August 2017

The Modernization of the Nuclear Applications Laboratories in Seibersdorf

The IAEA's Department of Nuclear Sciences and Applications (NA) manages eight laboratories in Seibersdorf, Austria that deliver technical assistance to Member States around the world in the areas of food and agriculture, human health, the environment and the development and use of nuclear scientific instruments. The laboratories provide training and analytical services and conduct demand-driven R&D to develop and transfer scientific techniques and technologies to Member States. The IAEA contributes to Member States' efforts to achieve the following Sustainable Development Goals:

Since the laboratories opened in 1962, the number of IAEA Member States has more than doubled. This has led to significant increases in Member State requests for assistance from the laboratories. Member States' needs are also evolving as challenges such as climate change and the global cancer epidemic have emerged. The laboratories, however, have never received a comprehensive renovation, and they now struggle to meet Member States' needs.

The Plan for the NA Laboratories in Seibersdorf

Recognizing the need to modernize the NA laboratories in Seibersdorf, the IAEA developed a plan in 2014 to significantly enhance the capabilities of the laboratories. Specifically, the modernization will deliver:

- ✓ A new Insect Pest Control Laboratory (IPCL) building to replace the current IPCL and to increase and enhance its capabilities and space;
- ✓ A new Flexible Modular Laboratory (FML) building to accommodate three additional laboratories with increased and enhanced capabilities and space;
- ✓ New site infrastructure to support the new laboratory buildings;
- ✓ Increased and enhanced capabilities and space through targeted refurbishment for the four laboratories that will remain in the existing buildings;
- ✓ A linear accelerator (Linac) and a new bunker to house it for the Dosimetry Laboratory (DOL) to strengthen support for the use of Linacs in cancer treatment;
- ✓ Biosafety Level 3 (BSL3) capabilities for the Animal Production and Health Laboratory (APHL) to deliver new and improved services for the control of transboundary animal diseases, and;
- ✓ New equipment to replace aged instruments and provide new capabilities.

The new IPCL in August 2017

Start of FML excavation works in April 2017

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Total Funds Obtained for Modernization to Date:

€37 MILLION

Current Extrabudgetary Funds Required:

€4.7 MILLION

ReNuAL
Renovation of the Nuclear Applications Laboratories

The ReNuAL Project

The laboratories are being modernized under two related initiatives that together will provide all of the planned upgrades. The first initiative, the Renovation of the Nuclear Applications Laboratories (ReNuAL) project, began in 2014. ReNuAL has a budget of €31 million that is fully funded and will provide for:

- ✓ Construction of the structure of the new IPCL and interior outfitting of three of the four IPCL laboratory units;
- ✓ Construction and outfitting of two of the three FML laboratories: the Food and Environmental Protection Laboratory and Soil and Water Management and Crop Nutrition Laboratory;
- ✓ All of the required new site infrastructure to support the IPCL and FML, and;
- ✓ Urgently needed equipment.

Completing the Modernization: ReNuAL Plus (ReNuAL+)

ReNuAL+ is the follow-up initiative to ReNuAL that will complete the modernization by providing for the laboratories' remaining needs. ReNuAL+ has an estimated budget of €26 million, for which €6 million in extrabudgetary funds have been raised to date. ReNuAL+ will deliver:

- ✓ Outfitting of the final IPCL unit and construction of a new insect greenhouse for the IPCL;
- ✓ Construction of the DOL bunker to house a new linear accelerator;
- ✓ Biosafety level 3 capabilities (BSL3) for the APHL for work on transboundary animal diseases;
- ✓ Construction of the APHL as the third laboratory of the FML;
- ✓ Enhanced capacities through targeted refurbishment of: the DOL, the Nuclear Science and Instrumentation Laboratory, the Plant Breeding and Genetics Laboratory and the Terrestrial Environment Laboratory, and;
- ✓ Additional urgently needed equipment.

The completion of the IPCL and greenhouse and the DOL bunker are fully funded. The Government of Austria, through its Agency for Health and Food Safety, has provided the APHL with full access to a newly-constructed BSL3 facility to address the need for these capabilities.

The priority for ReNuAL+ is to raise funds for construction of the APHL to complete the FML. The estimated cost for construction of the APHL is €6.7 million, and an additional €4.7 million in extrabudgetary funds are now urgently required to reach this goal. These funds are needed by September 2017. Delays in obtaining these funds will result in cost increases.

ReNuAL+ construction began in the second quarter of 2017 and is planned for completion by December 2018. Refurbishment is planned to begin in January 2019.

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*As of August 2017. Includes in-kind contributions.

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www.iaea.org/about/seibersdorf-laboratories/renual