

IAEA ANNUAL REPORT 2020

Additional Annex Information



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Table A28. Coordinated research projects initiated in 2020

Nuclear Fuel Cycle and Waste Management

- Spent Fuel Characterization
- Testing and Simulation for Advanced Technology and Accident Tolerant Fuels (ATF-TS)

Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development

- Economic Appraisal of Small Modular Reactors Projects: Methodologies and Applications

Nuclear Science

- Development and Application of Ion Beam Techniques for Materials Irradiation and Characterization Relevant to Fusion Technology
- Hydrogen Permeation in Fusion-Relevant Materials
- Pathways to Energy from Inertial Fusion: Materials Research and Technology Development
- Updating Fission Yield Data for Applications

Food and Agriculture

- Depletion of Veterinary Pharmaceuticals and Radiometric Analysis of their Residues in Animal Matrices
- Developing Climate Smart Agricultural Practices for Mitigation of Greenhouse Gases
- Improvement of Diagnostic and Vaccine Tools for Emerging and Re-emerging Animal Health Threats
- Mosquito Irradiation, Sterilization and Quality Control

Human Health

- Efficacy of Spatially-Fractionated Radiation Therapy (SFRT) in Palliative Treatment of Lung and Cervical Cancer Patients
- IAEA Non-invasive Cardiology Protocols Study — INCAPS 2
- Optimising Nuclear Techniques to Assess Accurate Quantitative Biomarkers of Added Sugar Intake in Adults

Radioisotope Production and Radiation Technology

- Production of Cyclotron-Based Gallium-68 Radioisotope and Related Radiopharmaceuticals

Safety of Nuclear Installations

- Developing a Phenomena Identification and Ranking Table (PIRT) and a Validation Matrix, and Performing a Benchmark for In-Vessel Melt Retention

Table A29. Coordinated research projects completed in 2020

Nuclear Power

- Understanding and Prediction of Thermal Hydraulics Phenomena Relevant to Supercritical Water Cooled Reactors

Nuclear Fuel Cycle and Waste Management

- Accelerator-Driven System (ADS) Applications and Use of Low-Enriched Uranium in ADSs
- Benchmarks of Computational Tools against Experimental Data on Fuel Burnup and Material Activation for Utilization, Operation and Safety Analysis of Research Reactors

Capacity Building and Nuclear Knowledge Maintenance for Sustainable Energy Development

- Assessments of the Potential Role of Nuclear Energy in National Climate Change Mitigation Strategies

Food and Agriculture

- Accessible Technologies for the Verification of Origin of Dairy Products as an Example Control System to Enhance Global Trade and Food Safety
- Comparing Rearing Efficiency and Competitiveness of Sterile Male Strains Produced by Genetic, Transgenic or Symbiont-Based Technologies
- Dormancy Management to Enable Mass-Rearing and Increase Efficacy of Sterile Insects and Natural Enemies

Human Health

- Optimizing Nuclear Techniques to Assess Vitamin A Status

Water Resources

- Use of Isotope Hydrology to Characterize Groundwater Systems in the Vicinity of Nuclear Power Plants

Radioisotope Production and Radiation Technology

- Copper-64 Radiopharmaceuticals for Theranostic Applications
- Sharing and Developing Protocols to Further Minimize Radioactive Gaseous Releases to the Environment in the Manufacture of Medical Radioisotopes, as Good Manufacturing Practice
- Therapeutic Radiopharmaceuticals Labelled with New Emerging Radionuclides (^{67}Cu , ^{186}Re , ^{47}Sc)

Nuclear Security

- Improved Assessment of Initial Alarms from Radiation Detection Instruments

Table A30. Publications issued in 2020**Nuclear Power**

- Application of Wireless Technologies in Nuclear Power Plant Instrumentation and Control Systems — IAEA Nuclear Energy Series
- Assessing Behavioural Competencies of Employees in Nuclear Facilities — IAEA TECDOC
- Assuring the Competence of Nuclear Power Plant Contractor Personnel — IAEA TECDOC
- Benchmarking of Computational Fluid Dynamics Codes for Fuel Assembly Design — IAEA TECDOC
- Case Study on Assessment of Radiological Environmental Impact from Potential Exposure — IAEA TECDOC
- Challenges and Approaches for Selecting, Assessing and Qualifying Commercial Industrial Digital Instrumentation and Control Equipment for Use in Nuclear Power Plant Applications — IAEA Nuclear Energy Series
- Climate Change and the Role of Nuclear Power — IAEA Proceedings Series
- Computer Security Aspects of Design for Instrumentation and Control Systems at Nuclear Power Plants — IAEA Nuclear Energy Series
- Considerations for Environmental Impact Assessment for Small Modular Reactors — IAEA TECDOC
- Country Nuclear Power Profiles — Non-serial Publications
- Developments in the Analysis and Management of Combustible Gases in Severe Accidents in Water Cooled Reactors following the Fukushima Daiichi Accident — IAEA TECDOC
- Implementation and Effectiveness of Actions Taken at Nuclear Power Plants following the Fukushima Daiichi Accident — IAEA TECDOC
- Initiating Nuclear Power Programmes: Responsibilities and Capabilities of Owners and Operators — IAEA Nuclear Energy Series
- INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Safety of Nuclear Fuel Cycle Facilities — IAEA TECDOC
- INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Safety of Nuclear Reactors — IAEA TECDOC
- INPRO Methodology for Sustainability Assessment of Nuclear Energy Systems: Waste Management — IAEA TECDOC
- Management of Nuclear Power Plant Projects — IAEA Nuclear Energy Series
- Milestones in the Development of a National Infrastructure for Nuclear Power — IAEA Nuclear Energy Series (Russian)
- Operating Experience with Nuclear Power Stations in Member States — Operating Experience with Nuclear Power Stations in Member States (CD-ROM)
- Passive Shutdown Systems for Fast Neutron Reactors — IAEA Nuclear Energy Series
- Quality Assurance and Quality Control in Nuclear Facilities and Activities — IAEA TECDOC
- Reload Design and Core Management in Operating Nuclear Power Plants — IAEA TECDOC
- Understanding and Prediction of Thermohydraulic Phenomena Relevant to Supercritical Water Cooled Reactors (SCWRs) — IAEA TECDOC

Nuclear Fuel Cycle and Materials Technology

- Analysis of Options and Experimental Examination of Fuels for Water Cooled Reactors with Increased Accident Tolerance (ACTOF) — IAEA TECDOC
- Condition Monitoring and Incipient Failure Detection of Rotating Equipment in Research Reactors — IAEA TECDOC
- Costing Methods and Funding Schemes for Radioactive Waste Disposal Programmes — IAEA Nuclear Energy Series
- Decommissioning of Particle Accelerators — IAEA Nuclear Energy Series
- Descriptive Uranium Deposit and Mineral System Models — Non-serial Publications
- Design Principles and Approaches for Radioactive Waste Repositories — IAEA Nuclear Energy Series

- Geochemical and Mineralogical Characterization of Uranium and Thorium Deposits — IAEA TECDOC
- Light Water Reactor Fuel Enrichment beyond the Five Per Cent Limit: Perspectives and Challenges — IAEA TECDOC
- Management of Spent Fuel from Nuclear Power Reactors — IAEA Proceedings Series
- Modelling of Fuel Behaviour in Design Basis Accidents and Design Extension Conditions — IAEA TECDOC
- Underground Disposal Concepts for Small Inventories of Intermediate and High Level Radioactive Waste — IAEA TECDOC
- Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2018) — IAEA Proceedings Series
- World Uranium Geology, Exploration, Resources and Production — Non-serial Publications

Capacity Building and Nuclear Knowledge for Sustainable Energy Development

- Application of Plant Information Models to Manage Design Knowledge through the Nuclear Power Plant Life Cycle — IAEA TECDOC
- Approaches to Management of Requirement Specifications for Nuclear Facilities throughout Their Life Cycle — IAEA TECDOC
- Climate Change and Nuclear Power 2020 — Non-serial Publications
- Energy, Electricity and Nuclear Power Estimates for the Period up to 2050 — Reference Data Series
- Integrated Assessment of Climate, Land, Energy and Water — Non-serial Publications
- International Nuclear Management Academy Master's Programmes in Nuclear Technology Management — IAEA Nuclear Energy Series
- Mapping Organizational Competencies in Nuclear Organizations — IAEA Nuclear Energy Series
- Nuclear Power Reactors in the World — Reference Data Series

Nuclear Science

- An Introduction to Practical Industrial Tomography Techniques for Non-destructive Testing (NDT) — IAEA TECDOC
- Challenges for Coolants in Fast Neutron Spectrum Systems — IAEA TECDOC
- Guidelines for the Operation and Maintenance Assessment for Research Reactors (OMARR) — IAEA Services Series
- Industrial Applications of Sealed Radioactive Sources — IAEA TECDOC
- Material Properties of Unirradiated Uranium–Molybdenum (U–Mo) Fuel for Research Reactors — IAEA TECDOC
- Modern Neutron Detection — IAEA TECDOC
- Nuclear Data Newsletter Issue No. 68, January 2020
- Nuclear Data Newsletter Issue No. 69, July 2020
- Pathways to Energy from Inertial Fusion: Structural Materials for Inertial Fusion Facilities — IAEA TECDOC
- Radiotracer Technologies for Wear, Erosion and Corrosion Measurement — IAEA TECDOC
- Trends in Radiopharmaceuticals (ISTR-2019) — IAEA Proceedings Series

Food and Agriculture

- Animal Production and Health Newsletter No. 71, January 2020
- Animal Production and Health Newsletter No. 72, July 2020
- Food and Environmental Protection Newsletter Vol. 23, No. 2, July 2020
- Insect Pest Control Newsletter No. 95, July 2020
- Landscape Salinity and Water Management for Improving Agricultural Productivity — IAEA TECDOC

- Optimizing Soil, Water and Nutrient Use Efficiency in Integrated Cropping–Livestock Production Systems — IAEA TECDOC
- Plant Breeding and Genetics Newsletter No. 45, July 2020
- Soils Newsletter Vol. 42, No. 2, January 2020
- Soils Newsletter Vol. 43, No. 1, July 2020
- Strategies and Practices in the Remediation of Radioactive Contamination in Agriculture — IAEA Proceedings Series

Human Health

- Advances in Radiation Oncology (ICARO-2) — IAEA Proceedings Series
- COVID-19 Pandemic: Technical Guidance for Nuclear Medicine Departments — Non-serial Publications
- Nuclear Medicine Resources Manual 2020 Edition — IAEA Human Health Series
- Nutritional & Health Related Environmental Studies Newsletter No. 11, January 2020
- Nutritional & Health Related Environmental Studies Newsletter No. 12, August 2020
- SSDL Newsletter Issue No. 71, April 2020
- SSDL Newsletter Issue No. 72, August 2020

Environment

- Certification of Polycyclic Aromatic Hydrocarbon Mass Fractions in IAEA-477 Sediment Sample — IAEA Analytical Quality in Nuclear Applications Series
- Certification of Trace Element Mass Fractions in Marine Sediment IAEA-475 — IAEA Analytical Quality in Nuclear Applications Series
- Environment Laboratories Newsletter Vol. 7, No. 1, January–July 2020
- Environmental Transfer of Radionuclides in Japan following the Accident at the Fukushima Daiichi Nuclear Power Plant — IAEA TECDOC

Incident and Emergency Preparedness and Response

- Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency — IAEA Safety Standards Series
- Arrangements for the Termination of a Nuclear or Radiological Emergency — IAEA Safety Standards Series (Spanish)
- Guidance for Medical Physicists Responding to a Nuclear or Radiological Emergency — Emergency Preparedness and Response
- International Radiation Monitoring Information System — Emergency Preparedness and Response
- International Radiological Information Exchange (IRIX) Format — Emergency Preparedness and Response
- Medical Management of Radiation Injuries — Safety Reports Series
- Operations Manual for IAEA Assessment and Prognosis during a Nuclear or Radiological Emergency — Emergency Preparedness and Response
- Operations Manual for Incident and Emergency Communication — Emergency Preparedness and Response
- Pocket Guide for Medical Physicists Supporting Response to a Nuclear or Radiological Emergency — Emergency Preparedness and Response
- Preparedness and Response for a Nuclear or Radiological Emergency Combined with Other Incidents or Emergencies — Emergency Preparedness and Response

Safety of Nuclear Installations

- Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL) — Safety Reports Series

- Applicability of Design Safety Requirements to Small Modular Reactor Technologies Intended for Near Term Deployment — IAEA TECDOC
- Considerations on Performing Integrated Risk Informed Decision Making — IAEA TECDOC
- Design of Auxiliary Systems and Supporting Systems for Nuclear Power Plants — IAEA Safety Standards Series
- Design of Fuel Handling and Storage Systems for Nuclear Power Plants — IAEA Safety Standards Series
- Design of the Reactor Coolant System and Associated Systems for Nuclear Power Plants — IAEA Safety Standards Series
- Effective Management of Regulatory Experience for Safety — IAEA TECDOC
- Establishing the Safety Infrastructure for a Nuclear Power Programme — IAEA Safety Standards Series
- Experiences in Implementing Safety Improvements at Existing Nuclear Power Plants — IAEA TECDOC
- In-vessel Melt Retention and Ex-vessel Corium Cooling — IAEA TECDOC
- Methodologies for Seismic Safety Evaluation of Existing Nuclear Installations — Safety Reports Series
- Operating Experience from Events Reported to the IAEA/NEA Fuel Incident Notification and Analysis System (FINAS) — IAEA TECDOC
- Periodic Safety Review for Research Reactors — Safety Reports Series
- Probabilistic Safety Assessment for Seismic Events — IAEA TECDOC
- Radiation Safety of Accelerator Based Radioisotope Production Facilities — IAEA Safety Standards Series
- Reliability Data for Research Reactor Probabilistic Safety Assessment — IAEA TECDOC
- Research Reactors: Addressing Challenges and Opportunities to Ensure Effectiveness and Sustainability — IAEA Proceedings Series
- Safety Analysis and Licensing Documentation for Nuclear Fuel Cycle Facilities — Safety Reports Series
- Safety Culture Practices for the Regulatory Body — IAEA TECDOC
- Seismic Isolation Systems for Nuclear Installations — IAEA TECDOC
- Site Evaluation for Nuclear Installations — IAEA Nuclear Security Series (French)
- Technical Review of Acceptance Criteria for Pressurized Heavy Water Reactor Fuel — IAEA TECDOC

Radiation and Transport Safety

- Methodology for a Safety Case of a Dual Purpose Cask for Storage and Transport of Spent Fuel — IAEA TECDOC
- Occupational Radiation Protection Appraisal Service (ORPAS) Guidelines — IAEA Services Series
- Occupational Radiation Protection in the Uranium Mining and Processing Industry — Safety Reports Series
- Postgraduate Educational Course in Radiation Protection and the Safety of Radiation Sources — Training Course Series (Arabic)
- Postgraduate Educational Course in Radiation Protection and the Safety of Radiation Sources — Training Course Series (French)
- Postgraduate Educational Course in Radiation Protection and the Safety of Radiation Sources — Training Course Series (Spanish)
- Radiation Safety in the Use of Nuclear Gauges — IAEA Safety Standards Series
- Radiation Safety in Well Logging — IAEA Safety Standards Series
- Radiation Safety of X Ray Generators and Other Radiation Sources Used for Inspection Purposes and for Non-medical Human Imaging — IAEA Safety Standards Series
- Regulatory Control of the Safety of Ion Radiotherapy Facilities — IAEA TECDOC

Management of Radioactive Waste

- Application of the Graded Approach to Post-closure Safety Assessment for the Disposal of Disused Sealed Radioactive Sources in Boreholes — IAEA TECDOC
- Development of a Common Framework for Addressing Climate and Environmental Change in Post-closure Radiological Assessment of Solid Radioactive Waste Disposal — IAEA TECDOC
- International Peer Review of the Deep Well Injection Practice for Liquid Radioactive Waste in the Russian Federation — Non-serial Publications
- Storage of Spent Nuclear Fuel — IAEA Safety Standards Series

Nuclear Security

- Building Capacity for Nuclear Security — IAEA Nuclear Security Series (French)
- Building Capacity for Nuclear Security — IAEA Nuclear Security Series (Spanish)
- Establishing and Operating a National Nuclear Security Support Centre — Non-serial Publications
- Nuclear Forensics: Beyond the Science — IAEA TECDOC
- Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material out of Regulatory Control — IAEA Nuclear Security Series (Spanish)
- Preparation, Conduct and Evaluation of Exercises for Detection of and Response to Acts Involving Nuclear and Other Radioactive Material out of Regulatory Control — IAEA Nuclear Security Series
- Preventive and Protective Measures against Insider Threats — IAEA Nuclear Security Series
- Security of Radioactive Material in Transport — IAEA Nuclear Security Series
- Sustaining a Nuclear Security Regime — IAEA Nuclear Security Series (French)
- The Gate to Africa Exercise Programme: Morocco–Spain Joint Tabletop and Field Exercises on Maritime Security of Radioactive Material in Transport — Non-serial Publications

Executive Management, Policy-Making and Coordination

- The 1997 Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage — Explanatory Texts — IAEA International Law Series

Table A31. Technical cooperation training courses held in 2020

Energy

- Virtual Event — Training Course on Innovations in Nuclear Technologies to Combat Climate Change: Emancipating Nuclear in a Fair and Green Society
Austria
- Virtual Event — Training Course on Policy, Strategy and Regulation of Decommissioning and Environmental Remediation Projects
Austria
- Virtual Regional Training Course on Assessing Demand-side Contributions to Energy and Climate Strategies
Austria

Health and Nutrition

- Regional (AFRA) Training Course on Quality Control, Quality Assurance and Dosimetry in Planar Imaging for French-Speaking Countries
Algeria
- Virtual Event — Regional (AFRA) Training Course for Nuclear Medicine Professionals on New Trends in Nuclear Medicine
Austria
- Virtual Event — Regional (AFRA) Training Course on Quality Control/Quality Assurance and Dosimetry in Mammography
Austria
- Virtual Event — Training Course for the Treatment of Cervical Cancer: Clinical, Quality and Safety Aspects
Austria
- Regional Training Course on Quality Assurance and Dosimetry in Mammography and Digital Breast Tomosynthesis
Montenegro
- IAEA/RCA Regional Training Course on Diagnosis of Cardiovascular and Pulmonary Disease
Philippines
- Virtual Event — Regional Training Course: Introduction to Quality Practices in Diagnostic Radiology for Radiology Technologists (Radiographer)
United States of America

Nuclear Knowledge Development and Management

- E-Learning Course on Diagnostic and Therapeutic Radioisotopes and Radiopharmaceuticals Application
Austria
- Virtual Event — KOICA-KAERI-WCI-IAEA Joint Training Course on Establishment of Long-Term Management Plan by Strengthening Capacity for Diagnostic and Therapeutic Radioisotopes and Radiopharmaceutical Application
Austria
- Virtual Event — Regional Training Course on Supporting Women for Nuclear Science Education and Communications: A Continuing Education Program for Female University Science Teachers and Science Communication Professionals
Austria
- Virtual Event — Training Course on Strategic Planning/Management for young leaders
Austria
- Virtual Event — Webinar series on Strategic Communications for NNIs
Austria

- Virtual Training Course on the Economic Feasibility Analysis for Radiation Technology Projects
Austria
- Regional Virtual Training Course on Train the Trainers on Nuclear Sciences in Secondary Schools
Austria
- Postgraduate Educational Course on Radiation Protection and Safety of Radiation Sources for English-speaking Countries (PGEC)
Ghana
- Postgraduate Educational (PGEC) Course (French)
Morocco

Safety and Security

- Postgraduate Specialisation Training Course on Radiation Protection and Safety of Radiation Sources 2020 — Part I
Argentina
- Postgraduate Specialisation Training Course on Radiation Protection and Safety of Radiation Sources 2020 — Part II
Argentina
- Virtual Event — Interregional Training Course on Establishing a National Position for a New Nuclear Power Programme
Austria
- Virtual Event — Interregional Training Course on Nuclear Power Infrastructure Development
Austria
- Virtual Event — Interregional Training Course on Nuclear Power Plant Contract Specifications and Reactor Technology Assessment
Austria
- Virtual Event — Interregional Training Course on Nuclear Power Plant Financing and Risk Allocation
United States of America
- Virtual Event — Regional (AFRA) Training Course on QMS
Austria
- Virtual Event — Regional Training Course on Stakeholder Engagement and Communication Plan Development for SIT Projects
Austria
- Regional Training Course on the Use of Whole Genome Sequencing Platforms in Differentiation of Emerging and Re-emerging Animal and Zoonotic Pathogens in Africa
Ethiopia

Water and the Environment

- Virtual Regional Training Course on Isotope Hydrology
Austria
- Virtual Regional Training Course on Isotope Hydrology in Russian Language
Austria
- Regional Training Course on Marine and Terrestrial Sampling
Kenya
- Regional Training Course on Advanced Source Apportionment Techniques
Uruguay

Table A32. Agency corporate social media accounts

Facebook

Arabic

www.facebook.com/IAEAarabic

English

www.facebook.com/iaeaorg

French

www.facebook.com/aieaorg

Russian

www.facebook.com/magateorg

Spanish

www.facebook.com/oieaorg

Instagram

instagram.com/iaeaorg

LinkedIn

www.linkedin.com/company/iaea

Twitter

twitter.com/iaeaorg

Weibo

Chinese

<http://weibo.com/iaeaorg>

Youtube

www.youtube.com/user/IAEAvideo

Table A33(a). Number and types of facilities under Agency safeguards by State during 2020

| State ^a | Power reactors | Research reactors and critical assemblies | Conversion plants | Fuel fabrication plants | Reprocessing plants | Enrichment plants | Separate storage facilities | Other facilities | Total |
|----------------------------------|----------------|---|-------------------|-------------------------|---------------------|-------------------|-----------------------------|------------------|-------|
| Algeria | | 2 | 1 | 1 | | | | | 4 |
| Argentina | 4 | 7 | 4 | 3 | | 3 | 6 | 7 | 34 |
| Armenia | 2 | | | | | | 1 | | 3 |
| Australia | | 2 | | | | | 1 | 2 | 5 |
| Austria | | 1 | | | | | | | 1 |
| Bangladesh | 1 | 1 | | | | | | | 2 |
| Belarus | 2 | 1 | | | | | 2 | | 5 |
| Belgium | 6 | 3 | | 1 | 1 | | 6 | 5 | 22 |
| Brazil | 3 | 6 | 1 | 1 | | 5 | 2 | 5 | 23 |
| Bulgaria | 3 | 1 | | | | | 2 | | 6 |
| Canada | 6 | 8 | 2 | 5 | | | 12 | | 33 |
| Chile | | 2 | 1 | 1 | | | | | 4 |
| China | 1 | 1 | | | | 1 | | | 3 |
| Colombia | | 1 | | | | | | | 1 |
| Czech Republic | 3 | 3 | | | | | 4 | 2 | 12 |
| Democratic Republic of the Congo | | 1 | | | | | | | 1 |
| Denmark | | 1 | | | | | 2 | 1 | 4 |
| Egypt | 1 | 2 | 1 | 2 | | | | 3 | 9 |
| Estonia | | 1 | | | | | | | 1 |
| Finland | 5 | 1 | | | | | 2 | 1 | 9 |
| France | | | | 1 | 1 | 1 | | | 3 |
| Georgia | | 1 | | | | | | 1 | 2 |
| Germany | 21 | 13 | | 1 | 1 | 1 | 23 | 6 | 66 |
| Ghana | | 1 | | | | | | | 1 |
| Greece | | 1 | | | | | | | 1 |
| Hungary | 3 | 2 | | | | | 2 | | 7 |
| India | 10 | | | 3 | | | 2 | | 15 |
| Indonesia | | 3 | | 2 | | | 1 | 1 | 7 |
| Iran, Islamic Republic of | 4 | 6 | 2 | 2 | | 3 | 1 | 3 | 21 |
| Iraq | | | | | | | 1 | | 1 |
| Israel | | 1 | | | | | | | 1 |
| Italy | 5 | 6 | | | 2 | | 5 | 1 | 19 |
| Jamaica | | 1 | | | | | | | 1 |
| Japan | 64 | 20 | 2 | 8 | 6 | 3 | 7 | 15 | 125 |
| Jordan | | 1 | | | | | | | 1 |
| Kazakhstan | 1 | 4 | | 2 | | | 6 | | 13 |
| Korea, Republic of | 32 | 3 | | 1 | | | 3 | 7 | 46 |

| | | | | | | | | | |
|-----------------------------------|----|---|---|---|---|---|---|----|----|
| Latvia | | 1 | | | | | | 1 | |
| Libya | | 1 | | | | | 1 | 2 | |
| Lithuania | 1 | | | | | 2 | | 3 | |
| Malaysia | | 1 | | | | | | 1 | |
| Mexico | 2 | 1 | | 1 | | | 1 | 5 | |
| Morocco | | 1 | | | | | | 1 | |
| Netherlands | 2 | 2 | | | 1 | | 2 | 1 | 8 |
| Nigeria | | 1 | | | | | | 1 | |
| Norway | | 2 | | | | | | 1 | 3 |
| Pakistan | 7 | 2 | | | | | | 9 | |
| Peru | | 2 | | | | | | 2 | |
| Philippines | 1 | 1 | | | | | | 2 | |
| Poland | | 2 | | | | | 1 | 3 | |
| Portugal | | 1 | | | | | 1 | 2 | |
| Romania | 4 | 2 | 1 | 1 | | | 1 | 9 | |
| Russian Federation | | | | | | | 1 | 1 | |
| Serbia | | 1 | | | | | | 1 | |
| Slovakia | 5 | | | | | | 3 | 8 | |
| Slovenia | 1 | 1 | | | | | 1 | 3 | |
| South Africa | 2 | 1 | 2 | 2 | | | 8 | 3 | 18 |
| Spain | 8 | | | 1 | | | 7 | 1 | 17 |
| Sweden | 12 | 1 | | 1 | | | 2 | 16 | |
| Switzerland | 5 | 3 | | | | | 2 | 3 | 13 |
| Syrian Arab Republic | | 1 | | | | | | 1 | |
| Tajikistan | | 1 | | | | | | 1 | |
| Thailand | | 3 | | | | | | 3 | |
| Turkey | 3 | 2 | | 1 | | | 2 | 8 | |
| Ukraine | 21 | 2 | | | | | 8 | 6 | 37 |
| United Arab Emirates | 4 | | | | | | | 4 | |
| United Kingdom | | | | | 1 | | 2 | 3 | |
| United States of America | | | | | | | 1 | 1 | |
| Uzbekistan | | 1 | | | | | | 1 | |
| Venezuela, Bolivarian Republic of | | 1 | | | | | | 1 | |
| Viet Nam | | 1 | | | | | | 1 | |

^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 numbers indicated here include projected and operational facilities, and facilities at the decommissioning stage.
2. The Agency was also applying safeguards at 15 facilities in Taiwan, China.

Table A33(b). Facilities under Agency safeguards or containing safeguarded nuclear material during 2020

| State ^a | Name of facility | Location |
|-----------------------|-------------------------------|------------------------------|
| Power reactors | | |
| Argentina | Atucha I Nuclear Power Plant | Lima |
| | Atucha II Nuclear Power Plant | Lima |
| | Carem | Lima |
| | Embalse Nuclear Power Plant | Embalse |
| Armenia | Armenian NPP | Metsamor |
| | Armenian NPP 3 | Metsamor |
| Bangladesh | Rooppur NPP | Ishwardi, Pabna District |
| Belarus, Republic of | Belarus 1 | Ostrovets |
| | Belarus 2 | Ostrovets |
| Belgium | Doel 1 & 2 NPP | Doel |
| | Doel 3 NPP | Doel |
| | Doel 4 NPP | Doel |
| | Tihange 1 NPP | Tihange |
| | Tihange 2 NPP | Tihange |
| | Tihange 3 NPP | Tihange |
| Brazil | Angra 1 | Angra dos Reis |
| | Angra 2 | Angra dos Reis |
| | Angra 3 | Angra dos Reis |
| Bulgaria | NPP Kozloduy 1 & 2 | Kozloduy |
| | NPP Kozloduy 3 & 4 | Kozloduy |
| | NPP Kozloduy 5 & 6 | Kozloduy |
| Canada | Bruce 'A' N.G.S. | Tiverton, Ontario |
| | Bruce 'B' N.G.S. | Tiverton, Ontario |
| | Darlington NGD | Bowmanville, Ontario |
| | Gentilly II | Gentilly, Quebec |
| | Pickering N.G.S. | Pickering, Ontario |
| | Point Lepreau | Pt. Lepreau, New Brunswick |
| China | HTR-PM | Rongcheng, Shandong Province |
| Czech Republic | NPP Dukovany (Edu-1) | Dukovany |
| | NPP Dukovany (Edu-2) | Dukovany |
| | NPP Temelin | Temelin |
| Egypt | El Dabaa NPP | El Dabaa |
| Finland | Hanhikivi-I | Pyhaejoki |

| State ^a | Name of facility | Location |
|--------------------|-----------------------------|-----------------------------|
| | Loviisa NPP | Loviisa |
| | TVO I | Olkiluoto |
| | TVO II | Olkiluoto |
| | TVO III | Olkiluoto |
| Germany | HKG-THTR 300 | Hamm |
| | KKW Brokdorf | Brokdorf |
| | KKW Brunsbuettel | Brunsbuettel |
| | KKW Emsland | Lingen (Ems) |
| | KKW Grafenrheinfeld | Grafenrheinfeld |
| | KKW Grohnde | Emmerthal |
| | KKW Gundremmingen, Block B | Gundremmingen |
| | KKW Gundremmingen, Block C | Gundremmingen |
| | KKW Isar 1 | Essenbach |
| | KKW Isar 2 | Essenbach |
| | KKW Kruemmel | Geesthacht |
| | KKW Neckarwestheim 1 | Neckarwestheim |
| | KKW Neckarwestheim 2 | Neckarwestheim |
| | KKW Obrigheim | Obrigheim |
| | KKW Philippsburg 1 | Philippsburg |
| | KKW Philippsburg 2 | Philippsburg |
| | KKW Unterweser | Unterweser |
| | KW Biblis A | Biblis |
| | KW Biblis B | Biblis |
| | KWL Lingen | Lingen |
| | KWW Muelheim-Kaerlich | Muelheim-Kaerlich |
| Hungary | MVM Paks NPP Ltd. I | Paks |
| | MVM Paks NPP Ltd. II | Paks |
| | Paks II Nuclear Power Plant | Paks |
| India | KAPS 1 & 2 | Surat, Gujrat |
| | KAPS 3 & 4 | Surat, Gujrat |
| | KKNPP 1 & 2 | Kudankulam, Tamil Nadu |
| | KKNPP 3 & 4 | Kudankulam, Tamil Nadu |
| | NAPS 1 & 2 | Bulandshahar, Uttar Pradesh |
| | RAPS 1 & 2 | Rawatbhata, Rajasthan |
| | RAPS 3 & 4 | Rawatbhata, Rajasthan |

| State ^a | Name of facility | Location |
|---------------------------|-----------------------------|-------------------------------|
| | RAPS 5 & 6 | Rawatbhata, Rajasthan |
| | RAPS 7 & 8 | Rawatbhata, Rajasthan |
| | TAPS | Tarapur, Maharashtra |
| Iran, Islamic Republic of | Bushehr NPP | Bushehr |
| | Bushehr NPP | Bushehr |
| | Bushehr NPP | Bushehr |
| | IR360 NPP | Darkhovein |
| Italy | Area Disattivazione Caorso | Caorso |
| | Centrale Latina | Borgo Sabotino |
| | Centrale Nucleare di Trino | Trino Vercellese |
| | Cirene (On Load) | Borgo Sabotino |
| | So.G.I.N. CN del Garigliano | Sessa Aurunca (CE) |
| Japan | Fugen | Tsuruga-Shi, Fukui-Ken |
| | 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 |
| | Higashidoori-1 | Shimokita-Gun, Aomori-Ken |
| | Ikata-1 | Nishiuwa-Gun, Ehime-Ken |

| State ^a | Name of facility | Location |
|--------------------|------------------|------------------------------|
| | Ikata-2 | Nishiuwa-Gun, Ehime-Ken |
| | Ikata-3 | Nishiuwa-Gun, Ehime-Ken |
| | Joyo | Higashi, Ibaraki-Ken |
| | Kaminoseki-1 | Kumage-Gun, Yamaguchi-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 |
| | 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-Ken |
| | 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 |
| | Sendai-3 | Satsumasendai-Shi |
| | 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 |

| State ^a | Name of facility | Location |
|--------------------|------------------|-------------------------|
| | 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 | 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 |
| | Kori-1 | Pusan |
| | Kori-2 | Pusan |
| | Kori-3 | Pusan |
| | Kori-4 | Pusan |
| | Shin Hanul-1 | Ulchin |
| | Shin Hanul-2 | Ulchin |
| | Shin Hanul-3 | Ulchin |
| | Shin Hanul-4 | Ulchin |
| | Shin Kori-1 | Pusan |
| | Shin Kori-2 | Pusan |
| | Shin Kori-3 | Pusan |
| | Shin Kori-4 | Pusan |
| | Shin Kori-5 | Pusan |
| | Shin Kori-6 | Pusan |
| | Shin Wolsong-1 | Kyongju |
| | Shin Wolsong-2 | Kyongju |

| State ^a | Name of facility | Location |
|--------------------|------------------------------|----------------------------|
| | Wolsong-1 | Kyongju |
| | Wolsong-2 | Kyongju |
| | Wolsong-3 | Kyongju |
| | Wolsong-4 | Kyongju |
| 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 | Chasnupp-1 | Kundian, District Mianwali |
| | Chasnupp-2 | Kundian, District Mianwali |
| | Chasnupp-3 | Kundian, District Mianwali |
| | Chasnupp-4 | Kundian, District Mianwali |
| | Kanupp | Karachi |
| | Kanupp-2 | Karachi |
| | Kanupp-3 | Karachi |
| Philippines | BNPP | Morong, Bataan |
| Romania | Cernavoda 3 | Cernavoda |
| | Cernavoda 4 | Cernavoda |
| | CNE Cernavoda 1 | Cernavoda |
| | CNE Cernavoda 2 | Cernavoda |
| Slovakia | JAVYS NPP A-1 | Jaslovske Bohunice |
| | JAVYS NPP V-1 | Jaslovske Bohunice |
| | NPP Mochovce Units 1 & 2 | Mochovce |
| | NPP Mochovce Units 3 & 4 | Mochovce |
| | V-2 NPP | Jaslovske Bohunice |
| Slovenia | Krško (NEK) | Krško |
| South Africa | Koeberg Unit I | Cape Town |
| | Koeberg Unit II | Cape Town |
| Spain | Asco 1 | Asco |
| | Asco 2 | Asco |
| | C.N. Almaraz 1 | Almaraz |
| | C.N. Almaraz 2 | Almaraz |
| | C.N. Cofrentes | Cofrentes |
| | C.N. de Sta. Maria de Garona | Santa Maria de Garona |

| State ^a | Name of facility | Location |
|--------------------|-----------------------|-------------------|
| | CN Trillo-1 | Trillo |
| | CN Vandellos-2 | Vandellos |
| 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 1 | Ringhals |
| | Ringhals 2 | Ringhals |
| | Ringhals 3 | Ringhals |
| | Ringhals 4 | Ringhals |
| Switzerland | KKB Beznau-I | Beznau Doettingen |
| | KKB Beznau-II | Beznau Doettingen |
| | KKG Goesgen | Goesgen Daeniken |
| | KKL Leibstadt | Leibstadt |
| | KKM Muehleberg | Muehleberg |
| Turkey | Akkuyu Unit 1 | Büyükeceli |
| | Akkuyu Unit 2 | Büyükeceli |
| | Akkuyu Unit 3 | Büyükeceli |
| Ukraine | Chernobyl NPP, Unit 1 | Chornobyl |
| | Chernobyl NPP, Unit 2 | Chornobyl |
| | Chernobyl NPP, Unit 3 | Chornobyl |
| | Chernobyl NPP, Unit 5 | Chornobyl |
| | Chernobyl NPP, Unit 6 | Chornobyl |
| | Khmelnitski 1 | Netishyn |
| | Khmelnitski 2 | Netishyn |
| | Khmelnitski 3 | Netishyn |
| | Khmelnitski 4 | Netishyn |
| | Rovno 1 & 2 | Varash |
| | Rovno 3 | Varash |
| | Rovno 4 | Varash |
| | South Ukraine 1 | Yuzhnoukrayinsk |

| State ^a | Name of facility | Location |
|--|--------------------------------|--------------------------------|
| | South Ukraine 2 | Yuzhnoukrayinsk |
| | South Ukraine 3 | Yuzhnoukrayinsk |
| | Zaporozhe 1 | Enerhodar |
| | Zaporozhe 2 | Enerhodar |
| | Zaporozhe 3 | Enerhodar |
| | Zaporozhe 4 | Enerhodar |
| | Zaporozhe 5 | Enerhodar |
| | Zaporozhe 6 | Enerhodar |
| United Arab Emirates | BNPP-1 | Barakah |
| | BNPP-2 | Barakah |
| | BNPP-3 | Barakah |
| | BNPP-4 | Barakah |
| Research reactors and critical assemblies | | |
| 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) | Buenos Aires |
| | 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 |
| | Argentine Reactor 10 (RA-10) | Centro Atomico Ezeiza |
| Australia | HIFAR | Lucas Heights, New South Wales |
| | OPAL | Lucas Heights, New South Wales |
| Austria | TRIGA Mark II Reactor | Vienna |
| Bangladesh | Atomic Energ. Res. Estab. | Dhaka |
| Belarus | Sosny | Minsk |
| Belgium | BR1-CEN | Mol |
| | BR2-CEN | Mol |
| | Venus-CEN | Mol |
| Brazil | Brazilian Multipurpose Reactor | Iperó, São Paulo |
| | CDTN/IRP-R1 Reactor | Belo Horizonte |
| | IEN/Argonauta Reactor | Rio de Janeiro |
| | IPEN/IEA-R1 | São Paulo |
| | IPEN/MB01 Critical Assembly | São Paulo |

| State ^a | Name of facility | Location |
|----------------------------------|------------------------------|-------------------------|
| | LABGENE | Iperó |
| Bulgaria | IRT-2000 | Sofia |
| Canada | Biology, Chemistry, Physics | Chalk River, Ontario |
| | DIF | Chalk River, Ontario |
| | Ecole Polytechnique | Montreal, Quebec |
| | McMaster Nuclear Reactor | Hamilton, Ontario |
| | NRU Reactor | Chalk River, Ontario |
| | NRX Reactor | Chalk River, Ontario |
| | Slowpoke Kingston | Kingston, Ontario |
| | Slowpoke Saskatchewan | Saskatoon, Saskatchewan |
| Chile | RECH-1 | Santiago |
| | RECH-2 | 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 |
| | ET RR-2 | 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-Furtwangen | Furtwangen |
| | FRM | Garching |
| | FRM II | Garching |
| | Helmholtz-Zentrum Geesthacht | Geesthacht |
| | KFA-FRJ2 | Juelich |
| | Labor-ST | Zittau |
| | SUR-100 FHU | Ulm |
| | SUR-100 Hannover | Hannover |
| | SUR-100 Stuttgart | Stuttgart |

| State ^a | Name of facility | Location |
|---------------------------|---------------------------------|----------------------------|
| | SUR100-RWTH | Aachen |
| | TRIGA Mainz | Mainz |
| Ghana | GHARR-1 Ghana Research React. 1 | Legon-Accra |
| Greece | GRR-1 | Attikis |
| Hungary | Budapest Research Reactor | Budapest |
| | Training Reactor | Budapest |
| Indonesia | ChTkn | Bandung |
| | PPNY | Yogyakarta |
| | RSG-GAS | Serpong |
| Iran, Islamic Republic of | Esfahan MNSR | Esfahan |
| | FARS Research Reactor FRR | Shiraz |
| | HWZPR | Esfahan |
| | KHRR | Arak |
| | LWCR | Tehran |
| | Tehran Research Reactor (TRR) | Tehran |
| Israel | Israel Res. Reactor (IRR1) | Soreq |
| Italy | AGN-201 | Palermo |
| | 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 |
| 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 |

| State ^a | Name of facility | Location |
|--------------------|-------------------------|--------------------------------|
| | Musashi Reactor | Kawasaki-Shi, Kanagawa-Ken |
| | NCA | Kawasaki-Shi, Kanagawa-Ken |
| | 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 |
| Jordan | JRTR | Jordan Univ. Science & Tech. |
| Kazakhstan | IGR Reactor | Kurchatov |
| | IVG.1M Reactor | Kurchatov |
| | RA Reactor | Kurchatov |
| | WWR-K | Almaty |
| Korea, Republic of | Gijang Research Reactor | Gijang, Busan Metropol. City |
| | Hanaro | Taejeon |
| | Kyung Hee | Suwoon |
| 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 |
| 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 & Agata | Otwock-Świerk |
| | Maria | Otwock-Świerk |
| Portugal | IST (CTN) RPI | Sacavem |
| Romania | IFIN-HH | Magurele |

| State ^a | Name of facility | Location |
|-----------------------------------|-----------------------------------|-------------------------------------|
| | TRIGA Research & MTR | Pitești-Mioveni |
| Serbia | RA-RB | Vinča |
| Slovenia | TRIGA II | Ljubljana |
| South Africa | Safari-I Research Reactor | Pelindaba |
| Sweden | Studsvik AB and AB Svafo | Studsvik |
| Switzerland | AGN 211-P | Basel |
| | Crocus | Lausanne |
| | Proteus | Villigen |
| Syrian Arab Republic | MNSR | Damascus |
| Tajikistan | Argus Research Reactor | Dushanbe |
| Thailand | MNSR | Nakhon Ratchasima Province |
| | ONRC | Ongkharak |
| | TRR-1 | Bangkok |
| Turkey | Çekmece Nuc. Res. & Tr. Centre | Istanbul |
| | ITU-TRR-TRIGA Mark II | Istanbul |
| Ukraine | IR-100 Research Reactor | Sevastopol |
| | WWR-M Research Reactor | Kyiv |
| Uzbekistan | WWR-SM Reactor | Ulugbek |
| Venezuela, Bolivarian Republic of | RV-1 Ivic R. Reactor | 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 | Pilcaniyeu |
| | UF ₆ Conversion Plant | Pilcaniyeu |
| | UO ₂ Conversion Plant | Cordoba |
| | Uranium Powder Production Fac. | Polo Cientifico, Tecnologico y Inn. |
| Brazil | USEXA | Iperó, São Paulo |
| Canada | Blind River | Blind River, Ontario |
| | Port Hope | Port Hope, Ontario |
| Chile | Lab. Experiment de Conversion | Santiago |
| Egypt | Uranium Products Semi-pilot Plant | Inshas |
| Iran, Islamic Republic of | EUPP | Esfahan |
| | UCF | Esfahan |
| Japan | JCO | Tokai-Mura, Ibaraki-Ken |

| State ^a | Name of facility | Location |
|--------------------------------|---------------------------------|--------------------------------|
| | PCDF | Tokai-Mura, Ibaraki-Ken |
| Romania | National Uranium Company | Feldioara |
| South Africa | Conversion Plant (U Plant) | Pelindaba |
| | HEU/LEU Conversion Plant | Pelindaba |
| Fuel fabrication plants | | |
| Algeria | UDEC | Draria Nuclear Research Center |
| Argentina | ECRI | Buenos Aires |
| | FECN | Ezeiza |
| | R. Reactor Fuel Fab. Plant | Ezeiza |
| Belgium | FBFC DNU Fab. | Dessel |
| Brazil | Fuel Fabrication Plant | Resende |
| Canada | Cameco, Port Hope | Port Hope, Ontario |
| | Fuel Eng. Met. Che. Op. | Chalk River, Ontario |
| | Fuel Fabrication Facility | Chalk River, Ontario |
| | BWXT, Peterborough | Peterborough, Ontario |
| | BWXT, Toronto | Toronto, Ontario |
| Chile | United de Metalur, Fisica (UMF) | Santiago, Chile |
| Egypt | FMPP (Fuel Manuf. Pilot Plant) | Inshas |
| | R&D-NFL | Inshas |
| France | Melox de Marcoule | Chusclan |
| Germany | Advanced Nuclear Fuels | Lingen |
| India | NFC | Hyderabad |
| | NFC-NU | Hyderabad |
| | PFFF | Kota, Rjasthan |
| Indonesia | IEBE | Serpong |
| | IPEBRR | Serpong |
| Iran, Islamic Republic of | FMP | Esfahan |
| | FPPF | Esfahan |
| 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 |
| | PFPF | Tokai-Mura, Ibaraki-Ken |

| State ^a | Name of facility | Location |
|----------------------------|---------------------------------|-----------------------------|
| | PPFF | Tokai-Mura, Ibaraki-Ken |
| Kazakhstan | Fuel Assembly Fabrication Plant | Ust-Kamenogorsk |
| | UMP | Ust-Kamenogorsk |
| Korea, Republic of | KNFFP | Taejeon |
| Mexico | Fuel Fabrication Pilot Plant | Salazar |
| 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 |
| Reprocessing plants | | |
| Belgium | RECUMO | Mol |
| France | AREVA NC-UP2 & UP3 | La Hague |
| Germany | KTE GmbH | Eggenstein-Leopoldshafen |
| Italy | So. G.I.N. SpA-Impianto EUREX | Saluggia |
| | So. G.I.N. SpA-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 |
| | TRP | Tokai-Mura, Ibaraki-Ken |
| Enrichment plants | | |
| Argentina | Lasie | Bariloche |
| | Pilcaniyeu Mock-up Laboratory | Pilcaniyeu |
| | Uranium Enrichment Pilot Plant | Pilcaniyeu |
| Brazil | CTMSP/Ladesi-Copesp | São Paulo |
| | CTMSP/LEI | Iperó |
| | CTMSP/USIDE | Iperó |
| | FCN-Enrichment Plant | Resende |
| | IAEV/AR/LAS | São Jose dos Campos |
| China | Shaanxi | Han Zhang, Shaanxi Province |
| France | Georges Besse II | Bollene |
| Germany | UTA 1 and UTA 2 | Gronau |

| State ^a | Name of facility | Location |
|------------------------------------|--------------------------------------|------------------------------|
| Iran, Islamic Republic of | FEP | Natanz |
| | FFEP | 20 km North-East 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 |
| United Kingdom | Urenco Capenhurst E22, E23, A3 | Capenhurst |
| Separate storage facilities | | |
| Argentina | Cent. St. Irr. Sp. Fiss. M. (DCMFEI) | Centro Atomico Ezeiza |
| | Centr. Store Sp. Fiss. Mat. (DCMFE) | Buenos Aires |
| | DUE | Centro Atomico Ezeiza |
| | FACIRI | Ezeiza |
| | Nuclear Material Storage | Buenos Aires |
| | Storage Bunker | Centro Atomico Ezeiza |
| Armenia | SSFS | Metsamor |
| Australia | Bulk Storage Facility | Lucas Heights, Sutherland |
| Belarus | Belarus NPP FF storage | Ostrovets |
| | Sosny 2 | Minsk |
| Belgium | Belgoprocess | Dessel |
| | Belgoprocess Dry Storage | Dessel |
| | Belgoprocess UF ₆ | Dessel |
| | Elbel Doel Dry Storage | Beveren |
| | Tihange Dry Storage | Tihange |
| | Tihange Wet Storage | Tihange |
| Brazil | Angra Dry Storage | Angra dos Reis |
| | Planned Fuel Storage Facility | Ilha Da Madeira, Itaguaí |
| Bulgaria | DSFSF KNPP 2 | Kozloduy |
| | SFSF Kozloduy 1 | Kozloduy |
| Canada | ACEL Research | Pinawa, Manitoba |
| | CRL Waste Storage Facility | Chalk River, Ontario |
| | DP Dry Storage | Tiverton, Ontario |
| | DWMF | Darlington, Ontario |
| | FPSF | Chalk River, Ontario |
| | Gentilly I | Gentilly, Quebec |

| State ^a | Name of facility | Location |
|--------------------|---------------------------------|----------------------------|
| | LTWMF | Port Hope, Ontario |
| | NMSF | Chalk River, Ontario |
| | PWMF | Pickering, Ontario |
| | Spent Fuel Canister Storage | Chalk River, Ontario |
| | Waste Storage Facility | Chalk River, Ontario |
| | WUFDSF | Tiverton, Ontario |
| Czech Republic | ISFS Dukovany | Dukovany |
| | ISFS Temelin | Temelin |
| | Radioactive Waste Rep. Richard | Litoměřice |
| | Vao, HLWS | Řež |
| Denmark | DD Storage | Roskilde |
| | DD Waste | Roskilde |
| Finland | Geological Repository | Olkiluoto |
| | TVO-KPA-Store | Olkiluoto |
| Germany | AVR-BL | Juelich |
| | BZA Ahaus | Ahaus |
| | Daher Nuclear Technologies GmbH | Hanau |
| | EWN Zwischenlager Nord GmbH | Lubmin |
| | HDB | Eggenstein - Leopoldshafen |
| | Kernmateriallager 87 | Rossendorf |
| | KFK-FR-2 | Eggenstein-Leopoldshafen |
| | PTB-Spaltstofflager | Lubmin |
| | SZK Kruemmel | Geesthacht |
| | SZL Biblis | Biblis |
| | SZL Brokdorf | Brokdorf |
| | SZL Brunsbuettel | Brunsbuettel |
| | SZL Emsland | Lingen (Ems) |
| | SZL Grafenrheinfeld | Grafenrheinfeld |
| | SZL Grohnde | Emmerthal |
| | SZL Gundremmingen | Gundremmingen |
| | SZL Isar | Essenbach |
| | SZL Neckarwestheim | Neckarwestheim |
| | SZL Philippsburg | Philippsburg |
| | SZL Unterweser | Stadland |
| | TBH (B) 87.2 | Rossendorf |

| State ^a | Name of facility | Location |
|---------------------------|-------------------------------|----------------------------|
| | TBL-G | Gorleben |
| | Uranoxid-Lager UAG | Gronau |
| Hungary | Central Isotope Storage | Budapest |
| | MVDS | Paks |
| India | PREFRE | Tarapur |
| | TAPS AFR | Tarapur |
| Indonesia | Ria-Nd ISFSF | Serpong |
| Iran, Islamic Republic of | KWS | Karaj |
| Iraq | Former Location C | Tuwaitha |
| Italy | Centro Comune di Ricerca | Ispra |
| | Dep. Avogadro Elementi Irragg | Torino |
| | Essor Storage | Ispra |
| | Lab. Misure Nucleari Perla | Ispra |
| | Nucleco S.p.A. | Rome |
| Japan | Fuku-I-CSFS | Futaba-Gun, Fukushima-Ken |
| | Hamaoka (Storage-UC) | Omaezaki-Shi, Shizuoka-Ken |
| | JAERI Mutsu | Mutsu-Shi, Aomori-Ken |
| | KUFFS | Sennan-Gun, Osaka |
| | NFI Kumatori-2 | Sennan-Gun, Osaka |
| | Ningyo R&D | Tomata-Gun, Okayama-Ken |
| | RFSC | Mutsu-Shi, Aomori-Ken |
| Kazakhstan | Baikal-1 DSFS | Kurchatov |
| | BN-350 Temporary Storage | Aktau |
| | DU & PU Source Storage | Kurchatov |
| | IAEA LEU Storage Facility | Ust-Kamenogorsk |
| | Thorium Storage Facility | Kurchatov |
| | Ulba Thorium Storage | Ust-Kamenogorsk |
| Korea, Republic of | NMSF | Kaeri-Taejeon |
| | Uranium Residue Storage Fac. | Kaeri-Taejeon |
| | WLDC | Kyongju |
| Lithuania | SNFS-1 | Visaginas |
| | SNFS-2 | Visaginas |
| Mexico | IFSI | Estado de Veracruz |
| Netherlands | COVRA | Vlissingen |
| | HABOG | Vlissingen |

| State ^a | Name of facility | Location |
|--------------------|-------------------------------|-----------------------|
| Poland | ZUOP | Otwock-Świerk |
| 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 |
| | Bohunice Dry SNF Storage | Jaslovske Bohunice |
| Slovenia | Spent Fuel Dry Storage | Krško |
| South Africa | E-Building Storage Facility | Pelindaba |
| | HEU Storage Vault | Pelindaba |
| | Koeberg Castor Storage Fac. | Cape Town |
| | Thabana Pipe Store | Pelindaba |
| | Vaalputs | Springbok |
| | Waste Storage Facility | Pelindaba |
| | Y-Plant Storage Facility | Pelindaba |
| | Z-Plant Storage Facility | Pelindaba |
| Spain | Almaraz Dry Storage | Almaraz |
| | Asco Dry Storage | Asco |
| | ATC Centralized Storage | Madrid |
| | Cofrentes Dry Storage | Cofrentes |
| | Nuclenor, S.A. Storage | Santa Maria de Garona |
| | Trillo Dry Storage | Trillo |
| | Zorita Dry Storage | Almonacid de Zorita |
| Sweden | SFK | Oesthammar |
| | SKB Clab Store | Oskarshamn |
| Switzerland | Zwibez Kernkraftwerk Beznau | Doettingen |
| | Zwilag | Wuerenlingen Aargau |
| Turkey | Akkuyu Fresh Fuel Storage | Büyükeceli |
| | Akkuyu Spent Fuel Storage | Büyükeceli |
| Ukraine | Chernobyl NPP-SFS | Chornobyl |
| | Chernobyl SNFSF-2 | Chornobyl |
| | Khmelnitski FF Storage | Netishyn |
| | Rovno FF Storage | Varash |
| | South Ukraine FF Storage | Yuzhnoukrayinsk |
| | Ukraine Centralized Dry Store | Chornobyl |

| State ^a | Name of facility | Location |
|--------------------------|-------------------------------------|---------------------------|
| | Zaporozhe FF Storage | Enerhodar |
| | Zaporozhe SFS | Enerhodar |
| United Kingdom | SNM Store 9 | Sellafield |
| | Thorp Product Store | Sellafield |
| United States of America | KAMS Storage | Savannah River Site |
| Other facilities | | |
| Argentina | Alpha Laboratory | Buenos Aires |
| | PPRF | Centro Atomico Ezeiza |
| | Lapep | Centro Atomico Ezeiza |
| | Tripple Altura Laboratory (LTA) | Centro Atomico Ezeiza |
| | Enriched Uranium Recovery Lab (LUE) | Centro Atomico Ezeiza |
| | Uranium Power Fab. Plant (PFPU) | Buenos Aires |
| | PPCA | Buenos Aires |
| Australia | R&D Labs | Lucas Heights, Sutherland |
| | SYNROC | Lucas Heights, Sutherland |
| Belgium | Belgoprocess Waste Treatment | Mol |
| | I.R.E. | Fleurus |
| | IRMM. Geel | Geel |
| | SCK•CEN Lab. | Mol |
| | SCK•CEN Pu Laboratories | Mol |
| Brazil | Aramar Store | Iperó |
| | CTMSP/Lambat | Iperó |
| | IPEN-Nuclear Fuel Centre | São Paulo |
| | IPEN-Reprocessing Project | São Paulo |
| | LADICON | São Paulo |
| Czech Republic | Lab. & Stores, Centr. Anal. Lab. | Řež |
| | UJP | Prague |
| Denmark | Danish Decommiss. - Hotcell | Roskilde |
| Egypt | Hydrometallurgy Unit | Inshas |
| | Molybdenum Production Unit | Inshas |
| | NCB | Inshas |
| Finland | Encapsulation Plant | Olkiluoto |
| Georgia | Sukhumi Institute | Sukhumi |
| Germany | Inst. Kernchemie | Mainz |

| State ^a | Name of facility | Location |
|---------------------------|-----------------------------|----------------------------|
| | JRC-ITU | Eggenstein-Leopoldshafen |
| | Betriebsstätten der JEN | Juelich |
| | Lab. Juelich | Juelich |
| | PKA Gorleben | Gorleben |
| | WAK-Heisse Zellen der HVT | Eggenstein-Leopoldshafen |
| Indonesia | RMI | Serpong |
| Iran, Islamic Republic of | JHL | Tehran |
| | LWSCR | Esfahan |
| | MIX Separation Facility | Tehran |
| Italy | Impianto Plutonio | Santa Maria di Galeria |
| Japan | JNC Tokai R&D | Tokai-Mura, Ibaraki-Ken |
| | 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 |
| | 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 |
| | Showa | Kawasaki-Shi, Kanagawa-Ken |
| | Sumitomo-Chiba | Sodegaura-Shi, Chiba-Ken |
| | UML | Higashi, Ibaraki-Ken |
| Korea, Republic of | ACPF | Taejeon |
| | DFDF | Taejeon |
| | HFFL | Taejeon |
| | IMEF | Taejeon |
| | KAERI R&D Facility | Taejeon |
| | PIEF | Taejeon |
| | PRIDE | Kaeri Site, Taejeon |
| Libya | Tajura Uranium R&D Facility | Tajura |
| Netherlands | GCO/ECN Lab. | Petten |
| Norway | Research Laboratories | Kjeller |

| State ^a | Name of facility | Location |
|--------------------|----------------------------------|---------------|
| South Africa | Decontam. and Waste Recovery Pl. | Pelindaba |
| | Hot Cell Complex | Pelindaba |
| | Nu and Du Metals Plant | Pelindaba |
| Spain | C.A. El Cabril | El Cabril |
| Switzerland | AERA | Villigen |
| | CERN | Meyrin-Geneva |
| | Hot Labor | Villigen |
| Ukraine | Chernobyl Conditioning | Chornobyl |
| | Chernobyl Unit 4 Shelter | Chornobyl |
| | Izotop Enterprise | Kyiv |
| | KHFTI | Kharkiv |
| | KHFTI | Kharkiv |
| | Sevastopol Subcritical Assembly | Sevastopol |

^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 15 facilities in Taiwan, China.
 2. Additionally under Agency safeguards there were 604 material balance areas outside facilities in 144 States and in Taiwan, China. These include 65 material balance areas established for States with a small quantities protocol based on revised standard text.
 3. The list includes projected and operational facilities and facilities at the decommissioning stage.