Radiotherapy Treatment of Lung and Head and Neck Cancer
Bangladesh
- Clinical Applications of Radiotherapy in the Management of Gynaecological Disorders
Bangladesh
- Training Course for Radiation Therapy Technologists
Bangladesh
- New Treatment Planning System (TPS) and the New 2D Motorized Water Phantom
Honduras
- Modern Clinical Radiotherapy
Indonesia
- Course on Quality Assurance
Kazakhstan
- Clinical Applications of 3D CRT
Mauritania
- Radionuclide Therapy
Benin
- Endocrinology Diagnosis and Therapy
Uganda
- Nuclear Cardiology and Oncology
South Africa
- Data Evaluation and Analysis
Benin
- Transitioning from 2D to 3D CRT (French)
Tunisia
- Commissioning of Radiotherapy Treatment Planning Systems
Morocco
- Accuracy Requirements and Uncertainty in Radiotherapy
Sudan

- Imaging in Radiotherapy
Zimbabwe
- Quality Management in Radiotherapy
Zimbabwe
- RTT
Zambia
- GIT Cancers
Austria
- Cancer Control Planning Based on impACT Review Experience
Austria
- Data Collection and Management
Austria
- Quality Assurance in Medical Imaging
Austria
- IAEA/RCA Regional Training Course on Clinical Applications of PET/CT for Nuclear
Japan
- IAEA/RCA Regional TRC on Advanced Hybrid Nuclear Reporting in Oncology
AUL
- IAEA/RCA Regional Training Course on Essentials of Hybrid Nuclear Medicine Imaging
Thailand
- IAEA/RCA Training Course on 3D Image-Guided Brachytherapy for Cervical Cancer
Japan
- Improving Nuclear Cardiology Services in Evaluation of IHD and Left Ventricular
Sri Lanka
- Clinical Applications of SBRT in Head and Neck, Spinal and Liver Cancers
Japan
- Assessment of Human Milk Intake by Stable Isotope Techniques
Viet Nam
- RTC on CT Cancer Staging for Abdomen and Urogenital System
Republic of Korea
- QM Audits in Nuclear Med Practices (QUANUM) Master's Course: Train the Trainers
United Arab Emirates
- Regional training course on Nuclear Oncology using SPECT/CT and PET/CT (Basic Course)
United Arab Emirates
- Radiation Safety/QA/QC in SPECT/CT, PET/CT, Cyclotron and Radiopharmaceuticals
Qatar
- Regional Training Course on Assessment of Body Composition and Total Energy
Malaysia
- Regional Training Course on Hybrid Imaging: SPECT/CT and PET/CT
Bosnia and Herzegovina
- Neuroimaging
Austria
- EANM Trends in PET Methodologies
Austria
- EANM Basic Learning Course on PET/CT in Oncology
Austria

- SPECT Imaging
Austria
- EANM Advanced Dosimetry Learning Course
Austria
- Regional Training Course on Hybrid Imaging: SPECT/CT and PET/CT
Estonia
- EANM PET/CT in Oncology Advanced Course
Austria
- Thematic Training Course: Developing a Radiotherapy Plan
Slovenia
- IAEA/ESTRO Course on Combined Drug Radiation Treatment: Biological Basis
Russian Federation
- Radiation Oncology
Bulgaria
- ESTRO Course — Train RTT Trainers
Austria
- Dosimetry and Quality Assurance for External Beam Radiotherapy
Russian Federation
- Transition from 2D Radiation Therapy to 3D Conformal Radiation Therapy
Russian Federation
- Transition from 3D Conformal Radiation Therapy to Intensity Modulated Radiation
Russian Federation
- Role of Imaging and Patient Specific QA
Russian Federation
- ESTRO Training Course: Advanced Brachytherapy Physics
Belgium
- Treatment Planning
Hungary
- Radiotherapy
United States of America
- Update in Three-Dimensional Conformal Radiotherapy
Mexico
- Use of Stable Isotope Techniques for the Assessment of Body Composition
Mexico
- RTC on the Guidelines for Control of Therapeutic Radiopharmaceuticals
Brazil
- Implementation of the Guideline for the Preparation and Quality Assurance Control
Peru
- Use of Diagnostic and Therapeutic Radionuclide Therapies in Neuroendocrine Tumours
Mexico
- Use of the Hybrid Image Modalities (SPECT/CT and PET/CT) in Paediatrics
Uruguay
- National Training Course on the implementation of IAEA TRS 430
Romania

Management of Radioactive Waste

- ITC on Fuel Cycle Strategies and Radioactive Waste Policy
Viet Nam
- CONNECT
Austria
- Practical Training Course on Planning and Implementation of Nuclear Facility Decommissioning
United States of America
- National Training Course on Orphan Source Search Training
Nigeria
- Interregional Training Course on the Management of Radioactive Lightning Rods
Montenegro
- Conditioning of Disused Sealed Radioactive Sources of Category 1 and 2
South Africa
- Mining Activities for Radioactive Minerals
Mozambique
- Development and Implementation of National Policy and Strategy for Radioactive Waste Management
Viet Nam
- RTC on Developing a Safety Case for Predisposal Waste Management Facilities
Austria
- Practical Training Course
Philippines
- Interregional Training Course on Management of DSRS using the IAEA Borehole Disposal
Sri Lanka
- RTC 1 on Uranium Production Legacy Sites
Russian Federation
- RTC 2 on Uranium Production Legacy Sites
Russian Federation
- Advanced Training on Management of Large Components with Complex Geometries
Slovakia
- Predisposal Management of Radioactive Waste
Russian Federation
- Advanced National Training Course on the use of MESSAGE
Romania, Sri Lanka

Management of Technical Cooperation for Development

- Procedures and the Organization of the Technical Cooperation Programme
Austria

Nuclear Fuel Cycle and Materials Technologies

- Regional Group Training on the Utilization of Synchrotron Radiation Techniques
Italy
- Quality Assurance of Fingerprint and Source Apportionment of Air Particulate Matter
Austria

Nuclear Power

- Regulator–Operator Interfaces and Implementation of National Requirements
Finland
- Supporting NP Infrastructure Capacity Building in MSs Introducing & Expanding NP
Republic of Korea
- Leadership and Management for Introducing and Expanding Nuclear Power Programmes
United States of America
- Legal and Financial Issues for a Decision in Countries Introducing or Expanding
United States of America
- Nuclear Energy Policy, Planning and Project Management
Republic of Korea
- Training Course on Management Systems and Safety Culture
United States of America
- Interregional Training Course on Engineering Procurement and Construction (EPC)
China
- Joint ICTP–IAEA School of Nuclear Energy Management
Italy
- Training Course on Understanding the Physics and Technology of Advanced
Malaysia
- Training Course on Providing Decision Support for Nuclear Power Planning and Development
Japan
- Energy Demand Analysis for the Assessment of Energy Supply Options including Nuclear
Austria

Nuclear Science

- 3rd WNU School on Radiation Technologies
Qatar
- The Tenth Annual World Nuclear University (WNU) Summer Institute
United Kingdom
- Nuclear Medical Equipment (LINAC)
Mauritania
- Digital Pulse Processing in Nuclear Spectroscopy
Algeria
- Protection of Sensitive Nuclear Instruments
Zambia
- Networking of Wireless Sensors
Egypt
- Harshaw TLD Reader Models 4500 and 6600
Tunisia
- Refurbishment and Customization of XRF Acquisition System
Madagascar
- Tango Distributed Control System
Algeria
- Digital Nuclear Spectroscopy
Cameroon
- Digital Power Supplies
Sudan

- Maintenance of Harshaw TLD Readers
Zambia
- RTS for End-users in Nuclear Techniques for Analysis
Albania
- Gamma Radiation Processing
Hungary
- Safe Operation of Irradiation Facilities
Poland
- Taxonomy and Identification of Fruit Fly Pest Species Exotic to the Balkans
Belgium
- Nuclear Instrumentation Electronics and Diagnostic Training
Austria
- Instrumentation Refresher Training Course: Open Source Hardware Microcontroller
Austria

Nuclear Security

- Physical Security of Radioactive Sources
Spain
- Nuclear Security Infrastructure
Costa Rica

Radiation and Transport Safety

- NTC on Radiation Protection and Safety Principles for Afghanistan
Austria
- National Training Course on Occupational and Medical Radiation Protection
Bosnia and Herzegovina
- Physicians in Charge of Health Surveillance of Exposed Workers (Part II)
Bosnia and Herzegovina
- Radiation Protection in Interventional Cardiology, Including Strategies to Avoid
Costa Rica
- IAEA ORGIMP for New Regulatory Body Staff
Costa Rica
- NTC on Authorization, Inspection and Enforcement in Medical Field
Qatar
- Self-Assessment Methodology and Tool
Zambia
- Self-Assessment of Nat. Regulatory Infrastructure for Safety Methodology and Tool
Chad
- Effective and Sustainable Regulatory Control of Radiation Sources
Mauritius
- RAIS 3.2 Web
Ethiopia
- Authorization and Inspection of Uranium Mining and Milling Activities
United Republic of Tanzania
- Regulatory Enforcement
Sudan
- Regulatory Control of Radiation Sources
Tunisia

- General Safety Provision
Morocco
- Train-the-Trainers Workshop for Radiation Protection Officers (English)
Zimbabwe
- National Regulatory Infrastructure for Safety (SARIS)
Tunisia
- RAIS 3.3 Web
Niger, Nigeria
- RTC on Regulatory Enforcements
Qatar
- RTC on the Organization, Staffing and Competence Management of Regulatory Body
Philippines
- Advance RTC on Application of RAIS 3.3 Web for Management of Regulatory Programme
Mongolia
- RTC on Assessment of Occupational Exposures due to External Sources of Radiation
Indonesia
- RTC on Radiation Protection in the Oil and Gas Industry
United Arab Emirates
- Train the Trainers RTC for Radiation Protection Officers
Malaysia
- PGEC in Radiation Protection and the Safety of Radioactive Sources
Malaysia
- RTC on Safe Transport of Radioactive Material for the Pacific Islands
New Zealand
- PGEC on Radiation Protection and the Safety of Radiation Sources
Greece
- Protection and Safety of Radiation Sources
Argentina
- Nuclear Safety
Argentina
- Reducing the Risks from Indoor and Occupational Exposure to Radon
Argentina
- Radiation Protection and Optimization in Interventional Procedures
Mexico
- Safety Assessment and Safety Case for the Predisposal Management of Radio
Dominican Republic
- Workplace Monitoring
Senegal
- Radiation Protection Principles
Togo
- NTC Patient Radiation Safety and Dosimetry in Interventional Radiology
United Arab Emirates
- Radiation Safety
Zambia

Radioisotope Production and Radiation Technology

- Cleaner and Safer Management of Industrial Processes
Austria
- RTC on Industrial Radioactive Particle Tracking (RPT)
Malaysia
- RTC on Advanced Radiation Grafting of Polymeric Matrices
Viet Nam

Safety of Nuclear Installations

- Basic Professional Training
Nigeria
- The Safety of Research Reactors
Morocco
- RTC on Integrated Approach for Regulatory Inspection
Hungary
- Regulatory Oversight of Licensees, Human and Organization Factors
Romania
- Occupational Exposure
Greece, Poland

Water Resources

- Synthesis of Isotopic Information and Use of Artificial Tracers
Jamaica
- Geographic Information System (GIS)
Austria
- Hydrochemistry and Groundwater Dating
Cameroon
- Socioeconomic Impact of Ocean Acidification and HABs
Monaco
- Groundwater–Surface Water Interaction
Cameroon
- Application of Recharge Characteristics and Groundwater Dating
Sudan
- RTC on Application of Environ. Isotope Techniques for Assessment of Ground Water
Jordan
- RTC on Investigation of Seawater Intrusion & Interrelationships between Aquifers
United Arab Emirates

Table A29. Relevant Agency web sites

Public web site

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

Nuclear Power

Nuclear energy

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

Nuclear power

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

Nuclear power technology development

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

Nuclear power engineering

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

Nuclear energy knowledge resources

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

INPRO

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

Planning and economic studies

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

International Nuclear Information System and Nuclear Knowledge Management

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

Nuclear energy databases

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

Nuclear Fuel Cycle and Materials Technologies

Nuclear fuel cycle and waste technology

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

Integrated Nuclear Fuel Cycle Information System (iNFCIS)

<https://infcis.iaea.org/>

Nuclear Science

Portal for medical related nuclear data

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

Research Reactor Database

<http://nucleus.iaea.org/RRDB/RR/ReactorSearch.aspx?rf=1>

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/Technical-Areas/RRS/operation-maintenance.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>

Distance Assisted Training on-line (DATOL)

<http://nucleus.iaea.org/HHW/Technologists/NuclearMedicineTech/Educationalresources/DAT/index.html>

Water Resources

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

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

Environment

Reference material web site

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

Incident and Emergency Preparedness and Response

Incident and Emergencies, main page:

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

Unified System for Information Exchange in Incidents and Emergencies

<https://iec.iaea.org/usie/actual/LandingPage.aspx>

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/safeguards/index.html>

Management of Technical Cooperation for Development

<http://www.iaea.org/technicalcooperation/Home/index.html>

Regional Sites

Africa

<http://www.iaea.org/technicalcooperation/Regions/Africa/index.html>

Europe

<http://www.iaea.org/technicalcooperation/Regions/Europe/index.html> Latin America

<http://www.iaea.org/technicalcooperation/Regions/Latin-America/index.html>

TC Pride

<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/index.html>

State ^{a,b} / Organization	Power reactors	Research reactors and critical assemblies	Conversion plants	Fuel fabrication plants	Repro- cessing plants	Enrichment plants	Separate storage facilities	Other facilities	Total
Republic of Macedonia									
Turkey	0	2	0	1	0	0	0	0	3
Turkmenistan	0	0	0	0	0	0	0	0	0
Uganda	0	0	0	0	0	0	0	0	0
Ukraine	19	2	0	1	0	0	8	4	34
United Kingdom	0	0	0	0	0	1	2	0	3
United Republic of Tanzania	0	0	0	0	0	0	0	0	0
United States of America	0	0	0	0	0	0	1	0	1
Uruguay	0	0	0	0	0	0	0	0	0
Uzbekistan	0	2	0	0	0	0	0	0	2
Vanuatu	0	0	0	0	0	0	0	0	0
Venezuela, Bolivarian Republic of	0	1	0	0	0	0	0	0	1
Viet Nam	4	1	0	0	0	0	0	0	5
Zimbabwe	0	0	0	0	0	0	0	0	0

Note: The numbers indicated here include projected and operational facilities, and facilities at the decommissioning stage.

^a And Taiwan, China.

^b 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.

Table 30(b). Facilities under Agency safeguards or containing safeguarded nuclear material on 31 December 2014

State ^a	Name of facility	Location ^a
Power reactors		
Argentina	Atucha-1	Lima
	Atucha-2	Lima
	Carem 25	Lima
	Embalse NPP	Embalse
Armenia	Armenian NPP	Metsamor
	Armenian NPP 3	Metsamor
Belarus	Belarus-1	Ostrovets
	Belarus-2	Ostrovets
Belgium	Doel-1 & 2	Doel
	Tihange-1	Tihange
	Tihange-2	Tihange
	Doel-3	Doel
	Tihange-3	Tihange
	Doel-4	Doel
Brazil	Angra-1	Angra dos Reis
	Angra-2	Angra dos Reis
	Angra-3	Angra dos Reis
Bulgaria	Kozloduy-1 & 2	Kozloduy
	Kozloduy-3 & 4	Kozloduy
	Kozloduy-5 & 6	Kozloduy
Canada	Darlington NGD	Bowmanville, Ontario
	Bruce 'A' N.G.S.	Tiverton, Ontario
	Bruce 'B' G.S.	Tiverton, Ontario
	Pickering N.G.S.	Pickering, Ontario
	Gentilly II	Gentilly, Quebec
	Point Lepreau	Pt. Lepreau, New Brunswick
China	QSNPP	Hai Yan, Zhe Jiang
Czech Republic	NPP Dukovany (Edu-1)	Dukovany
	NPP Dukovany (Edu-2)	Dukovany
	NPP Temelin	Temelin
Finland	Hanhikivi-1	Pyhaejoki
	Loviisa	Loviisa
	TVO-1	Olkiluoto
	TVO-2	Olkiluoto
	TVO-3	Olkiluoto
	TVO-4	Olkiluoto

State ^a	Name of facility	Location ^a
Germany	AVR	Juelich
	KW Biblis A	Biblis
	KW Biblis B	Biblis
	KKW Brunsbuettel	Brunsbuettel
	KKW Emsland	Lingen (Ems)
	KKW Grohnde	Emmerthal
	KKW Brokdorf	Brokdorf
	KKW Gundremmingen, Block B	Gundremmingen
	KKW Gundremmingen, Block C	Gundremmingen
	KKW Grafenrheinfeld	Grafenrheinfeld
	KKW Kruemmel	Geesthacht
	KKW Obrigheim	Obrigheim
	KKW Philippsburg-1	Philippsburg
	KKW Philippsburg-2	Philippsburg
	KWL Lingen	Lingen
	KW Muelheim-Kaerlich	Muelheim-Kaerlich
	KKW Neckarwestheim-1	Neckarwestheim
	KKW Neckarwestheim-2	Neckarwestheim
	HKG-THTR 300	Hamm
	KKW Unterweser	Unterweser
	KKW Isar-1	Essenbach
	KKW Greifswald-1 & 2	Lubmin
	KKW Isar-2	Essenbach
	KKW GR3-5	Lubmin
Hungary	MVM Paks-1	Paks
	MVM Paks-2	Paks
India	TAPS	Tarapur, Maharashtra
	RAPS-1 & 2	Rawatbhata, Rajasthan
	RAPS-3 & 4	Rawatbhata, Rajasthan
	RAPS-5 & 6	Rawatbhata, Rajasthan
	KKNPP	Kudankulam
	KAPS-1 & 2	Surat, Gujrat
	NAPS-1 & 2	Bulandshahar, Uttar Pradesh
Iran, Islamic Republic of	Bushehr NPP	Bushehr
	IR360 NPP	Darkhovein
Italy	Cirene	Borgo Sabotino
	Caorso	Caorso
	Garigliano	Sessa Aurunca

State ^a	Name of facility	Location ^a
	Latina	Borgo Sabotino
	Trino	Trino Vercellese
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
	Hamaoka-1	Ogasa-Gun, Shizuoka-Ken
	Hamaoka-2	Ogasa-Gun, Shizuoka-Ken
	Shimane-1	Yatsuka-Gun, Shimane-Ken
	Tokai-2	Tokai-Mura, Ibaraki-Ken
	Tsuruga-1	Tsuruga-Shi, Fukui-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
	Onagawa-1	Oshika-Gun, Miyagi-Ken
	Hamaoka-3	Ogasa-Gun, Shizuoka-Ken
	Kashiwazaki-1	Kashiwazaki-Shi, Niigata-Ken
	Kashiwazaki-2	Kashiwazaki-Shi, Niigata-Ken
	Kashiwazaki-3	Kashiwazaki-Shi, Niigata-Ken
	Kashiwazaki-4	Kashiwazaki-Shi, Niigata-Ken
	Kashiwazaki-5	Kashiwazaki-Shi, Niigata-Ken
	Shimane-2	Yatsuka-Gun, Shimane-Ken
	Shika-1	Hakui-Gun, Ishikawa-Ken
	Hamaoka-4	Ogasa-Gun, Shizuoka-Ken
	Onagawa-2	Oshika-Gun, Miyagi-Ken
	Kashiwazaki-6	Kashiwazaki-Shi, Niigata-Ken
	Kashiwazaki-7	Kashiwazaki-Shi, Niigata-Ken
	Onagawa-3	Oshika-Gun, Miyagi-Ken
	Higashidoori-1	Shimokita-Gun, Aomori-Ken
	Hamaoka-5	Ogasa-Gun, Shizuoka-Ken
	Shika-2	Hakui-Gun, Ishikawa-Ken
	Ohma	Shimokita-Gun, Aomori-Ken
	Shimane-3	Yatsuka-Gun, Shimane-Ken
	Kaminoseki-1	Kumage-Gun, Yamaguchi-Ken
	Higashidoori-1	Shimokita-Gun, Aomori-Ken
	Joyo	Higashi, Ibaraki-Ken

State ^a	Name of facility	Location ^a
	Tokai	Tokai-Mura, Ibaraki-Ken
	Monju	Tsuruga-Shi, Fukui-Ken
	Genkai-1	Higashimatsuura-Gun, Saga-Ken
	Ikata-1	Nishiuwa-Gun, Ehime-Ken
	Mihama-1	Mikata-Gun, Fukui-Ken
	Mihama-2	Mikata-Gun, Fukui-Ken
	Mihama-3	Mikata-Gun, Fukui-Ken
	Ohi-1 & 2	Ohi-Gun, Fukui-Ken
	Sendai-3	Satsumasendai-Shi
	Takahama-1	Ohi-Gun, Fukui-Ken
	Takahama-2	Ohi-Gun, Fukui-Ken
	Genkai-2	Higashimatsuura-Gun, Saga-Ken
	Ikata-2	Nishiuwa-Gun, Ehime-Ken
	Sendai-1	Sendai-Shi, Kagoshima-Ken
	Sendai-2	Sendai-Shi, Kagoshima-Ken
	Takahama-3	Ohi-Gun, Fukui-Ken
	Takahama-4	Ohi-Gun, Fukui-Ken
	Tsuruga-2	Tsuruga-Shi, Fukui-Ken
	Tomari-1	Fururu-Gun, Hokkaido
	Tomari-2	Fururu-Gun, Hokkaido
	Ohi-3	Ohi-Gun, Fukui-Ken
	Ohi-4	Ohi-Gun, Fukui-Ken
	Genkai-3	Higashimatsuura-Gun, Saga-Ken
	Genkai-4	Higashimatsuura-Gun, Saga-Ken
	Ikata-3	Nishiuwa-Gun, Ehime-Ken
	Tomari-3	Fururu-Gun, Hokkaido
Kazakhstan	BN-350	Aktau
Korea, Republic of	Shin Kori-5	Pusan
	Shin Kori-6	Pusan
	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
	Wolsong-1	Kyongju
	Wolsong-2	Kyongju

State ^a	Name of facility	Location ^a
	Wolsong-3	Kyongju
	Wolsong-4	Kyongju
	Shin Wolsong-1	Kyongju
	Shin Wolsong-2	Kyongju
	Hanbit-1	Yeonggwang
	Hanbit-2	Yeonggwang
	Hanbit-3	Yeonggwang
	Hanbit-4	Yeonggwang
	Hanbit-5	Yeonggwang
	Hanbit-6	Yeonggwang
	Hanul-1	Ulchin
	Hanul-2	Ulchin
	Hanul-3	Ulchin
	Hanul-4	Ulchin
	Hanul-5	Ulchin
	Hanul-6	Ulchin
	Shin Hanul-1	Ulchin
	Shin Hanul-2	Ulchin
Lithuania	Ignalina NPP	Visaginas
Mexico	Central Laguna Verde Unit I	Muni. Al. Luc. Veracruz
	Central Laguna Verde Unit II	Muni. Al. Luc. Veracruz
Netherlands	EPZ Borssele	Borssele
	N.V. GKN-Dodewaard	Dodewaard
Pakistan	Kanupp	Karachi
	Chasnupp-1	Kundian, District Mianwali
	Chasnupp-2	Kundian, District Mianwali
	Chasnupp-3	Kundian, District Mianwali
	Chasnupp-4	Kundian, District Mianwali
Philippines	BNPP	Morong, Bataan
Romania	Cernavoda-3	Cernavoda
	Cernavoda-4	Cernavoda
	CNE Cernavoda-1	Cernavoda
	CNE Cernavoda-2	Cernavoda
Slovakia	JAVYS A-1	Jaslovske Bohunice
	JAVYS V-1	Jaslovske Bohunice
	Mochovce-1 & 2	Mochovce
	Mochovce-3 & 4	Mochovce
	V-2	Jaslovske Bohunice
Slovenia	Krško (NEK)	Krško

State ^a	Name of facility	Location ^a
South Africa	Koeberg Unit I	Cape Town
	Koeberg Unit II	Cape Town
Spain	C.N. Almaraz-1	Almaraz
	Asco-1	Asco
	C.N. Almaraz-2	Almaraz
	Asco-2	Asco
	C.N. Jose Cabrera	Almonacid de Zorita
	C.N. de Sta. Maria De Garoña	Santa Maria de Garoña
	C.N. Cofrentes	Cofrentes
	Cn Trillo-1	Trillo
	Cn Vandellos-2	Vandellos
Sweden	Barsebaeck-1	Loeddekoepinge
	Barsebaeck-2	Loeddekoepinge
	Forsmark-1	Oesthammar
	Forsmark-2	Oesthammar
	Forsmark-3	Oesthammar
	Ringhals-1	Ringhals
	Ringhals-2	Ringhals
	Ringhals-3	Ringhals
	Ringhals 4	Ringhals
	Oskarshamn-1	Oskarshamn
	Oskarshamn-2	Oskarshamn
	Oskershamn-3	Oskarshamn
Switzerland	KKM	Muehleberg
	KKB-1	Doettingen
	KKB-2	Doettingen
	KKG	Daeniken
	KKL	Leibstadt
Ukraine	Chernobyl-1	Chernobyl
	Chernobyl-2	Chernobyl
	Chernobyl-3	Chernobyl
	Khmelnitski-1	Neteshin
	Khmelnitski-2	Neteshin
	Khmelnitski-3	Neteshin
	Khmelnitski-4	Neteshin
	Rovno-1 & 2	Kuznetsovsk
	Rovno-3	Kuznetsovsk
	Rovno-4	Kuznetsovsk
	South Ukraine-1	Yuzhnoukrainsk

State ^a	Name of facility	Location ^a
	South Ukraine-2	Yuzhnoukrainsk
	South Ukraine-3	Yuzhnoukrainsk
	Zaporozhe-1	Energodar
	Zaporozhe-2	Energodar
	Zaporozhe-3	Energodar
	Zaporozhe-4	Energodar
	Zaporozhe-5	Energodar
	Zaporozhe-6	Energodar
Viet Nam	Ninh Thuan-1 Plant Unit 1	Phuoc Dinh Comm.Thuan Nam Dist.
	Ninh Thuan-1 Plant Unit 2	Phuoc Dinh Comm.Thuan Nam Dist.
	Ninh Thuan-2 Plant Unit 1	Vinh Hai Comm. Ninh Hai Dist.
	Ninh Thuan-2 Plant Unit 2	Vinh Hai Comm. Ninh Hai Dist.
Research Reactors and Critical Assemblies		
Algeria	Nur Reactor	Draria-Bp29 Wilaya De Tipaza
	Es Salam Reactor	Ain Oussera
Argentina	RA-1	Buenos Aires
	RA-3	Ezeiza
	RA-10	Ezeiza
	RA-4	Rosario
	RA-6	Bariloche
	RA-0	Cordoba
	RA-8	Pilcaniyeu
Australia	HIFAR	Lucas Heights, Sutherland
	MOATA	Lucas Heights, Sutherland
	OPAL	Lucas Heights, Australia
Austria	TRIGA Mark II Reactor	Vienna
Bangladesh	Atomic Energ. Res. Estab.	Dhaka
Belarus	Sosny	Minsk
Belgium	BR1-CEN	Mol
	BR2-CEN	Mol
	Thetis Universiteit Gent	Gent
	Venus-CEN	Mol
Brazil	IPEN/IEA-R1	São Paulo
	IEN/Arogonauta Reactor	Rio de Janeiro
	CDTN/IRP-R1	Belo Horizonte
	IPEN/MB01 Critical Assembly	São Paulo
	Brazilian Multipurpose Reactor	Ipero
	Labgene	Ipero
Bulgaria	IRT-2000	Sofia

State ^a	Name of facility	Location ^a
Canada	NRX Reactor	Chalk River, Ontario
	DIF	Chalk River, Ontario
	NRU Reactor	Chalk River, Ontario
	Biology, Chemistry, Physics	Chalk River, Ontario
	McMaster Nuc. Reactor	Hamilton, Ontario
	Slowpoke Saskatchewan	Saskatoon, Saskatchewan
	Slowpoke Alberta	Uni. of Alberta, Edmonton
	Slowpoke Kingston	Kingston, Ontario
	Ecole Polytechnique	Montreal, Quebec
Chile	RECH-1	Santiago
	RECH-2	Santiago
China	HTR-10	Nankou, Beijing
Colombia	Ian-R1	Bogata
Czech Republic	LVR-15	Řež
	LR-0	Řež
	VR-1	Prague
Democratic Republic of the Congo	TRIGA II Reactor	Kinshasa
Denmark	Danish Decommissioning - DR3	Roskilde
Egypt	ET RR-1	Inshas
	MPR (Multi Purpose Reactor)	Inshas
Estonia	A.L.A.R.A.	Paldiski
Finland	FiR 1	Espoo
Georgia	Decom. IRT-M	Tbilisi
Germany	AKR-2	Dresden
	FH-Furtwangen	Furtwangen
	SUR-100 FHU	Ulm
	Helmholtz-Zentrum Geesthacht	Geesthacht
	FRM	Garching
	FRM II	Garching
	KFA-FRJ2	Juelich
	BER-II	Berlin
	SUR-100-RWTH	Aachen
	SUR-100 Stuttgart	Stuttgart
	Labor-St	Zittau
	SUR-100 Hannover	Hannover
	TRIGA Mainz	Mainz
Ghana	GHARR-1 — Ghana Research Reactor 1	Legon-Accra

State ^a	Name of facility	Location ^a
Greece	GRR-1	Attikis
Hungary	Budapest Research Reactor	Budapest
	Training Reactor	Budapest
Indonesia	CHTKN	Bandung
	PPNY	Yogyakarta
	RSG-GAS	Serpong
Iran, Islamic Republic of	Tehran Research Reactor (TRR)	Tehran
	Esfahan MNSR	Esfahan
	HWZPR	Esfahan
	IR-40	Arak
	Fars Research Reactor FRR	Shiraz
Israel	Israel R. R.-1(IRR-1)	Soreq
Italy	CNEN-Rb-3	Montecuccolino
	CEC-Complexe-Essor	Ispra
	CISAM-RTS-1	San Piero A Grado
	LENA	Pavia
	TAPIRO Casaccia	Santa Maria di Galeria
	TRIGA RC1 Mark II	Santa Maria di Galeria
	AGN-201	Palermo
	Jamaica	CNS
Japan	DCA	Oarai-Machi, Ibaraki-Ken
	FCA	Tokai-Mura, Ibaraki-Ken
	JMTRC	Higashi-Gun, Ibaraki-Ken
	KUCA	Osaka
	NCA	Kawasaki-Shi
	VHTRC	Tokai-Mura, Ibaraki-Ken
	TCA	Tokai-Mura, Ibaraki-Ken
	JMTR	Higashi, 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
	KUR	Sennan-Gun, Osaka
	Musashi Reactor	Kawasaki-Shi, Kanagawa-Ken
	NSRR	Tokai-Mura, Ibaraki-Ken
Rikkyo	Nagasaka, Kanagawa-Ken	
TODAI	Tokai-Mura, Ibaraki-Ken	
TTR	Kawasaki-Shi, Kanagawa-Ken	

State ^a	Name of facility	Location ^a
	HTR	Kawasaki-Shi, Kanagawa-Ken
	HTTR	Higashi, Ibaraki-Ken
Kazakhstan	WWR-K	Almaty
	IVG.1M Reactor	Kurchatov
	IGR Reactor	Kurchatov
	RA Reactor	Kurchatov
Korea, Republic of	Kyung Hee	Suwoon
	Hanaro	Daejeon
	Gijang Research Reactor	Pusan
Latvia	IRT	Salaspils
Libya	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	JEEP-II	Kjeller
	HBWR	Halden
Pakistan	Parr-1	Rawalpindi
	Parr-2	Rawalpindi
Peru	RP-0	Lima
	RP-10	Lima
Philippines	PRR-1	Quezon-City, Diliman
Poland	Anna & Agata	Otwock Swierk
	Maria	Otwock-Swierk
Portugal	IST (CTN) RPI	Sacavem
Romania	IFIN-HH	Magurele
	TRIGA Research & MTR	Pitești-Mioveni
Serbia	RA-RB	Vinca
Slovenia	TRIGA II	Ljubljana
South Africa	Safari-I Research Reactor	Pelindaba
Sweden	Studsvik Aband Ab Svafo	Studsvik
Switzerland	AGN 211-P	Basel
	Proteus	Villigen
	Crocus	Lausanne
Syrian Arab Republic	MNSR	Syrian Arab Republic
Tajikistan	Argus Research Reactor	Dushande

State ^a	Name of facility	Location ^a
Thailand	TRR-1	Bangkok
	ONRC	Ongkharak
Turkey	Cekmece Nuc. Res. & Tr. Centre	Istanbul
	ITU-TRR-TRIGA Mark II	Istanbul
Ukraine	WWR-M Research Reactor	Kiev
	IR-100 Research Reactor	Sevastopol
Uzbekistan	WWR-SM	Ulugbek
	IIN-3M	Tashkent
Venezuela, Bolivarian Republic of	RV-1	Altos de Pipe
Viet Nam	Da Lat Research Reactor	Da Lat, Lam Dong
Conversion Plants		
Algeria	Pilot Uranium Conversion Plant	Draria Nuclear Research Center
Argentina	Experimental Dry Conversion	Bariloche
	UO ₂ Conversion Plant	Cordoba
	UF ₆ Conversion Plant	Pilcaniyeu
	Uranium Powder Production Fac.	Constituyentes
Brazil	USEXA	Ipero
Canada	Blind River	Blind River, Ontario
	Port Hope	Port Hope, Ontario
Chile	LEC	Santiago
Iran, Islamic Republic of	UCF	Esfahan
	EUPP	Esfahan
Japan	JCO	Tokai-Mura, Ibaraki-Ken
	PCDF	Tokai-Mura, Ibaraki-Ken
Mexico	Fuel Fabrication Pilot Plant	Salazar
Romania	National Uranium Company	Feldioara
South Africa	HEU/LEU Conversion Plant	Pelindaba
	Conversion Plant (U Plant)	Pelindaba
Sweden	RMA	Stenstorp
Fuel Fabrication Plants		
Algeria	UDEC	Draria Nuclear Site
Argentina	FECN	Ezeiza
	ECRI	Buenos Aires
	R. Reactor Fuel Fa. Plant	Ezeiza
	Pilot Advance Fuels Plant	Buenos Aires
Belgium	FBFC DNU Fab.	Dessel
	FBFC Pu Fab.	Dessel

State ^a	Name of facility	Location ^a
	N.V. BN	Dessel
Brazil	FCN-Fuel Fabrication Plant	Resende
Canada	Fuel Eng. Met. Che. Op.	Chalk River, Ontario
	Fuel Fabrication Facility	Chalk River, Ontario
	Cameco, Port Hope	Port Hope, Ontario
	GE, Hitachi Inc., Toronto	Toronto, Ontario
	GE, Hitachi Inc., Peterborough	Peterborough, Ontario
Chile	UMF	Santiago
Egypt	FMPP (Fuel Manuf. Pilot Plant)	Inshas
	R & D - NFL	Inshas
France	Melox Marcoule	Chusclan
Germany	Advanced Nuclear Fuels	Lingen
India	NFC	Hyderabad
	NFC - NU	Hyderabad
Indonesia	IPEBRR	Serpong
	IEBE	Serpong
Iran, Islamic Republic of	FMP	Esfahan
	FPFP	Esfahan
Italy	FN Bosco Marengo	Bosco Marengo
Japan	J-MOX	Oaza Obuchi, Rokkasho-Mura
	NFI Tokai-2	Tokai-Mura, Ibaraki-Ken
	PPFF	Tokai-Mura, Ibaraki-Ken
	PFPP	Tokai-Mura, Ibaraki-Ken
	GNF-J	Yokosuka-Shi, Kanagawa-Ken
	NFI Kumatori-1	Sennan-Gun, Osaka
	NFI Tokai-1	Tokai-Mura, Ibaraki-Ken
	MNF	Tokai-Mura, Ibaraki-Ken
Kazakhstan	UMP	Ust-Kamenogorsk
Korea, Republic of	KNF	Daejeon
Romania	SN NFP Subsidiary	Mioveni
South Africa	MTR Fuel Fabrication Plant	Pelindaba
	LEU Fuel Fabrication Plant	Pelindaba
Spain	ENUSA Fab. Juzbado	Juzbado
Sweden	Westinghouse Electric	Vaesteras/Finnslaetten
Turkey	Nuclear Fuel Pilot Plant	Istanbul
Ukraine	NFFP	Smolino Village, Kirovograd
Reprocessing Plants		
France	Areva NC - UP2 & UP3	La Hague

State ^a	Name of facility	Location ^a
Germany	WAK/VEK	Eggenstein-Leopoldshafen
Italy	So.G.I.N. Impianto EUREX	Saluggia
	So.G.I.N. Trisaia	Rotondella
Japan	RETF	Tokai-Mura, Ibaraki-Ken
	SCF	Tokai-Mura, Ibaraki-Ken
	TRP	Tokai-Mura, Ibaraki-Ken
	RRP	Kamikita-Gun, Aomori-Ken
	CPF	Tokai-Mura, Ibaraki-Ken
	RRF	Ibaraki-Ken

Enrichment Plants

Argentina	Uranium Enrichment Pilot Plant	Pilcaniyeu
	Mock-Up Laboratory	Pilcaniyeu
	Lasie	Bariloch
Australia	Silex	
Brazil	CTMSP/Uside	Ipero
	CTMSP/Lei	Ipero
	CTMSP/Ladesi-Copesp	São Paulo
	IAEV/AR/LAS	São Jose Dos Campos
	FCN-Enrichment Plant	Resende
China	Shaanxi	Han Zhang, Shaanxi Province
France	Georges Besse II	Bollene
Germany	UTA 1 and UTA 2	Gronau
Iran, Islamic Republic of	PFEP	Natanz
	FEP	Natanz
	FFEP	Qom
Japan	NEP	Tomata-Gun, Okayama-Ken
	CTF	Kitakami-Gun, Aomori-Ken
	REP	Kamikita-Gun, Aomori-Ken
Netherlands	Urenco Nederland	Almelo
United Kingdom	Urenco Capenhurst E22, E23, A3	Capenhurst

Separate Storage Facilities

Argentina	DCMFEI	Ezeiza
	Faciri	Ezeiza
	DCMFE	Buenos Aires
	Storage Bunker	Ezeiza
	Due	Ezeiza
	Nuclear Material Storage	Buenos Aires
Armenia	SSFS	Metsamor

State ^a	Name of facility	Location ^a
Australia	Bulk Storage Facility	Lucas Heights, Sutherland
Belarus	Belarus NPP FF Storage	Ostrovets
Belgium	Belgoprocess Dry Storage	Dessel
	Belgoprocess UF6	Dessel
	Belgoprocess	Dessel
	Doel Dry Storage	Beveren
	Tihange Wet Store	Tihange
Brazil	Aramar Store	Ipero
	Planned Fuel Storage Facility	Itaguaí
Bulgaria	SFSF Kozloduy-1	Kozloduy
	DSFSF KNPP-2	Kozloduy
Canada	NMSF	Chalk River, Ontario
	DWMF	Darlington, Ontario
	Waste Storage Facility	Chalk River, Ontario
	Spent Fuel Canister Storage	Chalk River, Ontario
	CRL Waste Storage Facility	Chalk River, Ontario
	FPSF	Chalk River Laboratories
	WUFDSF	Tiverton, Ontario
	PUFDSF	Pickering, Ontario
	Gentilly I	Gentilly, Quebec
	DP Dry Storage	Tiverton, Ontario
Czech Republic	Acel Research	Pinawa, Manitoba
	LTWMF	Port Hope, Ontario
	Vao, HLWS	Řež
	Isfs Dukovany	Dukovany
	Radioactive Waste Rep. Richard	Litomerice
	ISFS Temelin	Temelin
Denmark	DD Storage	Roskilde
	DD Waste	Roskilde
Finland	Encapsulation Plant	Olkiluoto
	Geological Repository	Olkiluoto
	TVO-KPA-Store	Olkiluoto
Germany	AVR-BL	Juelich
	SZL Biblis	Biblis
	TBL-G	Gorleben
	SZL Brunsbuettel	Brunsbuettel
	BZA Ahaus	Ahaus
	KFK-Fr-2	Eggenstein-Leopoldshafen
	SZL Gundremmingen	Gundremmingen

State ^a	Name of facility	Location ^a
	HDB	Eggenstein-Leopoldshafen
	PTB-Spaltstofflager	Hanau
	SZL Brokdorf	Brokdorf
	TBH (B) 87.2	Rosendorf
	SZL Grafenrheinfeld	Grafenrheinfeld
	Kernmateriallager 87	Rosendorf
	KFA-AVR	Juelich
	SZL Philippsburg	Philippsburg
	SZL Neckarwestheim	Neckarwestheim
	SZK Kruemmel	Geesthacht
	SZL Emsland	Lingen (Ems)
	SZL Unterweser	Stadland
	NCS-Lagerhalle	Hanau
	Uranoxid-Lager UAG	Gronau
	SZL Grohnde	Emmerthal
	EWN Zwischenlager Nord GmbH	Lubmin
	SZL Isar	Essenbach
Hungary	Central Isotope Storage	Budapest
	MVDS	Paks
India	PREFRE	Tarapur-Bombay
	TAPS AFR	Tarapur, Maharashtra
Indonesia	Ria-Nd ISFSF	Serpong
Iran, Islamic Republic of	KWS	Karaj
Iraq	Tuwaitha Location C	Tuwaitha
Italy	Nucleco Spa	Rome
	Lab Misure Nucleari Perla	Ispra
	Centro di Comune di Ricerca	Ispra
	Essor Storage	Ispra
	CCRM Ispra Central Store	Ispra
	Dep Avogadro Elementi Irragg	Sp37 Crescentino & Saluggia
Japan	NFI Kumatori-2	Sennan-Gun, Osaka
	Ningyo R & D	Tomata-Gun, Okayama-Ken
	Fugen	Tsuruga-Shi, Fukui-Ken
	KUFFS	Sennan-Gun, Osaka
	Fuku-I-CSFS	Futaba-Gun, Fukushima-Ken
	Jaeri Mutsu	Mutsu-Shi, Aomori-Ken
	RFSC	Mutsu-Shi, Aomori-Ken
Kazakhstan	Thorium Storage Facility	Kurchatov

State ^a	Name of facility	Location ^a
	BN-350 Temporary Storage	Aktau
	Baikal-1 DSFS	Kurchatov
	Ulba Thorium Storage	Ust-Kamenogorsk
Korea, Republic of	Acrylonitrile Plant	Ulsan
	NMSF	Daejeon
	Uranium Residue Storage Fac.	Daejeon
Lithuania	SNFS-1	Visaginas
	SNFS-2	Visaginas
	Radioactive Waste Management	Vilnius
Netherlands	COVRA	Vlissingen-Oost
	HABOG	Vlissingen
Poland	ZUOP	Swierk
Portugal	IST (CTN) Instalacao Piloto	Sacavem
Romania	CNE Cernavoda Idsfs	Cernavoda
Russian Federation	IUEC Storage Facility	Angarsk
Slovakia	Javys Nuclear Store	Jaslovske Bohunice
	Javys ISFS	Jaslovske Bohunice
South Africa	HEU Storage Vault	Pelindaba
	Y-Plant Storage Facility	Pelindaba
	Waste Storage Facility	Pelindaba
	Z-Plant Storage Facility	Pelindaba
	E-Building Storage Facility	Valindaba
	Thabana Pipe Store	Pelindaba
	Koeberg Castor Storage Fac.	Cape Town
	Vaalputs	Springbok
Spain	Asco Dry Storage	Asco
	ATC Centralized Storage	Madrid
	Trillo Dry Storage	Trillo
	Zorita Dry Storage	Almonacid de Zorita
Sweden	SFK	Oesthammar
	SKB Clab Store	Oskarshamn
Switzerland	Saphir	Villigen
	Zwibez	Doettingen
	Zwilag	Wuerenlingen
Ukraine	Ukraine Centralized Dry Store	Chernobyl Exclusion Zone
	Chernobyl NPP-SFS	Chernobyl
	Chernobyl SNFSF-2	Chernobyl
	Khmelnitski FF Storage	Neteshin
	Rovno FF Storage	Kuznetsovsk

State ^a	Name of facility	Location ^a
	Sth. Ukraine FF Storage	Yuzhnoukrainsk
	Zaporozhe SFS	Energodar
	Zaporozhe FF Storage	Energodar
United Kingdom	SNM Store 9	Sellafield
	Thorp Product Store	Sellafield
United States of America	KAMS Storage	Savannah River Site
Other Facilities		
Algeria	AURES I	Birine Nucl. Site (Ain Oussara)
Argentina	LUE	Ezeiza
	Alpha Laboratory	Buenos Aires
	Lapep	Ezeiza
	P.F.P.U.	Buenos Aires
	LTA	Ezeiza
	DPF	Ezeiza
Australia	R & D Labs	Lucas Heights, Sutherland
	Synroc	Lucas Heights, Sutherland
Belgium	IRMM.Geel	Geel
	SCK-CEN Lab.	Mol
	Belgoprocess Waste Treatment	Mol
	I.R.E.	Fleurus
	SCK-CEN Pu Laboratories	Mol
Brazil	CTMSP/Labmat	Ipero
	IPEN-Reprocessing Project	São Paulo
	Ladicon	São Paulo
	IPEN-Fuel Dev. and Tech. Fac.	São Paulo
Czech Republic	Lab. & Stores, Centr. Anal. Lab	Řež
	UJP	Prague
Denmark	Danish Decommiss. — Hotcell	Roskilde
Egypt	Molybdenum Production Unit	Inshas
	Hydrometallurgy Unit	Inshas
	NCB	Inshas
Georgia	Razmnozhitel-1	Tbilisi
	Sukhumi Institute	Sukhumi
Germany	PKA Gorleben	Gorleben
	WAK-Heisse Zellen der HVT	Eggenstein-Leopoldshafen
	KFA-HZ	Juelich
	Lab. Juelich	Juelich
	JRC-ITU	Eggenstein-Leopoldshafen

State ^a	Name of facility	Location ^a
	Inst. Kernchemie	Mainz
Indonesia	RMI	Serpong
Iran, Islamic Republic of	LWSCR	Esfahan
	Mix Separation Facility	Tehran
	JHL	Tehran
Italy	Impianto Plutonio	Santa Maria Di Galeria
	OPEC 2-Cas	Santa Maria Di Galeria
	CNEN-Istec	Santa Maria Di Galeria
Japan	NC Tokai R & D	Tokai-Mura, Ibaraki-Ken
	IRAF	Higashi-Gun, Ibaraki-Ken
	FMF	Higashi, Ibaraki-Ken
	JNC Oarai R & D	Higashi, Ibaraki-Ken
	NDC Fuel Hot Lab	Tokai-Mura, Ibaraki-Ken
	UML	Higashi, Ibaraki-Ken
	Showa	Kawasaki-Shi, Kanagawa-Ken
	Sumitomo-Chiba	Sodegaura-Shi, Chiba-Ken
	Mitsui Iwakuni-Ohtake	Kuga-Gun, Yamaguchi-Ken
	Itsui Osaka	Takai-Shi, Osaka-Fu
	JAERI Oarai R & D	Higashi, Ibaraki-Ken
	JAERI Tokai	Tokai-Mura, Ibaraki-Ken
	NRF	Tsukuba-Shi, Ibaraki-Ken
	NFD	Higashi, Ibaraki-Ken
	NERL	Tokai-Mura, Ibaraki-Ken
	Kumatori	Sennan-Gun, Osaka
Korea, Republic of	PIEF	Daejeon
	KAERI R&D Facility	Daejeon
	IMEF	Daejeon
	ACPF	Daejeon
	PRIDE	Daejeon
	HFFL	Daejeon
	DFDF	Daejeon
Libya	Tajura Uranium R&D Facility	Tajura
Netherlands	GCO/ECN Lab.	Petten
Norway	Research Laboratories	Kjeller
South Africa	Hot Cell Complex	Pelindaba
	Decontam. & Waste Recovery Pl.	Pelindaba
	Nu and Du Metals Plant	Pelindaba
Spain	C.A. El Cabril	El Cabril

State ^a	Name of facility	Location ^a
Switzerland	Hot Labor.	Villigen
	CERN	Geneva
Ukraine	Chernobyl Conditioning	Chenobyl
	Chernobyl Unit 4 Shelter	Chernobyl
	Sevastopol Subcritical Assy.	Sevastopol
	KHFTI	Kharkov

^a 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:**
1. The Agency was also applying safeguards at 17 facilities in Taiwan, China.
 2. Additionally under Agency safeguards were 563 material balance areas outside facilities in 121 States and in Taiwan, China.