



PNNL-34319

Communications Plan for the Radiochemical Processing Laboratory Life Extension Plan

June 2023

Hanson, Eric

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor Battelle Memorial Institute, nor any of their employees, **makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.** Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or Battelle Memorial Institute. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

PACIFIC NORTHWEST NATIONAL LABORATORY
operated by
BATTELLE
for the
UNITED STATES DEPARTMENT OF ENERGY
under Contract DE-AC05-76RL01830

Printed in the United States of America

Available to DOE and DOE contractors from
the Office of Scientific and Technical
Information,
P.O. Box 62, Oak Ridge, TN 37831-0062
www.osti.gov
ph: (865) 576-8401
fox: (865) 576-5728
email: reports@osti.gov

Available to the public from the National Technical Information Service
5301 Shawnee Rd., Alexandria, VA 22312
ph: (800) 553-NTIS (6847)
or (703) 605-6000
email: info@ntis.gov
Online ordering: <http://www.ntis.gov>

Communications Plan for the Radiochemical Processing Laboratory Life Extension Plan

June 2023

Hanson, Eric

Prepared for
the U.S. Department of Energy
under Contract DE-AC05-76RL01830

Pacific Northwest National Laboratory
Richland, Washington 99354

Summary

The Radiochemical Processing Laboratory Life Extension Plan (RPL-ELP) is a collection of independent projects that enable the life extensions of the Radiochemical Processing Laboratory to provide continuous, safe, and secure research operations in support of Department of Energy missions. The ELP includes facility infrastructure upgrades, laboratory and equipment upgrades, and increased research capacity through conversion of existing spaces to the current Pacific Northwest National Laboratory (PNNL) standards.

This communications plan is a living document that outlines the goals, target audiences and objectives, key messages, communications opportunities, and tactics for those communications products. This plan will help to make sure communications are coordinated and consistent. Periodically, PNNL will review the communications plan to make sure it addresses current needs of the RPL-ELP.

Contents

Summary	ii
1.0 Radiochemical Processing Laboratory Overview	1
2.0 Audiences	2
3.0 Messages.....	2
4.0 Communications Opportunities.....	3
5.0 Responses	4
5.1 Freedom of Information Act Response.....	8
5.2 Off-normal Event Responses	8
5.3 Media and Local Government Inquiries about RPL-ELP	8
6.0 Points of Contact for RPL-ELP Communications	8
Appendix A – Communications Tactics for FY 2023.....	A.1
Appendix B – Communications Products	B.1

1.0 Radiochemical Processing Laboratory Overview

Pacific Northwest National Laboratory (PNNL) is home to the Radiochemical Processing Laboratory (RPL), a hazard category II nonreactor nuclear facility. RPL has been serving the nation by housing the research to support national security, energy, environmental cleanup, and isotope research since the 1950s. RPL's building systems and laboratories are 50 to 70 years old, well beyond their service life, and their ability to support modern research is limited. Immediate investment is needed to continue vital research work and steward the foundational technical competencies necessary to support the research

PNNL, the National Nuclear Security Administration (NNSA), and the Department of Energy (DOE) Office of Science (SC) are stewarding the future of RPL by investing to enhance its readiness for current and future missions. From now through 2031, the NNSA Defense Programs Office and the Defense Nuclear Nonproliferation Office will sponsor the RPL Extended Life Plan (RPL-ELP), which will prolong the service life of the building to 2045 and steward foundational technical competencies in the nuclear material production and processing areas.

Recognizing the importance of RPL to NNSA missions, a memorandum of agreement between DOE-SC and NNSA was signed in December 2021 outlining specific objectives, participant roles, and funding commitments to support RPL life extension. The high-level objectives of this life extension include:

- Update building interior (plumbing, safety systems, electrical, roof, and heating, ventilation, and air-conditioning) and exterior infrastructure for safe facility operation through 2045 and beyond
- Refurbish and modernize existing research laboratories, including replacing aging fume hoods and glove boxes
- Increase research laboratory capabilities by using spaces previously devoted to offices
- Refurbish and potentially expand hot cells to align with NNSA's current and future mission needs.

Execution of these facility life-extending projects will enable the transformative science and technology that support nuclear material processing, post-irradiation examination for tritium production to support the nuclear stockpile, uranium-alloy fuel development for nonproliferation, material development and characterization for nuclear energy, waste-form development and characterization for environmental management, and isotope programs.

PNNL will communicate the support of its NNSA partners in this project to extend the service life of RPL and improve the capabilities of this national asset.

2.0 Audiences

Before preparing RPL-ELP communications, it is important to identify audiences. Understanding the audience allows for tailoring of the message based on expectations, knowledge, and audience attitudes toward the subject. This section presents lists of target audiences for RPL-ELP.

Internal (PNNL) audiences

- National Security Directorate (NSD) management and staff
- Energy and Environment Directorate (EED) management and staff
- Operational Systems Directorate (OSD) management and staff
- Physical and Computational Sciences Directorate (PCSD) management and staff
- Staff directly working in RPL

External audiences

- Pacific Northwest Site Office (PNSO)
- NNSA Office of Defense Nuclear Nonproliferation
- NNSA Office of Defense Programs
- DOE Office of Science
- Office of Management and Budget
- NNSA Office of Cost Estimation and Program Evaluation
- General public (City of Richland)

Stakeholders

- Congress and Intergovernmental Affairs Staff
- Office of Director of National Intelligence
- Intelligence Organizations
- Department of Defense
- Department of Homeland Security

Sponsors

- NNSA Office of Defense Nuclear Nonproliferation (NA-22), a funding partner
- NNSA Defense Programs (NA-19), a funding partner

3.0 Messages

Messages are typically tailored to the identified audience. Tailoring messages involves understanding the expectations and needs of the audience such that the audience's needs can be met. Not all audiences need to receive all messages. The messages below will be used to provide consistent themes for the RPL-ELP communications.

- RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship.
- RPL houses work vital to the nation (national security, energy, environment, and health).
- RPL systems and laboratories are 50 to 70 years old and beyond their service life, which affects the execution of cutting-edge research missions.
- Improvements will extend the life of RPL to 2045 and beyond.
- Space will be reconfigured to enhance existing laboratory space and create new laboratory spaces.
- RPL staff will have modern laboratories and equipment with infrastructure to support cutting edge research and steward foundational competencies
- The facility will continue to support vital NNSA as well as other DOE programmatic work during ELP work.
- ELP is a good steward of sponsor funding and will be managed with rigor by PNNL.
- ELP improvements will benefit all RPL staff and projects.

4.0 Communications Opportunities

Having identified audiences and messages, PNNL will look for opportunities to incorporate messages appropriate to the audience about RPL-ELP. This is not intended to be a comprehensive list, but provides anticipated opportunities. As other opportunities or needs arise, messages will be developed based on the audiences.

Appendix A contains a schedule of communications products. Appendix B contains a selection of completed products.

- Event to kick off RPL-ELP Minor Construction Projects
 - This may be an occasion for protocol visits
 - The RPL-ELP needs a base of information in place to point to. This includes internally and externally available information, and experts identified to talk to media.
- Monthly meetings with internal Advisory Committee
- Monthly reports to sponsors (sent after meetings)
- Monthly meetings with federal Steering Committee
- Updates to internal staff (could be in form of articles for the internal PNNL newsletter or targeted email messages for select staff, like affected staff in RPL)
- Internal newsletter stories including status reports, update audiences on progress (completion of major projects, [e.g., new roof and siding, new labs]). Status updates could appear on RPL-ELP website, too.
- Communications products delivered during the year (*not in priority order*)
 - Create an identity for this project.
 - Scout¹ answer to What is RPL-ELP? And then link to more information on web page(s).

¹ Scout is a search and answer tool for PNNL institutional knowledge.

- A stand-alone RPL-ELP website
- Fliers first on RPL-ELP, then on major projects.
- Elevator speech (a description of RPL-ELP that you or anyone else could deliver in about 30 seconds—the time you would spend riding in an elevator).
- Specific messages or acknowledgements for papers, presentations (e.g., “...*the work presented in this article/presentation was conducted as part of RPL-ELP at PNNL...*”)
- Photography for before and after renovation.
- A short (5-6 slides) presentation explaining “What is RPL-ELP.” The slide deck will be constructed for selected staff to deliver.
 - A description of RPL-ELP for Chief Operating Officer wrap messages (NSD, EED, and PCSD).
 - To the extent possible, organize visits from partners and stakeholders over a minimum of six months.
- Other communications opportunities
 - Sponsor visits (create specific, pre-visit material)
 - PNNL Expert page additions
 - Photography, new and curating existing photos with new captions
 - Directorate Advisory Committee (NSD, EED, and PCSD) updates
 - Division meetings (familiarize staff with RPL-ELP projects, benefits, and opportunities)
 - All-hands meetings of NSD, EED, and OSD
 - Posters inside RPL.

5.0 Responses

Communication is successful when it elicits a response. Internally, PNNL is capturing staff member questions about RPL-ELP and is answering them with information specific to the question and with the messages listed in Section 3.0. These questions and answers are captured in the Frequently Asked Question document shown in Figure 1.

RPL-ELP Frequently Asked Questions

WHAT IS THE RPL-ELP?

Pacific Northwest National Laboratory (PNNL) is home to the Radiochemical Processing Laboratory (RPL), a hazard category II nonreactor nuclear facility. RPL has been serving the nation by housing the research to support national security, energy, environmental cleanup, and isotope research since the 1950s. RPL's building systems and laboratories are 50 to 70 years old and well beyond their service life and ability to support modern research. Immediate investment is needed.

PNNL, the National Nuclear Security Administration (NNSA), and the Department of Energy Office of Science are stewarding the future of RPL. From now through 2031 and investing to enhance its readiness for current and future missions. The NNSA Defense Programs Office and the Defense Nuclear Nonproliferation Office will sponsor the RPL Extended Life Plan (RPL-ELP), which will prolong the service life of the building to 2045 and steward foundational technical competencies in the nuclear material production and processing areas.

WHO IS FUNDING THE RPL-ELP?

In December 2021, the National Nuclear Security Administration (NNSA) and the Department of Energy (DOE) Office of Science signed a memorandum of agreement to provide support to a 10-year Extended Life Plan (ELP) for RPL. According to the memorandum of Agreement, NNSA will contribute a total of \$150 million to the RPL-ELP from FY 2022 through FY 2031.

IT IS FY 2023, WHAT HAS RPL-ELP ACCOMPLISHED SO FAR?

We are starting work to replace the building siding, the roof, and hot cell manipulators. We also purchased a californium-252 source. Next year we will be working on laboratory renovations.

Hot cell manipulators for the High Level Radiation Facility (HLRF)

The HLRF manipulators have been purchased and they are scheduled for delivery in July 2023. RPL staff will remove the existing manipulators and put them into RPL waste stream and install the new manipulators. New manipulators should increase hot cell availability for research.

Roof replacement and siding replacement

The contract was awarded and work is expected to begin in spring 2023.

Californium-252 source

This source has been ordered. Once the source is fabricated, it will go to the national Institute of Standards and Technology (NIST) to be certified. The NIST-certified source will be shipped to the 318 Building and installed in a source well.

Figure 1. Frequently Asked Questions

RPL-ELP Frequently Asked Questions

WHAT IS THE RPL-ELP PROCESS FOR LABORATORY RENOVATIONS?

- First, we develop a conceptual design, also known as a PD-1. This document covers physical construction, equipment moves, and limited equipment purchases.
- Second is the design itself, also known as PD-2. The design gets more specific on physical construction, equipment purchases, and equipment moves.
- Once design is approved, the next step is a request for proposal, or RFP. Here is where we announce the project, describe it, and solicit bids from qualified contractors to complete the project.
- Once we receive bids, we select a contractor and let a construction contract for the physical work. This stage of the process is known as PD-3.
- Research relocation is expected to begin two to four months before construction begins. The first set of labs should expect to begin relocation between October and December 2023.
- Construction work begins.
- When the work is completed, this stage is known as project turnover, or PD-4.

WHAT ARE THE FIRST LABORATORIES TO BE RENOVATED?

Plutonium and Tritium Processing Laboratory Project

- 312
- 511
- 514/516
- 400

Plutonium Metal Laboratory Project

- 54, 34, and 36
- 604 and 604A
- 100 Hallway

WHAT IS THE TIMELINE FOR THE FIRST LABORATORY RENOVATION PROJECTS?

Plutonium and Tritium Processing Laboratory Project

- PD-1, Conceptual design/project authorization – May 2023
- PD-2, Definitive design complete – November 2023
- Vacate laboratories – October – December 2023
- PD-3 – December 2023
- Construction start – January-April 2024
- Construction end – October-December 2024
- PD-4, Return to laboratories – January 2025

Figure 1. Frequently Asked Questions (contd.)

RPL-ELP Frequently Asked Questions

Plutonium Metal Laboratory Project

- PD –1 Conceptual design/project authorization – June 2023

ARE RADON LEVELS IN THE RPL BASEMENT BEING ADDRESSED THROUGH THE RPL-ELP?

Radon mitigation will be evaluated during upgrades to the RPL ventilation system, which is a project under the RPL-ELP, Building Systems Upgrades, planned for FY 2023 through FY 2025. This project will increase air flow from the current 145,000 cubic feet per minute to a planned 180,000 cubic feet per minute.

WHAT KIND OF BUILDING WILL THE NEW OFFICE BUILDING BE?

The new 300 Area Office Building is a federally owned one-story building with approximately 50 to 55 offices and workstations, dedicated conference rooms, collaboration, and common space. The building will be of modular construction, an estimated 12,000 gross square feet in area, and located south of the RPL building on Cypress Street. The building will include a kitchenette, bathrooms, collaboration spaces, and a lactation room.

CAN WE COUNT ON FUNDING TO BE THERE TO COMPLETE THE INDIVIDUAL RPL-ELP PROJECTS?

PNNL is proceeding with the project decision process to conceptualize (PD-1); notify Congress; design (PD-2); request bids, select a contractor, and let a contract so work can begin (PD-3); make sure work is complete and receive the completed project (PD-4). The funding process requires PNNL to have full funding for the project before work begins. This allows project work to be completed once started.

WHAT TYPE OF LOCKS WILL THE RENOVATED LABS HAVE?

At the conceptual design stage (PD-1), RPL staff will be engaged to identify features and layout of laboratories that will be remodeled. This is the time to provide your input about locks. Physical Security will be engaged to address access controls for the laboratories in the design document (PD-2).

WHO SHOULD I CONTACT IF I HAVE OTHER QUESTIONS?

Don Bachand, Nuclear Operations
donald.bachand@pnnl.gov, (509) 375-5255

Dave Meier, Nuclear Material Processing Group Lead
david.meier@pnnl.gov, (509) 375-5685

Adam Poloski, Nuclear Chemistry & Engineering Group Lead
adam.poloski@pnnl.gov, (509) 375-6854

Eric Hanson, RPL-ELP Project Manager
eric.hanson@pnnl.gov, (509) 375-5351

Figure 1. Frequently Asked Questions (contd.)

Questions about RPL-ELP from audiences external to PNNL may arise. Questions from sponsors or partners and other government agencies are addressed by the RPL-ELP project manager.

The rest of this section covers questions or inquiries from the public or media.

5.1 Freedom of Information Act Response

PNNL staff will direct Freedom of Information Act (FOIA) requests to

FOIA Officer: Linda Chapman
Phone: (865) 576-2129
Mail: P.O. Box 2001, Oak Ridge, TN 37831

The FOIA Officer will direct PNNL's Legal team what to provide on PNNL's behalf in response to the FOIA request. Elizabeth Rosso, (509) 372-4743, elizabeth.rosso@pnnl.gov, is the point of contact on PNNL's Legal team.

5.2 Off-normal Event Responses

Certain off-normal events at the RPL—such as a radiological, chemical, or biological release; threats or impacts from natural disasters or extreme weather events; cyber attack targeting the facility; or an active shooter—will trigger activation of the Hanford Site's Joint Information Center (JIC). Communications surrounding these events will be handled by Hanford's JIC.

5.3 Media and Local Government Inquiries about RPL-ELP

Media and local governmental inquiries about RPL-ELP will be addressed by PNNL's Media Team. Responses to inquiries will be based on information in existing communications products about RPL-ELP (in development as of March 2023). RPL-ELP's media contact is Greg Koller, (509) 372-4864, greg.koller@pnnl.gov.

6.0 Points of Contact for RPL-ELP Communications

The following individuals are the points of contact for RPL-ELP Communications:

- Eric Hanson, RPL-ELP Project Manager, (509) 375-5351, eric.hanson@pnnl.gov
- Cornelia Brim, Communications Specialist, (509) 375-3950, cornelia.brim@pnnl.gov
- Greg Koller, Senior Public Affairs Advisor & Newsroom Manager, (509) 372-4864, greg.koller@pnnl.gov

Appendix A – Communications Tactics for FY 2023

Audience	Tactic	Message	Timing
Internal and External	Create project identity with attributes suggested by messages. Nuclear research at RPL benefits the nation.	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done
Internal	Organizing a new Teams site for collaboration and creating a SharePoint for a library, project record.	<ul style="list-style-type: none"> • ELP is a good steward of sponsor funding and will be managed with rigor by PNNL. 	Done
Internal and External	Stand up RPL-ELP internal website	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done
Internal	Frequently Asked Questions for website	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done

Internal and External	Create RPL-ELP flier	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done
Internal and External	Create RPL-ELP presentation	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done
Internal	Monthly meetings with and presentation to Advisory Committee	<ul style="list-style-type: none"> • PNNL is a good steward of NNSA investment. • ELP is a good steward of sponsor funding and will be managed with rigor by PNNL. 	Project manager creates the content to address agenda items
External	Monthly meetings with and presentations to federal Steering Committee	<ul style="list-style-type: none"> • PNNL is a good steward of NNSA investment. • ELP is a good steward of sponsor funding and will be managed with rigor by PNNL. 	Project manager creates the content to address agenda items
Internal and External	Poster for RPL lobby	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	Done

<p>External and internal use for comparison, project reporting to sponsors and PNNL managers, internal audience</p>	<p>Photography of “before” RPL-ELP shots</p>	<ul style="list-style-type: none"> • RPL houses work vital to the nation (national security, energy, environment, and health) • RPL needs updates. • Improvements will extend life to 2045 and beyond. 	<p>Roof and siding photography done, others in progress.</p>
<p>External</p>	<p>Event to kick off RPL-ELP</p>	<ul style="list-style-type: none"> • RPL houses work vital to NNSA missions of nonproliferation and stockpile stewardship. • RPL houses work vital to the nation (national security, energy, environment, and health). • RPL needs updates. • Improvements will extend life to 2045 and beyond. • Space will be reconfigured to enhance existing laboratory space and create new laboratory spaces. • RPL staff will have modern laboratories and equipment with infrastructure to support them. • The facility will continue to support programmatic work during ELP work. • ELP is a good steward of sponsor funding and will be managed with rigor by PNNL. • ELP improvements will benefit all RPL staff and projects. <p>Some secondary messages specific to Administrator (variations of above messages):</p> <ul style="list-style-type: none"> • PNNL is a good steward of NNSA investment. • NNSA Offices of Defense Nuclear Nonproliferation and Defense Programs are getting value from their investments in RPL. • RPL will increase and improve the laboratory space for research supporting the nonproliferation and stockpile stewardship missions. • PNNL is a nonproliferation laboratory and a nuclear material science laboratory. • PNNL supports NNSA missions of advancing missions to prevent nuclear weapon proliferation; reduce the threat of nuclear and radiological terrorism around the world; prevent, counter, and respond to nuclear or radiological threats; and maintain and enhance the safety, security, and effectiveness of the U.S. nuclear weapons stockpile. 	<p>Spring-Summer 2023</p>

Appendix B – Communications Products

B.1 RPL-ELP Elevator Speech

Pacific Northwest National Laboratory (PNNL) is home to the Radiochemical Processing Laboratory (RPL), a hazard category II nonreactor nuclear facility. RPL has been serving the nation by housing the research to support national security, energy, environmental cleanup, and cancer research for more than 60 years. The building needs updates for scientists to continue their vital work. PNNL, the National Nuclear Security Administration (NNSA), and the Department of Energy Office of Science are stewarding the future of RPL. From now through 2031, NNSA will sponsor the RPL Extended Life Plan, which will prolong the service life of the building to 2045. This plan also provides for long-term stewardship of foundational competencies in nuclear research. We have started hot cell manipulator procurement, siding, and roof replacement this year. Next year we will be working on laboratory renovations as well as mechanical and electrical systems upgrades.

B.2 Identity for RPL-ELP



RADIOCHEMICAL
PROCESSING LABORATORY
Extended Life Plan
@PNNL

B.3 Identity for PowerPoint Template



RADIOCHEMICAL
PROCESSING LABORATORY
Extended Life Plan
@PNNL

June 13, 2023



PNNL is operated by Battelle for the U.S. Department of Energy



B.4 Photo Samples of “Before” Condition of RPL



RPL exterior (April 2023)



RPL Siding (February 2023)



RPL Roof (February 2023)



RPL Laboratory before renovation (April 2023)

B.5 Poster



NNSA is Investing in the Radiochemical Processing Laboratory for Mission Readiness

The Radiochemical Processing Laboratory has supported DOE missions including national security since the 1950s. Its 50- to 70-year old building systems and laboratories need an upgrade to meet the national security missions of the future.

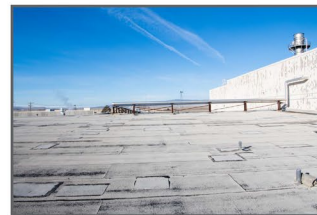
NNSA Office of Defense Nuclear Nonproliferation and Office of Defense Programs are investing \$150 million over 10 years.

This investment will:

- Update interior and exterior infrastructure for safe facility operation through 2045 and beyond.
- Refurbish and modernize 50 laboratories.

These improvements will enable PNNL researchers to complete vital work supporting NNSA missions of nonproliferation and maintaining the stockpile, including:

- Science and engineering of tritium production
- Plutonium oxide processing and analysis in support of nonproliferation and national security
- Small-scale plutonium metal processing to support programs in dynamic experiments, stockpile certification, and technology maturation
- Stewarding foundational technical competencies and workforce-development needs across a range of nuclear material production and processing areas.



RPL's roof before replacement.
Photo by Andrea Starr | Pacific Northwest National Laboratory



RPL's siding before replacement.
Photo by Andrea Starr | Pacific Northwest National Laboratory



Laboratory to be renovated.
Photo by Andrea Starr | Pacific Northwest National Laboratory



PNNL-SA-183981

B.6 Flyer

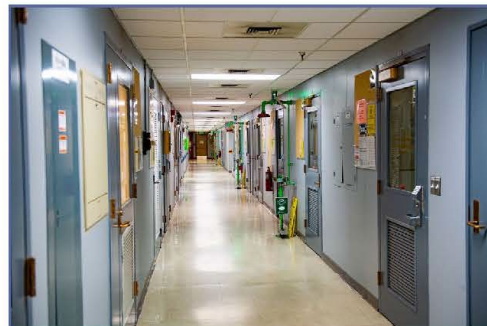


Investing for Mission Readiness

Pacific Northwest National Laboratory (PNNL) is home to the Radiochemical Processing Laboratory (RPL), a hazard category II nonreactor nuclear facility. RPL has been serving the nation by housing the research to support national security, energy, environmental cleanup, and isotope research for more than 60 years. PNNL, the National Nuclear Security Administration (NNSA), and the Department of Energy (DOE) Office of Science are stewarding the future of RPL and investing to enhance its readiness for current and future missions.

NATIONAL NUCLEAR SECURITY ADMINISTRATION'S INVESTMENT

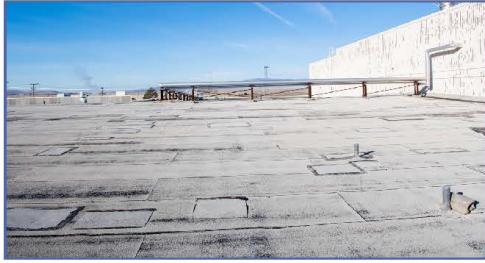
In December 2021, the NNSA and the DOE Office of Science signed a memorandum of agreement to provide support to a 10-year Extended Life Plan (ELP) for RPL. According to the memorandum of agreement, NNSA will contribute a total of \$150 million to the RPL-ELP from FY 2022 through FY 2031. NNSA Office of Defense Programs and NNSA Office of Defense Nuclear Nonproliferation will



Interior hall of RPL. Photo by Andrea Starr | Pacific Northwest National Laboratory

invest equally in RPL-ELP. The primary objectives of the RPL-ELP are to:

- Update building interior and exterior infrastructure for safe facility operation through 2045 and beyond.
- Refurbish and modernize existing research laboratories, including replacing aging fume hoods and glove boxes.
- Increase research laboratory capabilities by using spaces previously devoted to offices.



RPL's roof before replacement. Photo by Andrea Starr | Pacific Northwest National Laboratory



RPL's siding before replacement. Photo by Andrea Starr | Pacific Northwest National Laboratory

Near-term projects under NNSA's investments include:

- Replacement of RPL's roof and siding.
- Procurement of essential equipment for facility operations (such as spare remote manipulators for the hot cells).

These near-term projects will be completed in FY 2023 and FY 2024.

Twelve laboratories will be renovated, also in FY 2023 and FY 2024. These modernized laboratory spaces, complemented by instrument investments from outside of the RPL-ELP, will improve the efficiency and effectiveness of PNNL's contributions to NNSA missions, including:

- Science and engineering of tritium production for the nuclear weapons stockpile
- Plutonium recovery, processing, and analysis in support of nonproliferation and national security needs
- Small-scale plutonium metal processing to support programs in dynamic experiments, stockpile certification, and technology maturation
- Stewarding foundational technical competencies and workforce-development needs across a range of nuclear material production and processing areas.



PNNL'S INVESTMENTS

Coordinating with NNSA's investments in the RPL-ELP, PNNL will invest overhead resources on a series of projects including constructing an office building next to RPL to house the staff members displaced by the conversion of RPL office space to laboratory space. Other internally funded projects will include upgrades to PNNL's hot cell facilities: modifications to a hot cell door and the loading dock, renovation of floors, additional manipulator procurements, access upgrades, and a range of repairs (e.g., seals, lighting, and penetrations).

AN ENDURING NATIONAL ASSET CONTINUES TO SUPPORT CURRENT AND FUTURE MISSIONS

RPL operations will continue during upgrades and renovation. The modernized capabilities will serve the mission needs of today and offer a flexible readiness for the future. RPL will continue to serve the nation by supporting the research to reduce the threat of nuclear proliferation, secure the nuclear weapons stockpile, advance the science of carbon-free nuclear power, promote reactor safety, and improve nuclear-waste cleanup methods.

FOR MORE INFORMATION, CONTACT:

Eric Hanson, RPL-ELP Project Manager
eric.hanson@pnnl.gov | (509) 375-5351

PNNL-SA-183045 | MAY 2023 | NSD_1694_FLYER_RPL-ELP

Pacific Northwest National Laboratory

902 Battelle Boulevard
P.O. Box 999
Richland, WA 99354

1-888-375-PNNL (7665)

www.pnnl.gov