

Start of Collaborative Laboratories for Advanced Decommissioning Science

Gathering domestic and overseas know-how towards decommissioning research and human resource development

On April 20, JAEA held the opening ceremony for the Collaborative Laboratories for Advanced Decommissioning Science (Center) at Tokai, Ibaraki, which will become a research base for the decommissioning of the Fukushima Daiichi Nuclear Power Station, Tokyo Electric Power Company (TEPCO).

“The Collaborative Laboratories for Advanced Decommissioning Science inaugurated on April 1 will be the core of JAEA’s research and development (R&D) on the decommissioning of TEPCO’s Fukushima Daiichi Nuclear Power Station (1F). We are currently planning to comprehensively promote R&D from basic research to applied studies, such as understanding the properties of fuel debris, analysis of the situation inside the reactors, and understanding the properties of radioactive waste. In FY 2016, the International Collaborative Research Building will be established near the 1F as the base for R&D. I believe it will strengthen the Center’s hub function to bond researchers and research institutes and the bridging function between research and decommissioning sites.”

Mr. Toshio Kodama, the President of JAEA (**photograph above**), pointed out the significance of opening the Collaborative Laboratories for Advanced Decommissioning Science in his opening remarks. Accompanied by a large number of media reporters, the opening ceremony started with about 60 participants including Mr. Hakubun Shimomura (Minister of Education, Culture, Sports, Science and Technology), Ms. Yachie Yamaguchi (Deputy Governor of Ibaraki Prefecture), Mr.



Takayuki Kondo (Director General of Planning and Coordination Department, Fukushima Prefecture) and representatives of the U.S., French and British Embassies (**photograph left**).



The Collaborative Laboratories for Advanced Decommissioning Science is a facility for carrying out advanced R&D and human resource development (HRD) in order

to promote safe decommissioning, etc., of 1F.

Until the International Collaborative Research Building is completed and ready for service, the Center undertakes studies utilizing JAEA's research facilities at Tokai and Oarai. The immediate target of research tasks in hand is to gain an understanding the properties of and extraction of fuel debris that melted and fell into the reactor vessel due to the accident and establishing management methods for the radioactive waste. The Center will start with eighty staff, and will focus on the development of human resources who will engage in the decommissioning work that will span over 40 years. It will then be extended to 100~150 staff by the time the International Collaborative Research Building is completed in FY2016. The FY2015 budget allocated for realizing the acceleration plan formulated by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) is approximately 3.8 billion yen.

Mr. Toru Ogawa was inaugurated as the Director of the Collaborative Laboratories for Advanced Decommissioning Science

Mr. Toru Ogawa, the Director of the Collaborative Laboratories for Advanced Decommissioning Science (**photograph**), described the specific roles of the Center.



“This Center was launched in response to the ‘Acceleration Plan of Reactor Decommissioning R&D for Fukushima Daiichi Nuclear Power Station, TEPCO’ announced by Mr. Shimomura, Minister of MEXT in June last year. At this Center, in order to promote the

acceleration plan for reactor decommissioning, efforts will be made in the following four areas while maintaining collaboration inside and outside JAEA.

First, the International Collaborative Research Building will be constructed near the 1F. Until the construction of this building is completed, JAEA's existing facilities will be utilized in carrying out R&D on ‘waste processing and disposal’, ‘handling and analysis of fuel debris’, and ‘accident progression and behavior evaluation’ towards the decommissioning.

Specifically, in the Waste Management Division, R&D will be carried out regarding the processing and disposal of various waste that was generated by the accident. In the Fuel Debris Handling and Analysis Division, R&D for debris extraction that will be the key technology for decommissioning will be developed. In the Severe Accident Propagation Behavior Evaluation Division, the associated chemical behavior of radionuclides and migration behavior of materials in reactor will be estimated and evaluated.

The second is gathering of domestic and overseas know-how. Along with inviting Mr. Carlo Vitanza to be the Vice Director of the Center, we will promote collaboration and cooperation with overseas researchers and research institutions to enhance the decommissioning research.

Collaborative Laboratories for Advanced Decommissioning Science



On top of that, domestically, we will cooperate with institutions selected for 'Innovative Nuclear Research and Development Program' and 'The Initiatives for Atomic Energy – Basic and Generic Strategic Research' of MEXT, International Research Institute for Nuclear Decommissioning (IRID), Nuclear Damage Compensation and Decommissioning Facilitation Corporation (NDF), and TEPCO. Also we will start working groups consisting of domestic and overseas researchers and experts. Based on these cooperative activities, the Center will play a core role in decommissioning research.

The third is strengthening the function of human resource development, which is important in a mid- to long-term view. We will work on integration of analysis technologies from various fields and human resource development by opening cooperative sessions with institutions selected for the 'Decommissioning Basic Research: Human resource development program' hosted by MEXT. To that end, in order to gather a variety of talented people, the cross-appointment system¹ has been introduced.

The fourth is establishment of an information dissemination function. Cooperating with the National Diet Library, we will gather and arrange online information released by the national

¹ Cross-appointment system: A system, for the purpose of creating new innovations, to enable researchers, etc. to engage in R&D and education while being employed by two or more organizations (e.g., universities, public research institutes, companies) in accordance with the role of each organization under a time allocation method called effort management. Active introduction and utilization of this system are encouraged.

government and TEPCO on the basis of IAEA's nuclear accident information categories and disseminate it as the 'JAEA Archive (Fukushima Nuclear Accident Archive <http://dspace.jaea.go.jp/dspace/index.php?locale=eng>)'.

Through conducting R&D of decommissioning technologies at the Collaborative Laboratories for Advanced Decommissioning Science, we will establish and maintain active cooperation with overseas researchers and research institutions, collaboration and cooperation with domestic universities, enterprises, etc., and close collaboration and cooperation with relevant organizations and administrative agencies including TEPCO, IRID and NDF.”



Speech by Mr. Hakubun Shimomura, the Minister of Education, Culture, Sports, Science and Technology

Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station has no precedent in the world, and is an urgent issue that needs to be worked on by industry, government and academia gathering all their powers. When I visited the troubled power station in May last year, and observed 5,000 people diligently working every day, I thought that R&D on decommissioning must be accelerated by gathering domestic and overseas know-how. So we formulated

the "Acceleration Plan of Reactor Decommissioning R&D for Fukushima Daiichi Nuclear Power Station, TEPCO". I hope that industry, government and academia form a network to conduct R&D and human resource development towards the decommissioning, and this Center will become a place for uniting various knowledge and know-how.

TOPICS Fukushima No. 66

Fukushima Administrative Department

Sector of Fukushima Research and Development

Japan Atomic Energy Agency (JAEA)

Address: Fukushima/NBF Unix Building 1F 6-6, Sakae-machi, Fukushima-shi, Fukushima 960-8031, Japan

Phone: +81-24-524-1060 Fax: +81-24-524-1073

Website: <http://fukushima.jaea.go.jp/english/index.html>