Review of the Continued Analysis of Supplemental Treatment of Low-Activity Waste at the Hanford Nuclear Reservation

July 15, 2021
Virtual Meeting

PUBLIC AGENDA
Draft: July 14, 2021

Day 2: Thursday, July 15, 2021 (All times are US Eastern.)

PUBLIC SESSION

WEBEX connection details for July 15:

Meeting link:
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11:00 am – 11:10 am	**Call Open PUBLIC SESSION to Order and Welcome to the First Meeting** John S. Applegate, Committee Chair, and Charles D. Ferguson, Study Director
11:10 am – 11:30 am	**The Perspective from Congress on Section 3125 of the FY2021 National Defense Authorization Act** Senior Staff of the Senate Armed Services Committee and the House Armed Services Committee (*confirmed*)
11:30 am – 12:00 pm	**Introductory Remarks from the U.S. Department of Energy** Mark Gilbertson, Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, Office of Environmental Management, U.S. Department of Energy, and Brian T. Vance, Manager, Richland Operations Office and Office of River Protection, U.S. Department of Energy (*confirmed*)
12:00 pm – 12:30 pm	**Break**

12:30 pm – 1:05 pm	**The Perspective from Washington State Department of Ecology** Introductory remarks from David Bowen, Nuclear Waste Program Manager, and presentation from Jay Decker, Lead Tank Waste Treatment Engineer *(confirmed)*
1:05 pm – 1:35 pm	**The Perspective from Oregon Department of Energy** Maxwell Woods, Assistant Director for Nuclear Safety, and Jeff Burright, Radioactive Waste Remediation Specialist, Oregon Department of Energy (*confirmed*)
1:35 pm – 2:25 pm	**Overview of Relevant Technical Issues from Office of River Protection** Kaylin W. Burnett, Portfolio Coordinator, One Hanford, U.S. Department of Energy (*confirmed*)
2:25 pm – 2:35 pm	**Brief Break**
2:35 pm – 4:15 pm	**Presentation from the Federally Funded Research and Development Center (FFRDC) Team** Led by William (Bill) F. Bates, Deputy Associate Laboratory Director for the Environmental and Legacy Management (ELM) Directorate, Savannah River National Laboratory with presentations from Paul R. Dixon, Deputy Director, Civilian Nuclear Programs Office, Los Alamos National Laboratory, and David M. Tate, Senior Defense Analyst, Systems and Analyses Center, Institute for Defense Analyses (*confirmed*)
4:15 pm – 4:30 pm	**Public Comment Period**
4:30 pm	**Adjourn PUBLIC SESSION**

Reading Materials*

* Presentations and videos will be provided in advance on the study's meeting event webpage when available and dependent on copyright permission. If presentations are not posted in advance, every effort will be made to make presentations within 2-3 days after the meeting.

From Charles Ferguson, the study director to items relevant items include current study information, Congressional mandate text, and background information from the 2017-2020 study, Supplemental Treatment of Low-Activity Waste at the Hanford Nuclear Reservation:

- Link to the current study with statement of task, committee member bios, events contact information, and public comment using the "Provide feedback on this project" feature. Event links will contain presentations when available. Event pages contain videos and presentations.
- Link to relevant text of the Congressional mandate of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Public Law 116-283, Section 3125, "CONTINUED ANALYSIS OF APPROACHES FOR SUPPLEMENTAL TREATMENT OF LOW-ACTIVITY WASTE AT HANFORD NUCLEAR RESERVATION"

- Links for previous reviews of FFRDC reports, mandated in Section 3134 of the National Defense Authorization Act for FY2017, are available at:

  Review of the Analysis of Supplemental Treatment Approaches of Low-Activity Waste at the Hanford Nuclear Reservation: Review #1 (2018) The first of four, this report reviews the analysis carried out by the FFRDC. It evaluates the technical quality and completeness of the methods used to conduct the risk, cost benefit, schedule, and regulatory compliance assessments and their implementations; waste conditioning and supplemental treatment approaches considered in the assessments; and other key information and data used in the assessments.

  Review of the Draft Analysis of Supplemental Treatment Approaches of Low-Activity Waste at the Hanford Nuclear Reservation: Review #2 (2018) The second of four, this report reviews the results of the assessments, including the formulation and presentation of conclusions and the characterization and treatment of uncertainties.

  Review of the Final Draft Analysis of Supplemental Treatment Approaches of Low-Activity Waste at the Hanford Nuclear Reservation: Review #3 (2019) The third of four, this report provides an overall assessment of the FFRDC team's final draft report, dated April 5, 2019.

  Final Review of the Study on Supplemental Treatment Approaches of Low-Activity Waste at the Hanford Nuclear Reservation: Review #4 (2020) This review report discusses developments since the publication of Review #3 and provides a summary of public comments on the third committee review report. The authoring committee then shares their views on these comments and whether they change any of the findings or recommendations in the third review report.

Presenter Biographies

William "Bill" F. Bates, Deputy Associate Laboratory Director for the Environmental and Legacy Management (ELM) Directorate, Savannah River National Laboratory

William F. Bates is the Deputy Associate Laboratory Director for the Environmental and Legacy Management (ELM) Directorate at the Savannah River National Laboratory (SRNL). This Directorate focuses on disposition and cleanup of the legacy materials, waste, and facilities across the DOE complex with specific focus in the portfolios of the DOE Environmental Management (EM) and Legacy Management (LM) Offices. Bates has 34 years of nuclear experience, including technical roles in Reactor Technology and Engineering, Manager for Reactor Instrumentation and Controls (I&C), and Engineering Manager of High-Level Waste Systems responsible for all technical aspects of the H Area Tank Farm at SRS. In 2000, he transitioned to Operations Management. His facility management roles have included Deputy Facility Manager for the K Area Material Storage (KAMS) facility, L Area (Spent Fuel Program), and the Receiving Basin for Offsite Fuels (RBOF) and Facility Manager for K Area (KAMS) during the DOE Plutonium Consolidation Campaign. As Facility Manager, he led the deinventory of all unirradiated Highly Enriched Uranium (HEU) ingots and fresh SRS reactor Mk-22 fuel assemblies from K Area, which were part of the NNSA's Blended Low-Enriched Uranium (BLEU) program feedstock. From 2006 through 2008, he served as the Manager for K Area Business Programs, Project Controls, and Quality Assurance. He returned to Operations Management in late 2008 as the Deputy Director and later Director for Nuclear Materials Storage (K and L Areas). He transitioned to SRNL in 2012 as the Deputy Associate Laboratory

Director for Nuclear Materials Management and transitioned in 2021 to ELM. Bates has participated in several multi-lab teams, including the 2013 Pu Disposition Working Group, the 2015 Pu Disposition "Red Team", DOE Environmental Management's 2019 H-Canyon and Spent Fuel Management Independent Project Team (IPT), the 2020 DOE Nuclear Materials Handling and Infrastructure (NMI) IPT, and led the 2017 NDAA-3134 Hanford Supplemental Low Activity Waste Treatment Analysis FFRDC Team. He is currently the FFRDC Team leader for the 2021 NDAA-3125 followup study to the NDAA-3134 effort.

David Bowen, Nuclear Waste Program Manager, Washington State Department of Ecology

David Bowen is Washington State Department of Ecology's Nuclear Waste Program Manager, responsible for management and direction of personnel and budget resources to accomplish the Program's mission of the effective and efficient cleanup of the US Department of Energy's Hanford Site and ensure sound management of mixed hazardous and radioactive wastes to protect the air, water, and land. David has a Bachelor of Science in Business Administration and came to Richland from Ecology's Central Region Office, where he served as the Water Quality Section Manager overseeing permitting and water cleanup activities throughout seven central Washington counties. He has a diverse background with key private and public sector leadership positions in the areas of forestry, water quality, environmental analysis, legislative steering, renewable energy, economic development, land use, and planning. His professional career has focused on building relationships and creating consensus with a passion for finding solutions and moving forward complex projects through collaboration, resource acquisition, innovation, developing efficiencies, and nurturing support.

Kaylin W. Burnett, Portfolio Coordinator, One Hanford, U.S. Department of Energy

Kaylin Burnett joined the U.S. Department of Energy (DOE), Office of River Protection in August 2013 as the Facility Area Engineer for the Pretreatment Facility at the Waste Treatment and Immobilization Plant Project. He transitioned into the One System Division in October 2014 to focus on Mission Analysis and Planning. He helped develop strategic/system plans, supports mission/flowsheet modeling, coordinated with Richland Operations for infrastructure needs, helped to coordinate permitting activities and supported the DFLAW Program Office. Kaylin later moved into the Hanford Portfolio Management division where he continues to integrate the contracts in support of One Hanford. Previously, Kaylin worked at the Umatilla Chemical Agent Disposal Facility as a Deputy Site Project Manager with responsibilities for engineering, closure, environmental, safety, laboratory, and quality assurance. Prior to becoming a Deputy Site Project Manager, he was a Government Shift Representative and provided direct oversight on an around the clock basis within the operating facility. He also worked at the Tooele (Utah) Army Depot in the Ammunition Equipment Division, where he was a lead engineer, equipment designer, and project manager for construction, installation, training, and operation of ammunition maintenance facilities in Egypt and South Korea. Kaylin is a native of Prineville, Oregon. He earned a bachelor's degree in mechanical engineering in 1995 from Oregon State University, where he participated in the Multiple Engineering Cooperative Program (MECOP).

Jeff Burright, Radioactive Waste Remediation Specialist, Oregon Department of Energy

Jeff Burright joined the Oregon Department of Energy in 2017. He brings prior experience providing technical decision support for complex Federal nuclear remediation projects around the country, as well as knowledge of radioactive waste management at a national level. At ODOE, Jeff is focused on issues surrounding the high-level radioactive waste tanks at Hanford,

the Waste Treatment Plant, and other issues related to long-term risk management, site cleanup, and waste disposal. Prior to joining ODOE, he worked for a management consulting firm based in Eastern Washington that supported collaborative, technical problem solving and risk management for environmental remediation projects, with clients including USDOE, NASA, the US Army, and large private entities. Jeff's work experience also includes research into risk perception and collaboration in multi-stakeholder permitting processes and communication of technical information to public audiences. Originally from Albany, Oregon, Jeff holds a B.A. in English and an M.S. in Marine Resource Management from Oregon State University.

Jay Decker, Lead Tank Waste Treatment Engineer, Washington State Department of Ecology

Jay Decker is Lead Tank Waste Treatment Engineer for the Washington State Department of Ecology's Nuclear Waste Program. He has thirty-six year of experience in program management, plant operations management, project management, engineering, procurement, and construction. Jay leads Ecology's team in reviewing engineering and construction associated with Ecology dangerous waste permitting for the U.S. Department of Energy's Hanford nuclear waste and vitrification plant and advising Ecology management. Jay is a professional engineer in the state of Washington, and earned a master of science in engineering degree from the University of Texas at Austin.

Paul R. Dixon, Deputy Director, Civilian Nuclear Programs Office, Los Alamos National Laboratory

For the past 32 years, Dr. Dixon performed research and has been a technical program manager in a variety of energy, non-proliferation and environmental programs at Los Alamos National Laboratory. Dr. Dixon is currently a senior advisor to the US Department of Energy's Network of National Laboratories for Environmental Management and Stewardship (NNLEMS), the science lead for the NNSA/IAEC Subsurface Science and Waste Management focus area and he is the Deputy Director of the Civilian Nuclear Program Office at Los Alamos National Laboratory. Dr. Dixon serves on the FIRST Nevada Board for STEM and robotics programs in Nevada, and he is the Judge Advisor for the FIRST FRC Regional event in Las Vegas. Dr. Dixon has served for the past 13 years as the Chair of the Clark County Advisory Board to Manage Wildlife for the Nevada Wildlife Commission. Dr. Dixon holds a Bachelors of Arts degrees in geology and chemistry from Albion College, and both a masters and doctorate degree in geochemistry from Yale.

Mark Gilbertson, Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, Office of Environmental Management, U.S. Department of Energy

Mark Gilbertson is currently serving as the Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs in the Office of Environmental Management (EM). The office provides technical and policy support in the planning and field-execution of EM waste and materials disposition, soil and groundwater remediation, and deactivation and decommissioning of EM facilities. He also provides leadership on matters related to regulatory affairs defined by law or negotiated or stipulated compliance agreements. He became the APDAS in November 2020. In his more than 25 years in the EM complex, he has served in a number of key senior leadership positions, including as EM's Principal Deputy Assistant Secretary, National Laboratory Officer, and in various Deputy Assistant Secretary positions such as Site Restoration, Program and Site Support, Engineering and Technology, and Environmental Cleanup and Acceleration. Previously, he has held the APDAS role for Regulatory and Policy

Affairs from May 2017 to November 2018. Prior to EM, Gilbertson served in several key leadership positions throughout other Department of Energy offices such as Legacy Management and the former Environment, Safety and Health Office. Gilbertson spent four years at the Environmental Protection Agency working on the Resource Conservation and Recovery Act regulations and prior to that, as an engineering consultant. Gilbertson holds a Bachelor of Science in Chemical Engineering from the University of Wisconsin and an Executive Certificate in Management and Leadership from the Massachusetts Institute of Technology.

David M. Tate, Senior Defense Analyst, Systems and Analyses Center, Institute for Defense Analyses

David Tate joined the IDA SAC research staff in 2000. In his 20+ years with IDA, he has worked on a wide variety of national security issues, including: Analysis of Alternatives for multiple DoD and DHS acquisition programs, decision models for defense acquisition portfolio planning, affordability analysis of acquisition portfolios, drivers of development schedule and schedule growth, cost and schedule risk in major Department of Energy projects, test and evaluation methodologies for AI and autonomy, and national security software industrial base capacity and risks. Dr. Tate has led acquisition cost, schedule, and risk reviews of multiple high-profile national security programs, and has contributed to numerous Analyses of Alternatives and congressionally-mandated program reviews across multiple agencies. He has authored or co-authored dozens of technical reports in the areas of decision analysis, portfolio selection, acquisition of autonomous systems, cost and schedule risk analysis, and software-intensive systems. Prior to coming to IDA, Dr. Tate was Senior Operations Research Analyst for Telecommunications at Decision-Science Applications, Inc. Before that, he was an Assistant Professor of Industrial Engineering at the University of Pittsburgh. Dr. Tate holds bachelor's degrees in Philosophy and Mathematical Sciences from the Johns Hopkins University, and M.S. and Ph.D. degrees in Operations Research from Cornell University. He is an alumnus of the MIT Seminar XXI national security studies program and the Harvard executive course Leading in Artificial Intelligence.

Brian T. Vance, Manager, Office of River Protection, Richland Operations Office, U.S. Department of Energy

Brian Vance is the manager of the Office of River Protection and the Richland Operations Office. In this capacity, Brian is responsible for an overall annual budget of nearly $2.5 billion, and oversight of the contractors and more than 11,000 employees involved in cleanup of the 580-square-mile Hanford Site, a former nuclear weapons production site. In his role as manager, Brian is responsible for the safe and environmentally acceptable cleanup of the site including groundwater remediation; hazardous waste and facilities decontamination and disposal operations; treatment and disposal of radioactive chemical liquid waste; and the design, construction and commissioning of the world's largest complex of nuclear vitrification facilities, the Waste Treatment and Immobilization Plant. Brian has more than 30 years of experience in the nuclear industry. Prior to joining DOE, he was project director for the 300-296 Soil Removal Project at CH2M HILL Plateau Remediation Company, LLC. Before that, he was a product manager responsible for the identification and implementation of delivery efficiencies as the Westinghouse Electric Company, LLC AP1000™ nuclear power plant. He was also home office director for the Moorside Project, a development project to construct three new nuclear plants at a site near Sellafield in the western United Kingdom. Brian also worked at AREVA where he was the director for the licensing project to achieve the Design Certification for the U.S. EPR Nuclear Plant with the Nuclear Regulatory Commission. Brian served in the U.S. Navy for 25 years as a nuclear-trained submarine officer. While on active duty, he also gained extensive project and program management experience as a Submarine Force Acquisition

Professional, including two assignments as major program manager prior to his retirement at the rank of captain in 2009. Brian holds a Bachelor of Science degree in meteorology from the Pennsylvania State University, a Master of Business Administration from the University of North Carolina in Chapel Hill, North Carolina, and is also credentialed as a Project Management Professional by the Project Management Institute.

Maxwell Woods, Assistant Director for Nuclear Safety, Oregon Department of Energy

Max Woods is the Assistant Director for Nuclear Safety and Emergency Preparedness at the Oregon Department of Energy. This division represents Oregon's interests in the Hanford cleanup, with a focus on promoting cleanup efforts at Hanford that are protective of the Columbia River and the downstream Oregon communities. The division is also responsible for representing Oregon's interests in the Natural Resources Damages Assessment process at Hanford; provides staff support to the Oregon Hanford Cleanup Board; nuclear emergency response and planning, and safe transportation of radioactive material through Oregon. Max has degrees from Claremont McKenna College in California and Washington State University, Pullman.

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