



Class of 2022-2023 Fellow Posters



William E. Armour

NA-ESH-11 Packaging and Transportation Division



Overview

The Packaging and Transportation Division, NA-ESH-11 works with the laboratories and plants within the NNSA to enable safe and secure transport of hazardous nuclear weapons components and radioactive materials.

Outcomes

I worked on Offsite Transportation Authorizations. I analyzed the Hazard Analysis Reports. This was to ensure safety of the workers, public, and environment when anything hazardous had to be shipped that was not compliant with Department of Transportation 49 Code of Federal Regulations 100-185.



Fabricated DPP-3 packaging components designed by staff at PNNL.

I worked on the recertification of old containers that are in use and certification of new containers that are coming online. These efforts help ensure that both the old and new containers are safe for transporting hazardous materials.



Office
NA-ESH-11 Packaging and Transportation Division

Education
MS, Nuclear Engineering
University of Idaho

“This fellowship gave me an understanding of the NNSA complex and its mission. The fellowship gave me an opportunity to meet many wonderful people.”

Chinazor Azubike

NA-195 Office of Secondary Stage Production Modernization, Lithium



Overview

The Lithium Program Office is focused on modernizing the lithium component processing capability for the Nuclear Weapons Enterprise. I worked on projects directly supporting the Lithium Team – participating in the 2022 American Glovebox Society conference and the Glovebox Working Group.

Outcomes

The aim of the glovebox working group is to ascertain that the domestic glovebox production meets NNSA supply needs for cost, schedule, and quality. I served as my team's primary contact, distributing information and providing feedback to the working group.



PCSS Glovebox – Gloveboxes are sealed enclosures utilized to separate materials or processes from ambient conditions

As a member of the Lithium Modernization team, I supported the broader program office in tracking tasks and supporting executive communications. Within the program office, I supported writing the FY 2023 Stockpile Stewardship and Management Plan, standing up lithium specific technology one pagers, and creating weekly leadership read out reports. These efforts contributed to the daily success of the team.



Office
NA-195 Office of Secondary Stage Production Modernization
- Lithium Modernization

Education
PhD, Applied Science & Technology
North Carolina A&T State University

"The NGFP fellowship affirmed my interest in a federal career path and has set me up with a number of opportunities. Getting to experience a great team and new city was such a learning experience for me."

Natasha Barqawi

NA-212 Office of Radiological Security



Overview

The Office of Radiological Security (ORS) supports work for the Office of Global Material Security (GMS). I worked on projects focused on reducing the global reliance on high activity radioactive sources through the promotion of viable non-radioisotopic alternative technologies.

Outcomes

ORS employs three strategies to accomplish its mission of eliminating radiological terrorism: protect, remove, and reduce. The International Reduce team works with multiple stakeholders to identify areas for engagements, research and development, and information on viable replacements for high activity radioactive source-based devices. Through international collaborative



Natasha participates in a project meeting at International Atomic Energy Agency (IAEA) in Vienna, Austria.

efforts, the team contributes to improving national and international radiological security with permanent risk reduction by adopting non-radioisotopic alternatives while also having a positive impact for sustainable development goals in many countries.



Office
NA-212 Office of Radiological Security

Education
MA, International Security
University of Denver, Josef Korbel School of International Studies

“The NGFP Fellowship has been an insightful and wonderful opportunity. Being part of the nuclear security enterprise with my office allowed me to experience firsthand the impact of the world coming together for the common goal of safety and security.”

Ethan Boado

NA-22 Defense Nuclear Nonproliferation Research and Development

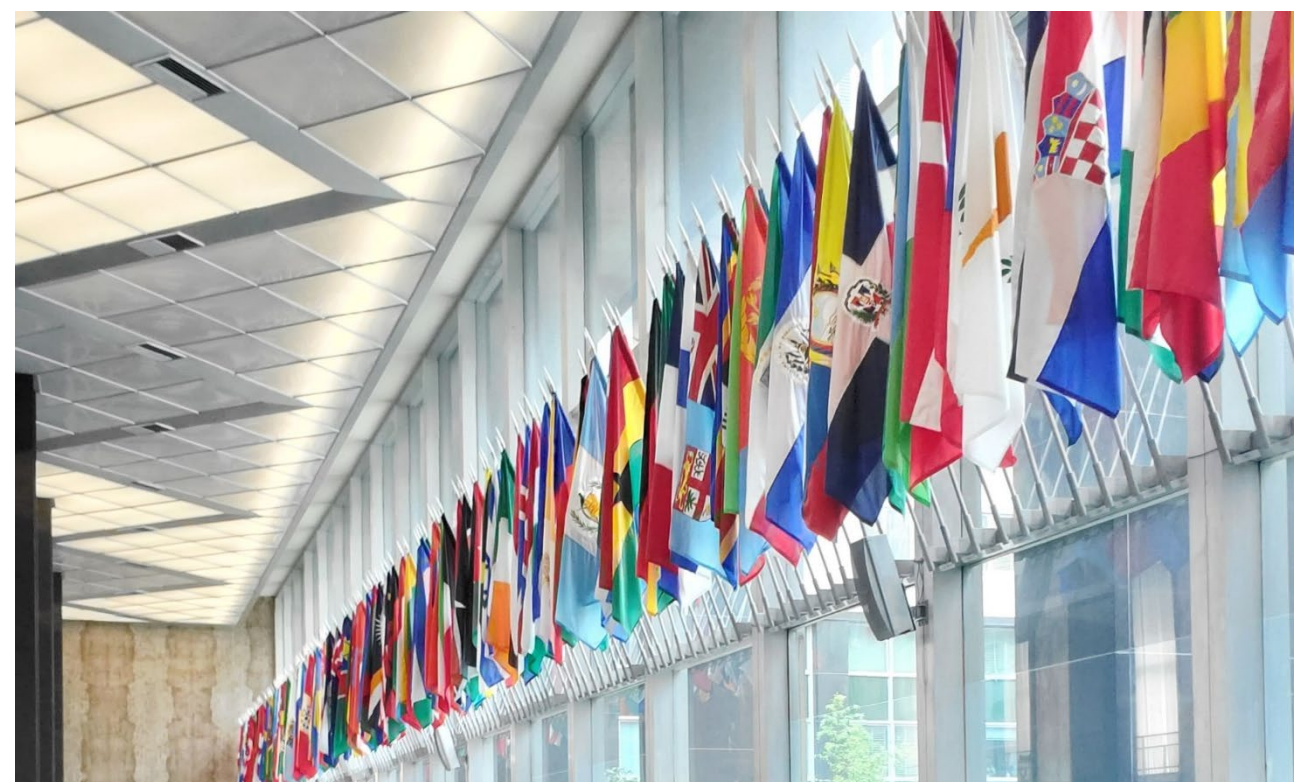


Overview

I supported a variety of oversight activities with an emphasis on NA-22's Near-Field Detection, Emergency Response, and Weaponization Detection portfolios. This work involved collaborating with project leaders, joining independent assessments, and giving inputs on project updates.

Outcomes

This work helped facilitate regular operations within NA-22, ensured projects were properly supported, and ensured work was progressing on schedule. Additionally, I helped prepare documentation including the 2023 University Program Review package, portions of the Nuclear Security Annual Report, and quarterly review summaries.



Taken during a tour of the State Department. Travel, tours, and site visits were an invaluable part of the fellowship experience.

This work contributed to the mission by helping enable NA-22's ongoing projects. Furthermore, this work allowed me to help network projects and project leaders across the laboratories to foster future collaborations and better serve the NNSA mission.



Office
NA-22 Defense Nuclear Nonproliferation Research and Development

Education
PhD, University of California, Berkeley (2023 expected)
MS, University of California, Berkeley

"The NGFP fellowship gave me incredible access and insight to the nuclear security enterprise. Through this experience I gained the skills and connections necessary to grow my career. As a result, I feel incredibly motivated to join a national laboratory and seek leadership opportunities."

Zach Boykin

NA-193 High Explosives and Energetics



Overview

The NA-193 office works to supply high explosive and energetic materials to the nuclear stockpile's modernization programs. The program works with Management and Operating contractors to ensure the long-term viability of their industrial bases. NA-193 also has the mission of ensuring that design and production agencies can meet the demand for strategic materials.

Outcomes

During my fellowship, I worked alongside the Environmental Protection Agency and NNSA sites to address the use of open burning and open detonation of Department of Energy waste.

I had the opportunity to lead this effort for my program alongside NNSA Environmental Safety and Health.



Boykin visits the Bradbury Museum of Science in Los Alamos with other fellows.

I also had the opportunity to work closely with my program's infrastructure control account to identify ongoing issues with the Department of Energy's aging infrastructure at its sites.



Office
NA-193 High Explosives
and Energetics

"This fellowship has given me the opportunity to work alongside passionate and driven leaders, who all stand behind a vital mission."

Education
MS, Civil Engineering
Virginia Tech

Omar E. Castillo

NA-122.1 Stockpile Services Division



Overview

The Stockpile Services Division (NA-122.1) supports the nuclear stockpile and program execution of Multi-Weapons Systems and Weapons Dismantlement and Disposition. I helped support the completion of complex assignments related to stockpile planning, sustainment, and security activities.

Outcomes

As a fellow in the Stockpile Services Division (NA-122.1), I had the opportunity to tour the various sites of our nuclear security complex. I actively engaged with members of our workforce at all levels and heard their motivations for supporting the management and maintenance of the nuclear stockpile. Through these interactions, I gained a deep sense of gratitude for what our military and civilian workforces do to keep our country safe.



Castillo exploring the National Atomic Testing Museum in Las Vegas, Nevada.

It has been an absolute honor working with everyone across the entire enterprise, as well as a pleasure to be around people who believe in the mission and have devoted their professional careers to public service. It is a privilege to have the opportunity to learn from them and grow alongside them.



Office
NA-122.1 Stockpile
Services Division

“Thank you for allowing me to be myself, for valuing my experiences, and investing in me!”

Education

MS, Software Engineering
California State University, Fullerton

MBA

California State University, Channel Islands

Jon Christian

ISN/CTR FIRST Program Officer



Overview

Through the Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology (FIRST) program, I oversaw bilateral and multilateral programmatic activities between the United States and partner countries to help our partners fight climate change and meet their energy needs.

Outcomes

The FIRST program is doing work that fights climate change while ensuring civil-nuclear newcomer countries adhere to the highest standards of nuclear safety, security, and nonproliferation. Our work with the U.S. interagency, multilateral organizations, and nonprofit corporations ensures that the rules-based international order will be competitive in the civil-nuclear reactor export



Christian and his supervisor at an international FIRST workshop.

space in the 21st century. After a meeting that I organized with counterparts in a country looking to import small modular reactors, a very high-ranking official noted, “We made the correct decision partnering with FIRST.”



Office
Department of State,
Office of Cooperative
Threat Reduction

Education
Master of International Policy
University of Georgia

“It is a very strange feeling when your supervisor lets you know that the Vice President of the United States wants to announce a project you are overseeing. I have worked with the greatest people in the world on work that can reverse climate change. We are changing the world.”

Craig Matthew Clark

NA-LA Los Alamos Field Office



Overview

The Los Alamos Field Office oversees the activities of the Los Alamos National Laboratory. In specific, the Mission Assurance and Infrastructure team that I worked with helped oversee the Quality of Weapon Products. To this effort I worked on several project to ensure the quality of these products.



Los Alamos National Laboratory

Outcomes

The oversight activities of the Los Alamos Field Office continued to ensure the Weapon Products produced by the Los Alamos National Laboratory were of top quality. My projects with the field office further ensured that there was built-in quality in the processes.

These efforts in the Quality Assurance group allowed me to have a great understanding of the high standards of all weapon products produced in the complex. My input into this process will ensure that the standards will continue to evolve and improve to ensure top quality products.



Office
NA-LA Los Alamos Field Office

Education
MS, Chemical Engineering
University of California, San Diego

“The quality of a product is the only determining factor of worth. The only thing keeping us safe is the quality put in.”

Francheska M. Colón-González

NA-233 Office of Material Disposition



Overview

The NA-233 Office of Material Disposition works to safely and securely eliminate weapons-usable material, including highly enriched uranium and plutonium, and supply low-enriched uranium for civilian uses.

Outcomes

NA-233 is a split office where most of the staff is in South Carolina. During the fellowship, I engaged with contractor partners at Savannah River Site, assisting with the Surplus Plutonium Disposition strategic planning. I worked on the development of a user-friendly measurement and tracking system in which tactics, actions, and dates can be easily accessed through a dashboard by key personnel working on the project. This system assists the office in identifying personnel requirements.



Left: 3D-printed vehicle at the Manufacturing Demonstration Facility. Right: with Dr. Terri Poxon-Pearson (NA-233 Physical Scientist, NGFP alum).

During this experience, I further developed my project management skills by interacting with contractor partners from Los Alamos and Oak Ridge national laboratories, the Waste Isolation Pilot Plant, and Y-12. I worked directly to support highly enriched plutonium and plutonium liability reports and monthly program reports and created different user-friendly dashboards systems to manage information requests, milestones, and tasks for personnel.



Office
NA-233 Office of Material Disposition

“This fellowship provided me substantial insight into nuclear security and nonproliferation topics where I acquired key skills that will be essential for my career path and development.”

Education
PhD Student, Applied Chemistry, Chemistry of Materials
University of Puerto Rico – Mayagüez Campus

Rebecca Copeland

NA-242 Office of Nuclear Export Controls



Overview

The Office of Nuclear Export Controls works to build U.S. and global export control capacity to detect and prevent the illicit or inadvertent transfer of nuclear and other dual-use materials, equipment, and technology. I supported this mission in a variety of ways including providing policy and technical analysis to export control licensing reviews, participating in weekly interagency meetings on licensing cases and escalations, and creating briefing materials and research for international regime work and National Security Council meetings.

Outcomes

I support a team of subject matter experts on critical national security issues including preventing WMD proliferation and countering threats through research, technical analysis, and participation on interagency working groups and licensing regulatory meetings. I also support our international and domestic training outreach by working with partner countries to exchange best practices, build



Joshua L. Zarka @yzarka · Nov 18, 2022

Today we concluded our annual interagency Counter Proliferation Dialogue led by @IsraelMFA and @StateISN, which is the cornerstone of our CP cooperation. As always, very productive exchange of views and information on threats emanating of #Iran and other proliferation threats..



Copeland supported the NA-242 Office Director in a Counterproliferation Policy Exchange in Jerusalem, Israel alongside the U.S. Department of State and U.S. Department of Commerce.

strategic trade control systems, and improve implementation to detect and prevent the transfer of sensitive goods and know-how to adversaries.

This work has daily challenges and successes but is ultimately key to strengthening domestic and global capacity to detect and prevent illicit transfer of WMD-related materials, equipment, and technology.



Office
NA-242 Office of Nuclear Export Controls

“This fellowship has been everything I hoped it would be and more. I was able to get hands-on experience tackling the most critical national security issues facing the U.S. today with amazing mentors while growing my professional skills and leadership experience. This fellowship has launched my career in export controls.”

Education
MA, Security Studies, National Security Policy
Georgetown University, School of the Foreign Service

Poppy Cox

NA-234 Office of Nonproliferation Construction and Program Analysis



Overview

The Office of Nonproliferation Construction and Program Analysis (NA-234) is responsible for the formulation, execution, cost analysis, and reporting of all budgets related to the mission of the Office of Material Management and Minimization (M3). I worked on various projects supporting the Program Support team and joined the Mobile Packaging team on an exercise.

Outcomes

M3 is separated into three mission areas: Conversion, Nuclear Material Removal, and Material Disposition. Working in the Program Support Office of M3, I was able to see how important the federal budget is when it comes to funding the critical work being done to help support our nation's nuclear security.



Visiting Scottish cliffs while on a trip with the Office of Nuclear Removal.

During the fellowship, I learned how money is allocated and expended through the Planning, Programming, Budgeting, and Evaluation processes. I also created monthly reports to reflect the spend plan data and other financial reports that were reviewed by the Assistant Deputy Administrator.



Office
NA-234 Office of
Nonproliferation Construction
and Program Analysis

Education
MBA, Management
University of Michigan Ross School of Business

“The NGFP fellowship has been the perfect introduction to nuclear security and learning about its importance. This opportunity has allowed me to develop critical skills and work in a field that I am passionate about.”

Abigail Eineman

NA-23 Material Management and Minimization



Overview

NA-23 works to minimize the risk of hostile states and non-state actors acquiring nuclear material for an improvised nuclear device by working with partners to eliminate the need for, presence of, or production of weapons-usable nuclear material. I supported our mission by facilitating new initiatives on surplus plutonium disposition and highly enriched uranium (HEU) minimization in Japan.

Outcomes

As the Material Management and Minimization front office fellow, I facilitated the movement of several signature projects to fruition. I helped secure approvals from multiple parts of the nuclear security enterprise so our program could permanently dispose of surplus plutonium, remove HEU from Japan, and build capacity for molybdenum-99 production in the United States.



University of Tokyo technical experts practice procedures for highly enriched uranium packaging at the Yayoi research reactor

I also improved the front office by designing a new organizational structure to streamline tasker approvals and by initiating an update to our Strategic Mission and Vision.



Office
NA-23 Material Management and Minimization

“The fellowship opened so many doors for me. I was able to meet leaders across the nuclear security enterprise, who gave me excellent advice on how to have a successful career in public service.”

Education
Master of Public Affairs, Policy Analysis
Indiana University O’Neill School of Public and Environmental Affairs

Jarret Fisher

NA-20 Defense Nuclear Nonproliferation Front Office of the Deputy Administrator



Overview

The Office of Defense Nuclear Nonproliferation co-hosts the India Global Centre for Nuclear Energy Partnership's (GCNEP) Annual Joint Working Group. I served as control officer for the U.S. head of delegation during the 8th Joint Working Group meeting in New Delhi, India.

Outcomes

The U.S.-India Memorandum of Understanding with GCNEP was first signed in 2010, enabling bilateral cooperation on nuclear and radiological security, emergency preparedness and response, transportation security, cybersecurity, insider threat mitigation, alternative technologies, and security-by-design for new nuclear power facilities.



Group photo of all participants in the 2022 U.S.-India GCNEP Joint Working Group

The result of the first Joint Working Group in three years was restarting dozens of joint research projects and capacity building collaborations.



Office

NA-20 Front Office of the Deputy Administrator for Defense Nuclear Nonproliferation

Education

MA, International Relations
Johns Hopkins School of Advanced International Studies

"This program allowed me to hone my writing and briefing skills. Working in the Front Office allowed me to learn both the specific components of nonproliferation and how nonproliferation serves as a key pillar of the Department of Energy's overall mission."

Jade Fortiner

NA-10 Office of Defense Programs, Deputy Administrator's Action Group



Overview

The Office of Defense Programs ensures the Nation's nuclear stockpile remains safe, secure, and effective. As a member of the Action Group, I developed communications materials and managed the NA-19 Office of Production Modernization portfolio.

Outcomes

My role allowed me to work closely with Defense Programs offices and subject matter experts to develop materials in support of NNSA leadership within the nuclear security enterprise and the larger U.S. government.

I worked to organize the first Plutonium Pit Summit to prepare NA-10 leadership to meet with the Strategic Posture Review



Jade in front of the historic Los Alamos Project Gate in Los Alamos, New Mexico.

Commission (SPRC). I served as the main point of contact between attendees/briefers and NA-10 leadership, coordinated Summit events, and even had the chance to attend! This opportunity gave me the ability to draft materials for the SPRC meetings that may be used to develop the long-term strategic posture of the United States.



Office
NA-10 Office of Defense Programs

Education
Master of Public Administration
University of Georgia

"The fellowship provided me an invaluable opportunity to work alongside the leaders of our enterprise and make a direct impact on national security initiatives. I cannot imagine a more impactful experience in my professional development."

James Foster

Office of Worker Safety & Health, NA-ESH-23



Overview

Located in Albuquerque, NM, the Office of Worker Safety & Health provides support for all DOE/NNSA facilities regarding radiation protection, industrial hygiene, electrical safety, explosives and fire protection. The office is quite faceted and requires collaboration amongst the subject matter experts to analyze the critical safety challenges that occur among all the facilities.

Outcomes

My work has been providing assistance to the health physicists in NA-ESH-23 on radiation protection assessments at several of the sites. I've also been working as a task team lead for the Subterranean Operations IPT, a group dedicated to addressing key safety challenges that are particular to underground facilities.



Donning of Class A Hazmat suit during the HAZWOPER training course.

The efforts of the Subterranean Operations IPT will help dictate future standards and regulations for safe underground operations, and hopefully our endeavors will promote future discussions about other unique health and safety concerns occurring at the sites.



Office
NA-ESH-23 Office of
Worker Safety & Health

Education
PhD, Chemical & Biomolecular Engineering
Clemson University

“The fellowship position with NA-ESH-23 has allowed me to explore the ‘depth’ of our nuclear security enterprise... literally. It still surprises me everyday the scope of work that is being undertaken.”

Marlon Gant

NA-MB-42 Office of Management and Budget



Overview

The Office of Management and Budget oversees federal agencies' performances and administers the federal budget. I worked on Knowledge Preservation efforts for the Technical Qualification Program to initiate technical knowledge capture and transfer.

Outcomes

A big issue within the NNSA is the loss of valuable knowledge from departing employees. Some skills are very limited, and it is essential to pass down those skills to future employees. To initiate knowledge preservation efforts, I co-developed two websites that displayed resources on technical areas of interest and archives of historical documents.



Gant attends the XR symposium at the Oak Ridge Enhanced Technology and Training Center.

Additionally, leadership exchange interviews were conducted on retiring leaders who succeeded in their field of expertise. They were questioned on their roles within the organization and how they navigated through career challenges. These interviews served as a learning tool for me on how to cope with challenges I may encounter in my future career.



Office
NA-MB-42 Office of Management and Budget

Education
MS, Environmental Sciences
Emory University

“The NGFP fellowship gave me a better understanding of the various outlets of nuclear security. The work I completed in my office helped me recognize my passion for imparting complex information in laymen’s terms.”

Jenna Gardner

NA-81 Office of Nuclear Incident Policy and Cooperation

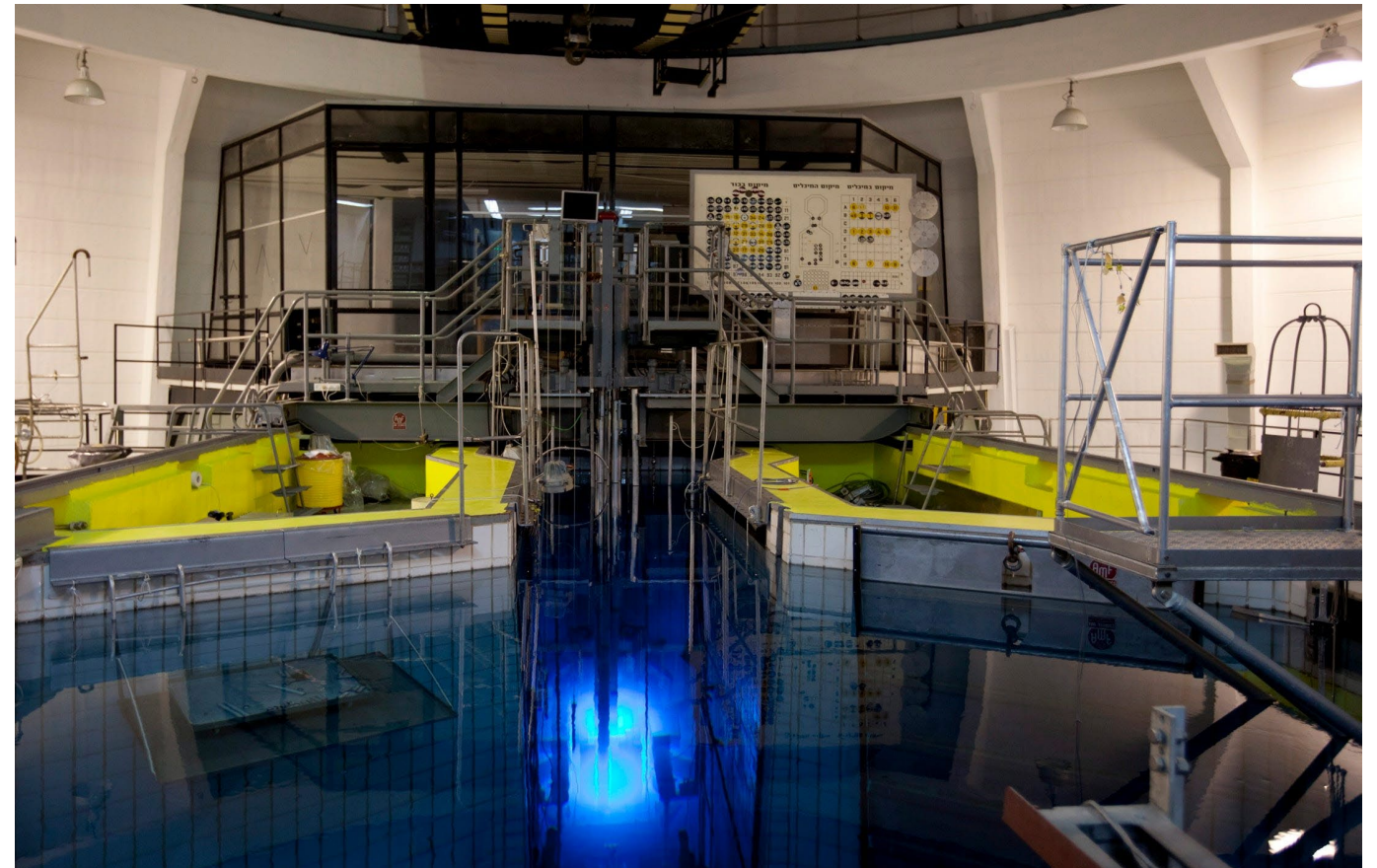


Overview

A core mission for the Counterterrorism and Counterproliferation Office of Nuclear Incident Policy and Cooperation (NIPC) is to build domestic and international capabilities for security, preparedness, and response against radiological/nuclear threats. I supported my office by engaging with our international partners and helping to develop materials to enhance capacity building.

Outcomes

A key focus area for NIPC is to increase awareness about the nuclear and radiological terrorism threat and the response assets available within the NNSA. I developed an exercise that focuses on increasing understanding of the types of threats we face that include the use of radiological/nuclear materials and the assets essential to responding to this type of emergency within NNSA as well as our interagency partners.



Soreq Nuclear Research Reactor in Israel.

Due to the current unprecedented global crises, the demand for trainings, exercises, and informational exchanges on topics of emergency preparedness and response from international partners has grown. I worked with a team in my office to develop a tool to assist in prioritizing the partners we engage with to build their understanding of and enhance their capabilities in efforts of response. We did this by analyzing terrorism threat levels in a country and the presence of radiological/nuclear materials.



Office
NA-81 Office of Nuclear Incident Policy and Cooperation

Education
MA, Political Science, Texas Tech University
BA, Political Science, Texas Tech University

“This fellowship has been a great step into the world of nuclear security. I had the opportunity to further my understanding of existing threats and how the technical expertise is applied in real-world response efforts to an incident involving radiological/nuclear materials.”

Samantha Groskritz

NA-195 Secondary Stage Production Modernization – Depleted Uranium Modernization



Overview

The NA-195 Office of Depleted Uranium (DU) Modernization works to restart lapsed manufacturing processes, establish feedstock supply chains, invest in technology development, and create new capabilities to meet future enterprise demand.

Outcomes

As a member of the NA-195 team, I supported the broader front office in tracking tasks and activities. Within the program office, I supported projects such as writing the FY 2023 Stockpile Stewardship and Management Plan, updating the DU Mission Strategy, and creating manufacturing briefs. These efforts contributed to the NA-195 mission of modernizing DU manufacturing capabilities.



Groskritz (center) attends the Mini-Federal Nuclear Expertise course in Forrestal alongside Nuclear Security Enterprise counterparts.

I also had the opportunity to participate in Technology Readiness Assessments, the Federal Nuclear Expertise Course, and Integrated Planning Group meetings. These experiences taught me a lot about the Defense Programs mission and nuclear security enterprise overall.



Office
NA-195 Secondary Stage
Production Modernization:
Depleted Uranium Modernization

Education
MA, International Relations
American University

“This fellowship gave me incredible insight into the challenges impacting the Nuclear Security Enterprise. It was an amazing opportunity to learn and grow professionally alongside the brilliant people working in Defense Programs.”

Brooke Guenther

NA-CI Congressional and Intergovernmental Affairs



Overview

NNSA's Office of Congressional and Intergovernmental Affairs (NA-CI) communicates, promotes, and defends the mission, goals, and budget of the NNSA through proactive outreach and relationship building with federal, tribal, state, and local stakeholders.

Outcomes

As a fellow in the NA-CI Front Office, I supported both the Congressional and Intergovernmental teams. Over the course of several months, I worked to revise and implement a new Communications Plans template and process to help create a more effective and efficient framework. Comms Plans organize notifications to external stakeholders for all major projects within the NNSA.



Guenther attends the Nuclear Deterrence Summit with other NGFP fellows.

I assisted on over 20 Comms Plans as a liaison between NA-CI/PA, NNSA Program Offices, and field offices, organizing the rollout of notifications to congressional, tribal, state, and local stakeholders, as well as the public and media.

In addition to my work with NA-CI, I wrote two web articles and developed a long-term social media campaign on radioactive elements for public affairs.



Office
NA-CI Congressional and Intergovernmental Affairs

“The fellowship provided invaluable exposure to the unique mission of the NNSA and its role in the broader nuclear security enterprise. I was able to develop new skills and sharpen existing ones. The best asset NGFP has to offer, however, is the people—from mentors to coworkers to a great cohort of fellows.”

Education
MA, Public and International Affairs
Virginia Polytechnic Institute and State University

Chester “Chet” Haner

NA-183 Office of Strategic Planning and Analysis



Overview

NA-183 took over as lead organization for the Committee on Foreign Investment in the U.S. (CFIUS). This program protects vital national interests by monitoring and mitigation foreign acquisitions of companies crucial to U.S. national security.

Outcomes

I took over as program manager for CFIUS, in charge of monitoring cases for the interests of NNSA’s Defense Programs. I queried labs, plants, and sites to gain expert opinions on business dealings, foreign companies, and emerging technologies. I learned so much about the wide range of activities across the NNSA and the nuclear enterprise as a whole.



NA-183 team visiting the National Ignition Facility at Lawrence Livermore National Laboratory.

With the help of all the labs, plants, and sites, we successfully mitigated multiple foreign acquisitions. This increased security of supply lines for strategically important purchases and services utilized by the national security enterprise.



Office
NA183 Office of Strategic Planning and Analysis

Education
Master in Public Policy
Harvard Kennedy School

“This fellowship taught me that prior knowledge of nuclear weapons is not a prerequisite to work at NNSA—anyone can succeed here.”

Haley B. Harrison

NA-MB-92 Office of Analysis and Evaluation



Overview

The Office of Analysis and Evaluation leads analysis, evaluation, and cost estimation to support large projects to support enterprise decisions. I have supported Analysis of Alternatives projects (AoA) valued over \$100M, led a cost and schedule study for a program's project over \$100M, and worked across offices and sites to develop knowledge sharing resources.

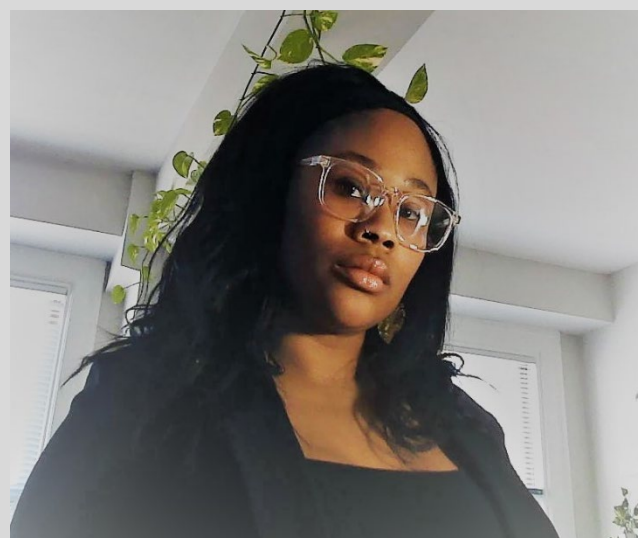
Outcomes

1. Develop programmatic resources to improve knowledge sharing as the utility of NA-MB-92's technical analyses grows across the enterprise.
2. Lead cost and schedule estimates, work closely with program managers to understand execution of projects to achieve program-wide goals.
3. Develop strategies, identify datasets to improve equity in the early stages of project development.



Strengthening relationships between offices is an important facet of improving programmatic execution.

Across the variety of tasks and projects I have been involved in, I have really appreciated working with the Enterprise Modeling and Policy office (NA-MB-922) to explore ways to incorporate equity and environmental justice through meaningful metrics for the AoA process.



Office
NA-MB-92 Office of
Analysis and Evaluation

Education
PhD, Nanoscience
MS, Earth Science
BS, Physics

“Working in the office of management and budget provided an opportunity to gain insight into data collection, model development, and an understanding of how data is used to improve the fidelity of a variety of estimates imperative to the sustainment of the nuclear deterrent.”

Kevin Heaney

NA-1.1 Office of Policy and Strategic Planning
NA-81 Office of Nuclear Incident Policy and Cooperation



Overview

I assisted NA-81 in its efforts to re-engage with Kazakhstan on nuclear/radiological emergency preparedness and response. This included preparing a joint statement that was signed by Administrator Hruby and visiting Kazakhstan to engage with government and non-governmental partners on emergency response capacity building.

Outcomes

Projects included preparing and assisting with the delivery of domestic and overseas training courses, scenario-based policy discussion exercises, and technical exchanges. I also met with numerous foreign delegations as they visited Washington DC to discuss emergency preparedness and response capacity-building training opportunities and prepped senior leaders for the 66th Annual International Atomic Energy Agency General Conference in Vienna, Austria.



NNSA Administrator Hruby signing the Joint Statement with Kazakhstan during a live virtual ceremony.

I later joined NA-1.1 to assist with efforts such as the Administrator's Strategy Forums, the NNSA Strategic Outlook Initiative, and the 2023 Labs, Plants, and Sites Strategic Planning Summit.



“Supporting our partners around the globe—and particularly Ukraine during Russia’s unwarranted invasion—was an incredible experience that will stay with me forever.”

Office

NA-1.1 Office of Policy and Strategic Planning
NA-81 Office of Nuclear Incident Policy and Cooperation

Education

Master of Public Policy, University of Virginia
BS, St. John's University

Christian Hedge

NA-MB-812 Weapons Activities Resource Managers Matrix



Overview

I worked to meticulously edit budget narratives for Defense Programs (DP) priorities from across the enterprise. Moreover, I managed updates for the stat table and master budget submission document, while tracking NNSA narratives pertaining to both Defense Nuclear Nonproliferation and Weapons Activities programs.

Outcomes

My contributions ensured the delivery of clear and concise language across the Defense Program narratives. While updating narrative budget tables, I ensured that processes were in-place across offices to create one unified effort and voice. This approach fostered greater efficiency and collaboration among all parties involved.



Visiting Capitol Hill with NNSA

Through my engagement in meetings, analysis of budget documents, and guidance from seasoned professionals, I gained a comprehensive understanding of the Planning, Programming, Budgeting, and Evaluation (PPBE) process. This hands-on learning experience provided me with invaluable insights into the intricacies of resource allocation and expenditure management in these critical organizations and across the government.



Office
NA-MB-812 Office of
Weapons Activities Resource
Managers Matrix

"The NGFP fellowship has been a transformative journey, offering unparalleled insights into the work of the nuclear security enterprise and government at-large. I am deeply grateful for the program's mentorship and opportunities, which have opened doors for my future career and fueled my passion for shaping a safer, more secure world."

Education
MA, Security Policy Studies
George Washington University

Susana Herrera

NA-LL Livermore Field Office



Overview

Lawrence Livermore National Laboratory's Material Science Division (MSD) and Nuclear and Chemical Sciences Division (NACS) support work to create novel materials for security and energy applications and advancement of our understanding and capabilities in nuclear science. MSD and NACS play a critical role in strengthening the nation's security through pioneering science and technology.

Outcomes

As part of the fellowship, I was placed in NACS's Nuclear and Radiochemistry group where I worked on the synthesis and characterization of actinide particle feedstocks for additively manufactured analytical standards and nuclear reaction targets. As part of MSD's Actinides and Lanthanides Science group, I worked on developing advanced manufacturing of Galfenol doped rare-earths with high magnetostriction properties.



Lawrence Livermore National Laboratory

As a research fellow, I learned about other fields and used new instrumentations: nuclear forensics work on synthesis of nanoparticles and material science work on metallurgy and measuring magnetic properties of materials. I was lead researcher for two projects that resulted in publications and will aid in advancing the mission of the laboratory and our understanding of challenges affecting national security.



Office
NA-LL Livermore Field
Office

Education
PhD, Radiochemistry
Florida International University

"The fellowship provided me the opportunity to evolve and gain new technical capabilities. I was able to explore new fields of research and challenge myself. This experience allowed me to learn more about the nuclear enterprise and grow my network."

Cassara Higgins

NA-NV Nevada Field Office

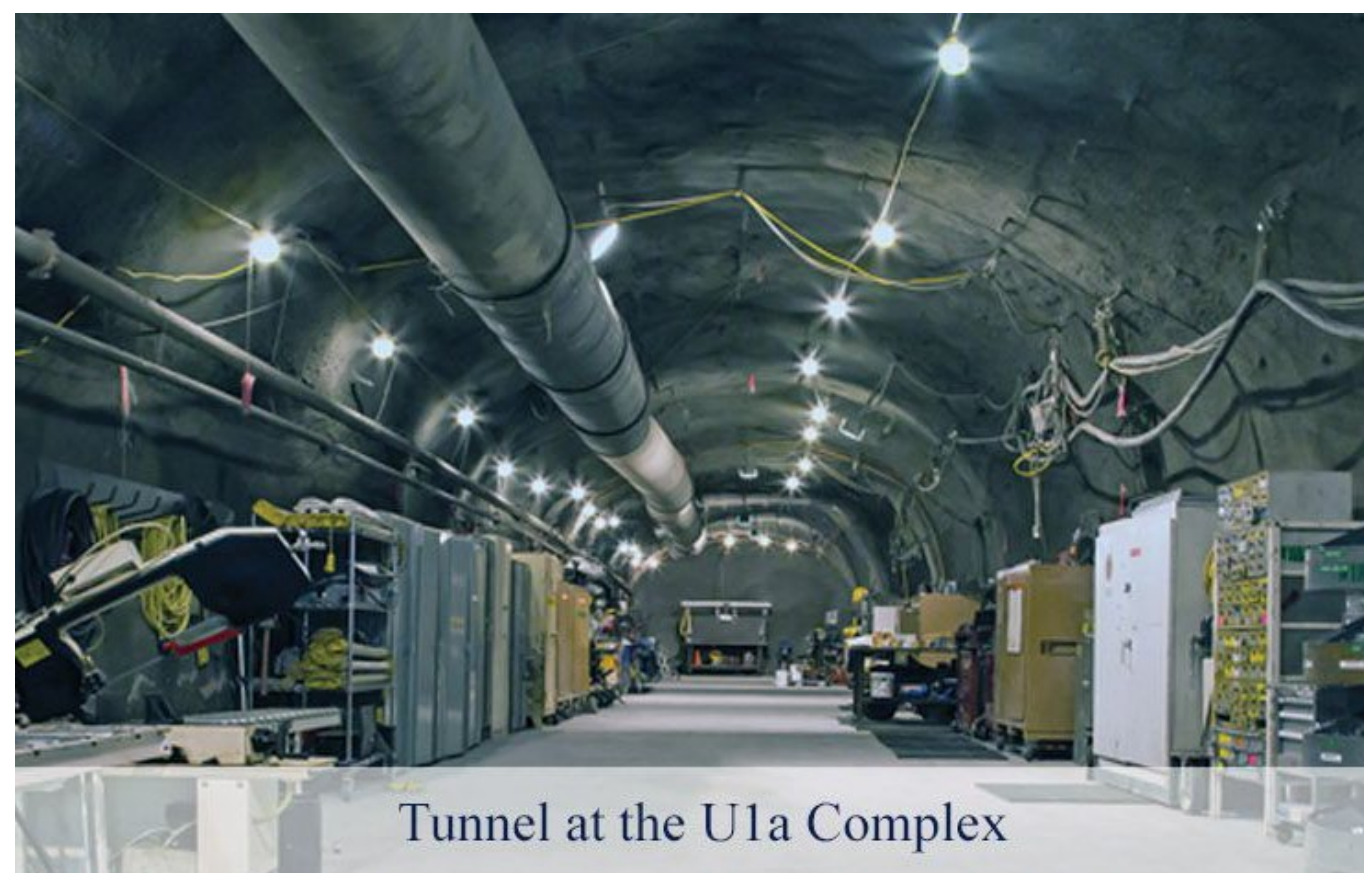


Overview

The Nevada Field Office serves as the liaison between the Nevada National Security Site (NNSS) and NNSA. The Assistant Manager for Operations and Safety (AMOS) group is comprised of facility representatives (FRs) and subject matter experts (SMEs) tasked with the oversight of nuclear and non-nuclear facilities at the NNSS.

Outcomes

I worked primarily with fire protection (FP) SMEs at NFO to evaluate the proposed fire suppression systems for existing and new subcritical experiments for U1a Complex. Also, I assisted in writing letters from the field office manager to the M&O and Operational Awareness Activities with FP SME. I also served as the NFO point of contact for the Triannual NNSS Fire Protection Program Assessment.



The U1a Complex, soon to be home of two new subcritical experiments supporting stockpile stewardship. (Photo from the NNSS website.)

Aside from working with FP, I assisted with the communication between M&O Radiation Control and NFO and writing a Radiation Protection Assessment Plan. I also served as the NFO point of contact and organizational leadership for the interview process for the 2023-2024 NGFP Class interviews and was recognized as an employee of the quarter at NFO for this effort.



Office
NA-NV Nevada Field Office

“The NNSA Graduate Fellowship Program has provided me with a broad understanding the execution of the NNSA mission. From funding in Congress to implementation by the labs, sites, and plants. I was able to witness all the parts coming together at the NNSS.”

Education

PhD, Radiochemistry, *University of Nevada, Las Vegas*
BS, Chemistry and Physics, *University of Northern Iowa*

Kurt Housh

NA-212 Office of Radiological Security



Overview

The Office of Radiological Security (ORS) encourages the replacement of radioactive sources such as cesium-137 (Cs-137) with non-radioisotopic alternative technologies such as X-ray devices. I supported domestic efforts to reduce the use of radioactive source-based devices and associated risks of radiological terrorism.

Outcomes

Through work on multiple facets of the ORS Domestic Reduce Portfolio, I managed small business innovative research projects and various studies with our National Laboratory partners. I led the organization of a Boston workshop to promote the adoption of X-ray devices over Cs-137 source-based ones in support of the Cesium Irradiator Replacement Project, which has the goal of eliminating cesium blood irradiators in the United States by 2027.



Housh visits the International Atomic Energy Agency in Vienna, Austria, while attending the International Conference of Radiation Science and Technology.

What benefitted me the most in my fellowship was working on a wide range of projects within ORS. It allowed me to see projects get implemented in real time and see the impact of radiological security globally.



Office
NA-212 Office of
Radiological Security

Education
PhD, Chemistry
University of Missouri-Columbia

“The fellowship allowed me to gain invaluable experience in the Nuclear Security Enterprise and to interact with people with diverse backgrounds all working together toward a common goal. It has been instrumental in launching my career in the Nuclear Security Enterprise.”

Kavough T. Jernigan

NA-911 Infrastructure Planning and Integration Division



Overview

The Infrastructure Planning and Integration Division provides long-term planning solutions to the NNSA's enterprise. These efforts include reducing the NNSA's footprint across the enterprise by removing aging facilities and building new state-of-the-art facilities to fit current mission needs. I support the various projects and analytics that go into maintaining NNSA's infrastructure.

Outcomes

Working in the infrastructure space has been a very rewarding experience. I have been fortunate to work with a group of people who make sure I have all the support I could need. I work with the division director, deputy director, and strategic planning team to conduct data analytics to support infrastructure planning efforts and metrics across the enterprise.



Fiscal Year 2023 Facilities Disposition

Facilities Disposition Report published and delivered to Congress.

A key area of my work has been leading and supporting the development of the annual facilities disposition report that is sent to Congress. I have had the opportunity to liaise with personnel from across the enterprise from developing the report. I have built relationships with many offices. These bonds are something that I have admired as a fellow.



Office
NA-911 Infrastructure Planning and Integration Division

"This fellowship has given me invaluable insight into the NNSA's national security enterprise. I am truly amazed at the sheer scope of work that happens here, and I am grateful to have worked alongside some talented individuals."

Education
MA, International Affairs: U.S. Foreign Policy and National Security, American University
BS, Political Science, Florida A&M University

Paulina Keim

NA-192 Domestic Uranium Enrichment



Overview

The Office of Domestic Uranium Enrichment's mission is to reestablish a reliable and economic supply of low enriched uranium for defense purposes. Specifically, I supported the socialization of NA-192's pilot plant acquisition strategy and became immersed in DOE Order 413.3B—the policies governing program and project management for the acquisition of capital assets.

Outcomes

During my fellowship, I represented NA-192 at NNSA-wide Integrated Planning Group meetings at Y-12, Livermore, and the Savannah River Site. I coordinated M&O inputs into the FY24 Product Modernization chapter of the Stockpile Stewardship and Management Plan (SSMP)—the chief messaging and planning document for the Nuclear Security Enterprise to Congress.



Polly with the DUE team at the Defense Programs' holiday party



Polly with General Huser at Pantex



Office
NA-192 Domestic Uranium Enrichment

Education
Master of Public Policy,
University of Virginia

“This fellowship is easily one of the best decisions I’ve ever made. I am grateful for the people I have met, the sites I have visited, and the mission I have supported. I am looking forward to staying with NNSA as a federal employee in NA-121.2 Production Operations!”

Anishka Khosla

Office of Nonproliferation and Arms Control



Overview

The Office of Nonproliferation and Arms Control (NPAC) supports and enhances U.S. national security and facilitates civil nuclear cooperation by reducing and preventing global nuclear proliferation threats.

Outcomes

I assisted with the coordination of 1200 taskers between NPAC offices and the Office of Defense Nuclear Nonproliferation. I addressed inquiries and issues related to International Nuclear Safeguards, Nuclear Export Controls, Nuclear Verification, and Nonproliferation Policy from a variety of sources including senior leaders, U.S. Congress, media, and the broader U.S. interagency.



Anishka meets Secretary Granholm at the annual DOE holiday party

Working in the NA-24 front office provided me with a comprehensive understanding of current challenges facing the non-proliferation regime. I had the unique opportunity to assist with Phase II of NPAC's Strategic Review, attend the inaugural board meeting for the Royal Scientific Society Threat Advisory Board Meeting in Jordan, and conduct interviews with senior leaders within the national security enterprise as part of a project.



Office
NA-24 Office of Nonproliferation and Arms Control

"The NGFP fellowship provided me with a valuable understanding of the nuclear security enterprise and helped me develop critical skills that are essential to my career in national security."

Education
MS, Foreign Service
Georgetown University
BA, International Relations
University of California San Diego

Jacqlynn (Jax) Klein

NA-21 Office of Global Material Security



Overview

Defense Nuclear Nonproliferation's (DNN) Office of Global Material Security (GMS) Action Officer team supports the various GMS offices. I supported the GMS front office as an action officer and primarily work on the multilateral, China, Russia, and Ukraine portfolios. I also worked on projects throughout GMS and had a large focus on NSDD workshops and trainings for Internal Security and Law Enforcement (ISLE) and Investigative Support (IS).

Outcomes

GMS is in 70+ countries to enhance U.S. national security and works with partners worldwide to build sustainable capacity to secure radioactive and nuclear (R/N) materials, and to interdict and investigate the trafficking of those materials. I often coordinated liaised activities, events, and information between NNSA offices, the interagency, and other GMS stakeholders. I had the opportunity to support multiple



NSDD/FBI Radiation Detection and Investigative Techniques Training (RDIT) in Bratislava, Slovakia, with various Slovak law enforcement partners.

projects with GMS law enforcement and multilateral partners including the FBI, Interpol, and the IAEA. I had the opportunity to do a deep dive into the three GMS offices to learn and work on various projects within each office. I believe that having a front row seat to the discussions among DNN and GMS leadership and many of their greatest partners aided me in seeing DNN's greater strategic mission in protecting the American people.



Office
NA-21 Office of Global
Material Security

Education
MS, International Policy Management
Kennesaw State University

“The fellowship has allowed me to learn in great depth about the NSE and the NNSA. I genuinely know I will be able to carry the knowledge and perspectives I’ve gained through my fellowship, through the rest of my career in the NSE.”

Ryuhei (Ron) Koshita

NA-114 Office of Advanced Simulation and Computing



Overview

The Advanced Simulation and Computing (ASC) Program provides simulation capabilities and computational resources to support the annual stockpile assessment and certification process, study advanced nuclear weapons design and manufacturing processes, analyze accident scenarios and weapons aging, and provide the tools to enable stockpile Life Extension Programs.

Outcomes

The ASC Office features six subprograms: Integrated Codes, Physics and Engineering Models, Verification and Validation, Advanced Technology Development and Mitigation, Computational Systems and Software Environment, and Facility Operations and User Support. I provided program management support, attended multiple conferences/workshops for each program scope, and assisted in communicating with experts at the national laboratories.



NA-114 fellows Joëd Ngangmeni and Koshita visiting CASC at Lawrence Livermore National Laboratory in Livermore, CA.

My co-fellow and I worked on a white paper discussing the intersection of artificial intelligence/machine learning and nuclear physics as a literature review and glossary of technical terms that could provide beginners with introductory material. In addition, we regularly provided support for the Predictive Science Academic Alliance Program reviews at various research universities in understanding how their research assists in ASC's mission.



Office

NA-114 Office of Advanced Simulation and Computing and Institutional Research and Development Programs

Education

PhD, Physics, Tulane University
MS, Physics, Tulane University
BS, Physics, Iowa State University

“The fellowship allowed me to express my interest in program/project management and the Nuclear Security Enterprise after graduate school. I highly recommend it for technical people looking for new skills.”

John Lambert

NA-122.2 Office of Stockpile Sustainment



Overview

NA-122.2 Office of Stockpile Sustainment's mission is to maintain the safety, security, and reliability of the U.S. nuclear weapon stockpile through surveillance activities, life-extension programs, weapon alterations and modifications. During the fellowship, I supported the Submarine Launched Ballistic Missile (SLBM) Team and the Stockpile Surveillance Team.

Outcomes

As a member of the SLBM team, I supported the Ballistic Missile Division's mission by providing program analysis for weapon alteration programs and program initiatives to improve security for over-the-road weapon transportation. I was responsible for drafting NNSA tasking memoranda to national laboratories and production facilities, as well as coordinating with experts to identify the resources required to support stockpile programs.



Lambert attended the GT244 test flight of an unarmed Minuteman III ICBM at Vandenberg.

The Surveillance Team focuses on the reliability of the nuclear stockpile—which is achieved through the inspection and testing of nuclear weapons and components across nuclear enterprise sites. I supported this mission by assisting with coordination efforts to ensure the proper number and type of weapons/components were surveilled.



Office
NA-122.2 Office of
Stockpile Sustainment

“Working with the NNSA provided me the opportunity to contribute to Nuclear Security Enterprise activities taking place every day across our nation. I had access to unparalleled training, which increased my understanding of the nuclear stockpile. NGFP is a great step toward any career in the Department of Energy or U.S. government.”

Education
Master of Public Administration
MA, International Studies
University of Washington

Benjamin Lee

NA-213 Office of Nuclear Smuggling Detection and Deterrence



Overview

The Office of Nuclear Smuggling Detection and Deterrence (NSDD) works with partner countries to detect, disrupt, and investigate the smuggling of radioactive and nuclear materials that could be used in these acts of terrorism.

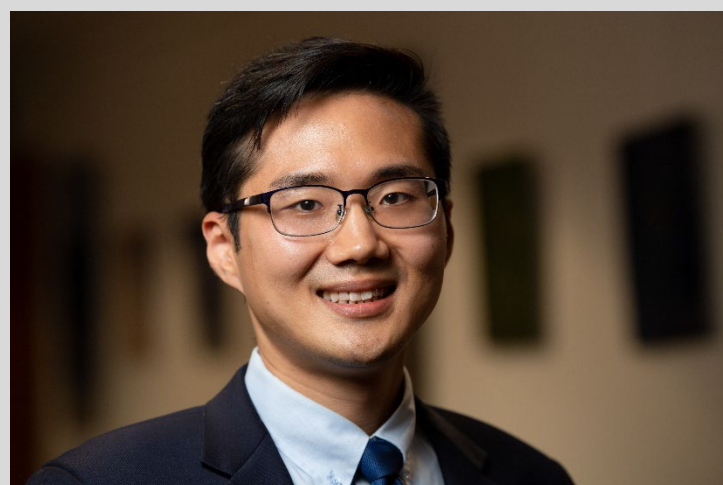


The Office of Nuclear Smuggling Detection and Deterrence (NSDD) counters nuclear smuggling through comprehensive capacity building and enduring partnerships with international organizations.

Outcomes

As a fellow, I assisted foreign affairs specialists to oversee program activities including, but not limited to, relationship management, project management, equipment deployment, testing and acceptance, and capacity building for partner countries in the Indo-Pacific Asia and the Balkans. The most memorable accomplishment was successfully planning and executing a high-profile trip to Taiwan with the Office Director.

The fellowship gave me an invaluable opportunity to develop expertise in capacity building programs and participate in various initiatives to prevent nuclear smuggling. The fellowship also enabled me to develop relevant project management skills and launch a career in the nuclear security enterprise.



Office
NA-213 Office of Nuclear
Smuggling, Detection and
Deterrence

“The fellowship allowed me to enhance important project management skills, develop lasting relationships with like-minded professionals, and launch a career in the nuclear security enterprise. I am immensely grateful for this opportunity and want to thank NNSA and PNNL for running such a unique program.”

Education
MA, Strategic Studies and International Economics
Johns Hopkins University School of Advanced
International Studies

Monica Lemmon

NA-84 Office of Nuclear Incident Response



Overview

The consequence management (CM) program facilitates multiple research and development efforts to improve nuclear emergency response capabilities. I worked on organizing R&D projects related to CM.

Outcomes

The consequence management program maintains response capabilities in the event of a radiological or nuclear release. I helped the technical advisor identify research and development priorities that align with the future goals of the consequence management program.



Consequence Management, August 2022, Albuquerque, NM

The improved organization of the R&D portfolio also allows for the future effort of creating an interactive dashboard, using PowerBI to aid high level decision making regarding R&D.



Office
NA-84 Office of Nuclear Incident Response

“After spending six years in school studying nonproliferation, this fellowship has been incredibly validating. These are the people and missions that I learned about in lectures and its an honor to work among them.”

Education
MA, Nonproliferation and Terrorism Studies
Middlebury Institute, Monterey

Sydney Long

NA-LA Los Alamos Field Office



Overview

Los Alamos National Laboratory (LANL), located in Los Alamos is a design laboratory responsible for the safety and reliability of the nuclear explosives package in nuclear weapons. This laboratory possesses unique capabilities in neutron scattering, enhanced surveillance, radiography, and plutonium science and engineering. I worked on projects in NA-10, NA-20, and NA-80.

Outcomes

My main focus was to administer the Advanced Recovery and Integrated Extraction System Program by visiting TA-55/PF-4 site, where the program is run, and solve issues concerning space, staffing, and potential small equipment projects. The program's purpose is to convert plutonium metal to less attractive oxide powder.



Dennis Duran works with plutonium oxide in a glove box in the laboratory's Plutonium Facility. (Source: Los Alamos National Laboratory)

I was also able to participate in different trainings. Two key trainings to highlight that were key for myself and my office were the U.S. Nuclear Detonation Detection System Orientation and the 151st Nuclear Nonproliferation Workshop.



Office
NA-LA Los Alamos Field Office

"The opportunities through this fellowship have been tremendous for my career and education. I look forward to applying this knowledge to the National Security Enterprise in my future career."

Education
MA, International Studies
University of Denver
BS, Spanish Translation
Missouri State University

Erin McLaughlin

NA-211 Office of International Nuclear Security



Overview

Insiders are one of the most significant threats to nuclear security because they possess access, authority, and knowledge to facilities. Recognizing this, the United States sponsored Information Circular 908 (INFCIRC/908), “Joint Statement on Mitigating Insider Threats” at the 2016 IAEA Conference on Nuclear Security. Today, 32 states and INTERPOL are subscribers.



INSIDER THREAT MITIGATION

Outcomes

The United States co-chairs the INFCIRC/908 International Working Group (IWG) with Belgium. This group aims to facilitate cooperation on insider threat mitigation measures for nuclear and radiological facilities, organizations, and regulating bodies. The IWG steering committee includes 10 subscribing states that aim to lead the IWG’s strategic focus, plan activities, and organize and lead focus groups.

During my fellowship, I supported the planning of, and attended, the first in-person steering committee meeting, held in Brussels, Belgium. I will continue to support the planning team in carrying out various events and meetings leading up to the 2024 International Symposium on Insider Threat Mitigation.



NA-211 Office of International Nuclear Security

“This fellowship provided me with the opportunity to see how nuclear security initiatives are carried out globally by connecting the expertise at the national laboratories to our international counterparts. It was a rewarding and eye-opening entrance into an aspect of this field that I hope to work in for years to come.”

BA, International Affairs
University of Georgia
MA, Security Studies
Georgetown University

Stephanie Miller

NA-10.1 Office of Strategic Partnership Programs



Overview

The Office of Strategic Partnership Programs supports a host of mission-enabling activities for the NNSA. I assisted our office in multiple areas including Technology Transfer, Reporting Data Statistics and Analysis, and Interagency Working Groups for STEM.

Outcomes

I helped publish a calendar that highlights key technology transfer accomplishments at the national laboratories, plants, and sites. I worked in data analytics to help visualize and publicize the incredible work the NNSA does in Technology Transfer, Strategic Partnership Projects, and Academic Programs. I also participated in many STEM related interagency working groups.



Miller attending the Nuclear Deterrence Summit alongside other NGFP fellows.

These efforts helped me learn a lot about what goes on in the NNSA's Defense Programs. It also provided me with the opportunity to summarize and visualize the impact of NA-10.1-sponsored work to provide to Congress and other stakeholders.



Office
NA-10.1 Office of Strategic Partnership Programs

Education
PhD (pending), Nuclear Engineering and Radiological Sciences
University of Michigan

“The NGFP fellowship connected me with outstanding mentorship I will carry with me throughout my entire career.”

Emily Morley

Office of Nuclear Smuggling Detection and Deterrence



Overview

The Office of Nuclear Smuggling Detection and Deterrence (NSDD) works with partner countries to detect, disrupt, and investigate the smuggling of nuclear and radioactive material. During my fellowship, I worked with country managers on capacity building projects in Tajikistan, Uzbekistan, Bulgaria, Estonia, and the Philippines, and supported NSDD's Investigation Support team.

Outcomes

As part of the Tajikistan country team, I was able to participate in meetings with Tajik partners, conduct acceptance testing of NSDD deployed equipment at sites along the Tajik-Afghan and Tajik-Kyrgyz borders, support training for frontline officers, and attend briefings with the U.S. ambassador. I also participated in the Women in Nuclear of Tajikistan's annual conference and delivered opening remarks on behalf of my office.



Morley represents NSDD at the Women in Nuclear Conference in Guliston, Tajikistan.

I also helped implement a new project with Oak Ridge National Laboratory to verify and prioritize locations along the Tajik-Afghan border for optimal equipment deployments. Additionally, I helped coordinate interagency, international, and multilateral security assistance to Tajikistan, including with the State Department, Department of Defense, Canadian and UK donors, and the International Atomic Energy Agency.



Office
NA-213 Nuclear Smuggling Detection and Deterrence

“NGFP gave me the perfect opportunity to continue learning about non-proliferation and nuclear security in practice while allowing me to grow as a young professional, work directly with partners overseas, and contribute to my office’s important mission.”

Education
MA, Strategy, Cybersecurity, and Intelligence
Johns Hopkins School of Advanced International Studies

Rebecca Mueller

NA-125.4, W87-1 Modification Program

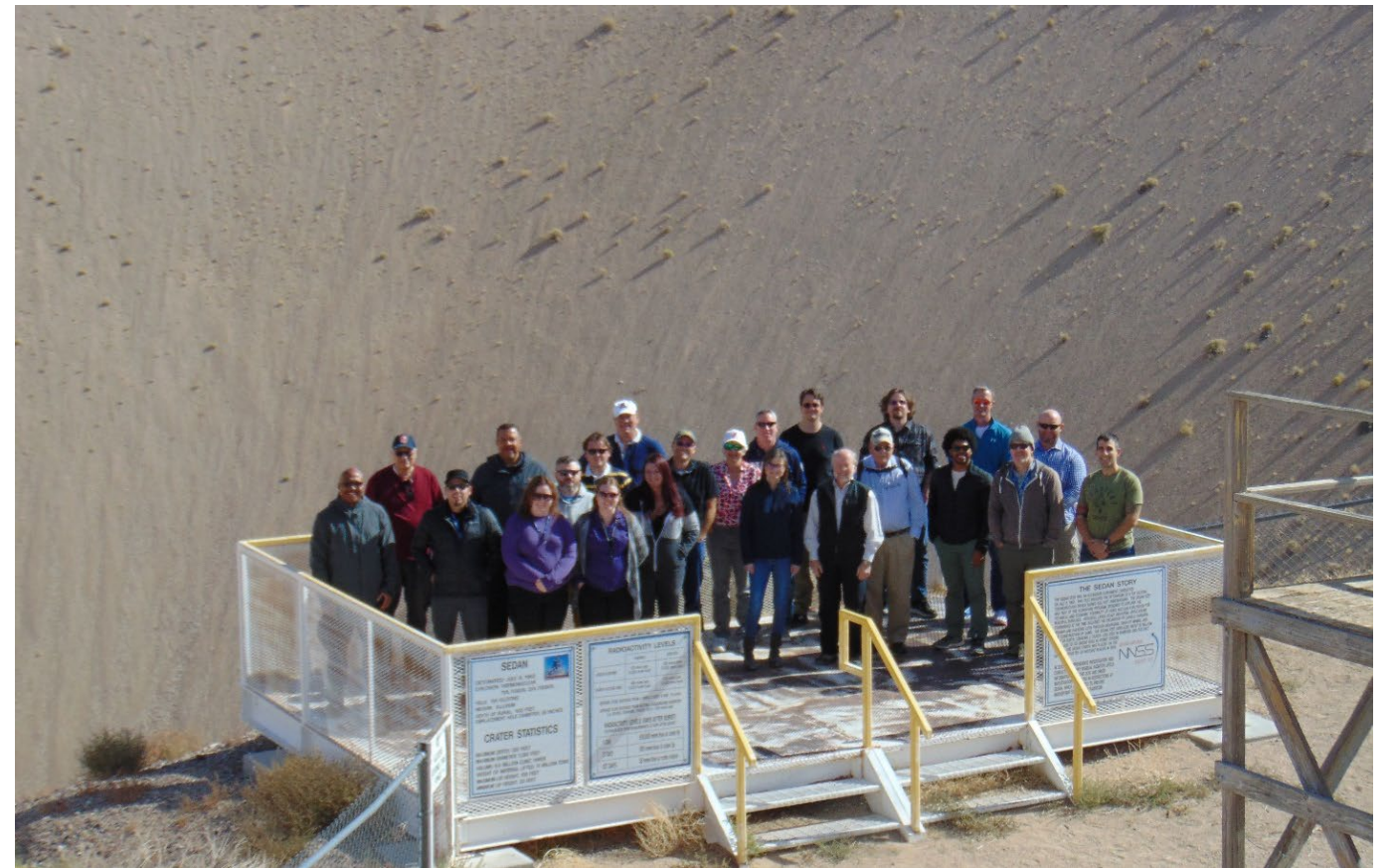


Overview

“The W87-1 will be deployed alongside the W87-0 on the Ground-Based Strategic Deterrent (GBSD) and will replace the aging W78 warhead by modifying the existing legacy W87-0 design. ... The W87-1 Modification Program will meet DoD and DOE/NNSA requirements for performance, safety, and security.” (2022 Stockpile Stewardship and Management Plan (SSMP)).

Outcomes

The Federal Program Office (FPO) of the W87-1 Modification Program is supported by Integrated Project Teams (IPTs) in subject areas. I spent most of my time as a NGFP Fellow supporting the Nuclear IPT. I visited Y-12, Lawrence Livermore National Laboratory, the Savannah River Site, Sandia National Laboratory, Los Alamos National Laboratory, Kansas City National Security Complex, and the Nevada National Security Site (NNS).



Rebecca Mueller (Fellow, NA 125.4) and Omar Castillo (Fellow, NA 122.1) with their cohort in the Underground Testing and Stockpile Stewardship Training at NNS.

These efforts aid in maintaining the Nuclear Deterrent of the United States as the aging American nuclear stockpile is modernized and updated.



Logo of the W87-1 Modification Program



Office
NA-125.4, W87-1
Modification Program

“I have learned so much about the wider Nuclear Security Enterprise (NSE) and was able to see so many labs, plants, and sites related to the NSE in both Research and Development (R&D) and production capacities.”

Education
PhD, Radiological Health Sciences
Colorado State University (in-progress)
BS, Chemistry
University of Kentucky

Joed Ngangmeni

NA-114 Advanced Simulation and Computing



Overview

NA-114, Office of Advanced Simulation and Computing is charged with the task of coordinating super computing efforts to simulate, test, and maintain our stockpile. I was responsible for supporting the team whenever the opportunity presented itself.

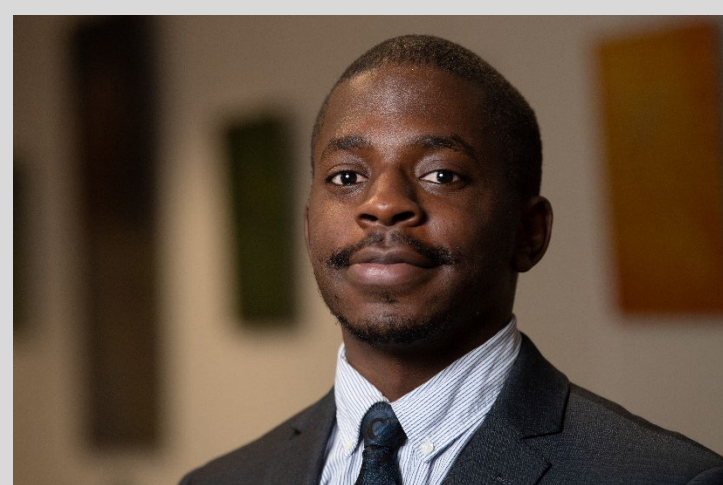
Outcomes

I provided program management support and attended multiple conferences focused on artificial intelligence and machine learning (AI/ML) topics. I served as scribe for several key conferences and meetings, including Artificial Intelligence for Science, Engineering and Security II and III, Predictive Science Academic Alliance Program III Chattanooga, Super Computing 22, debriefing NA-114 management on conclusions and takeaways.



Visiting the Center for Applied Scientific Computing (CASC) at Lawrence Livermore National Lab

I also wrote a white paper with another fellow on generalizing AI/ML and physics terms for official use; this white paper will help introduce technical AI/ML and physics concepts to NNSA managers as it relates to our mission space.



Office
NA-114 Advanced
Simulation and Computing

“This fellowship gave me the opportunity to hone my skills in AI/ML and refine my vision for the kind of leader I want to become. I now understand what happens when research meets policy and how to navigate conversations with national security implications.”

Education
PhD, Artificial Intelligence/Machine Learning
Howard University

Victoria Ontiveros

NA-242 Office of Nuclear Export Controls



Overview

The Office of Nuclear Export Controls (ONEC)'s International Nonproliferation Export Controls Program (INECP) works closely with foreign partners to strengthen international strategic trade controls. I supported the development and implementation of INECP engagements with partners.

Outcomes

I supported, and gradually took on additional responsibilities in, the development and implementation of INECP's international engagements with foreign partners. My work included preparing materials ahead of engagements, attending in-person and virtual engagements, and supporting the development phase of engagements.



Victoria and the U.S. delegation at the Pilot Strategic Trade Controls course conducted by the Kenyan task force in Mombasa, Kenya

Strengthening international strategic trade control systems is critical for combatting proliferation threats. By supporting INECP's work, I was able to learn about the importance of export controls in nonproliferation and contribute to the program's mission.



Office
NA-242 Office of Nuclear Export Controls

"I am grateful to ONEC for the opportunity to contribute to its mission. Through my work with INECP, I gained a better understanding of how I can apply my skills and expertise to grow in the nonproliferation field."

Education
MPP Harvard Kennedy School, BA
Johns Hopkins University

Sam Potier

NA-MB-92 Office of Analysis and Evaluation



Overview

NA-MB-92 conducts cost estimates and other technical analyses for programs across the NNSA. As a fellow, I assisted with multiple cost estimates, planning studies, and other technical projects. My work involved site visits to Los Alamos National Laboratory (LANL), Sandia National Laboratories (SNL), and the Nevada National Security Site (NNSS).

Outcomes

The support I provided to project teams in NA-MB-92 included (but is not limited to):

- Executability analysis for two planning studies
- Formal writing support for program requirement documents, mission need statements, and final reports
- Cost estimate distribution analysis
- In-person site assessment of mission and capability gaps.



Sites visited for work with NA-MB-92: NNSS (top left), LANL (top right), SNL (bottom left), and DOE Headquarters (bottom right) [1-4].

Additionally, I compiled a database on underground nuclear testing cost data.

Overall, my efforts have helped to maintain NA-MB-92's first-rate analysis and evaluation track record.

[1] Energy.gov; [2] Lanl.gov; [3] Group14eng.com; [4] Wikipedia.com



Office
NA-MB-92 Office of
Analysis and Evaluation

Education
Master of Physics, University of Notre Dame

“Through my fellowship year with NA-MB-92, I gained exciting and critical experience in the national security enterprise and the broader federal government. Perhaps most importantly, I learned how to execute, analyze, and write as a team member in federal projects.”

Paige Reed

NA-191 Plutonium Program Office



Overview

The United States is restoring the capability to produce new primaries for the nuclear weapon stockpile, including plutonium components known as pits. The two-pronged approach (LANL and SRS) will restore critical production capability to maintain the Nation's nuclear deterrent. Both sites require modernization efforts overseen by the Plutonium Program Office.

Outcomes

The primary focus of my work was on the Savannah River Plutonium Processing Facility (SRPPF) project and aiding in the establishment of the associated program at Savannah River Site (SRS). I helped establish and lead the SRPPF Program Acceleration Working Group which developed a schedule for FPU (first production unit) and process development plans for the high-fidelity training and operations center (HFTOC).



Paige demonstrating safe material handling in a glovebox used for SRS's Plutonium Training Courses, one of many to be implemented in the High-Fidelity Training and Operations Center

These efforts help ensure the capability to produce no fewer than 50 pits per year at SRPPF, as required by the National Defense Authorization Act for Fiscal Year 2018, and thus maintain the nation's nuclear deterrent.



NA-191
Plutonium Program Office

"This fellowship gave me great insight into the many facets and inter-dependent nature of the nuclear security enterprise. Working with several national laboratories and NNSA sites gave me an understanding of how headquarter missions are implemented across the nation."

Education

MS, Analytical Chemistry, Clemson University
MS, Nuclear Energy Technology Management, Thomas Edison State University

Kyle J. Sallee

NA-231 Office of Conversion



Overview

The Office of Conversion develops and deploys technology to enable the conversion of civilian nuclear facilities from the use of highly enriched uranium (HEU) to low-enriched uranium (LEU) fuels and targets. The program was initiated by the Department of Energy in 1978 and has led to the conversion or shutdown of over 100 facilities globally.

Outcomes

I supported the international conversion portfolio, engaging with experts from the national laboratory complex and our international partners in Europe and Asia. In support of our international conversion efforts, I had the opportunity to represent the office and support the NNSA Administrator for the signature of the Kindai Statement of Intent, initiating the conversion of the final HEU-fueled research reactor in Japan.



Administrator Hruby holds the signed Kindai SOI, supported by Chris Landers, Sallee, and Kelsey Wallace.

I coordinated and attended two conferences critical to our work: the Reduced Enrichment for Research and Test Reactors Conference (RERTR) and the European Research Reactors Conference. At RERTR, I moderated the first “Fireside Chat” between the Office Directors of the Office of Conversion and the Office of Nuclear Material Removal. I coordinated dozens of bi-lateral side meetings at each conference with multiple international partners.



Office
NA-231 Office of
Conversion

“The Office of Conversion and NGFP provided me the tools necessary to grow personally and professionally, fostering a deeper passion for public service and challenging me to translate this passion into meaningful advances in American nuclear security policy.”

Education
MA, International Relations
American University, School of International Service

Alexis Schlotterback

NA-19 Office of Production Modernization



Overview

NA-19 is responsible for modernizing the production processes for primaries, secondaries, energetics, and non-nuclear components in weapons systems. In my front office support role, I aided NA-19 leadership by interfacing with program directors and personnel from the Deputy Administrator's Action Group for Defense Programs.

Outcomes

The front office coordinates with five programs for briefings with congressional staff, drafting talking points for high-level meetings with the national laboratories, and holding quarterly program reviews with the Deputy Administrator for Defense Programs. As well, NA-19 interfaces with the United Kingdom as outlined by the Mutual Defense Agreement.



Polymer Production Enclave at Lawrence Livermore National Laboratory

I supported these regular coordination efforts along with internal office practices such as transitioning workflows into SharePoint. Additionally, NA-19 is responsible for a chapter in the Stockpile Stewardship and Management Plan. I worked to compile these inputs and revisions from our programs for this important task.



Office
NA-19 Office of Production
Modernization

“The opportunity to develop a foundation for a career in the Nuclear Security Enterprise is second to none. In this fellowship, participants are challenged to learn ideas outside of their regular field, including both policy-making practices and scientific processes.”

Education
MS, Defense and Strategic Studies
Missouri State University

Tristan Skupniewitz

NA-MB-82 Management and Budget for Defense Nuclear Nonproliferation

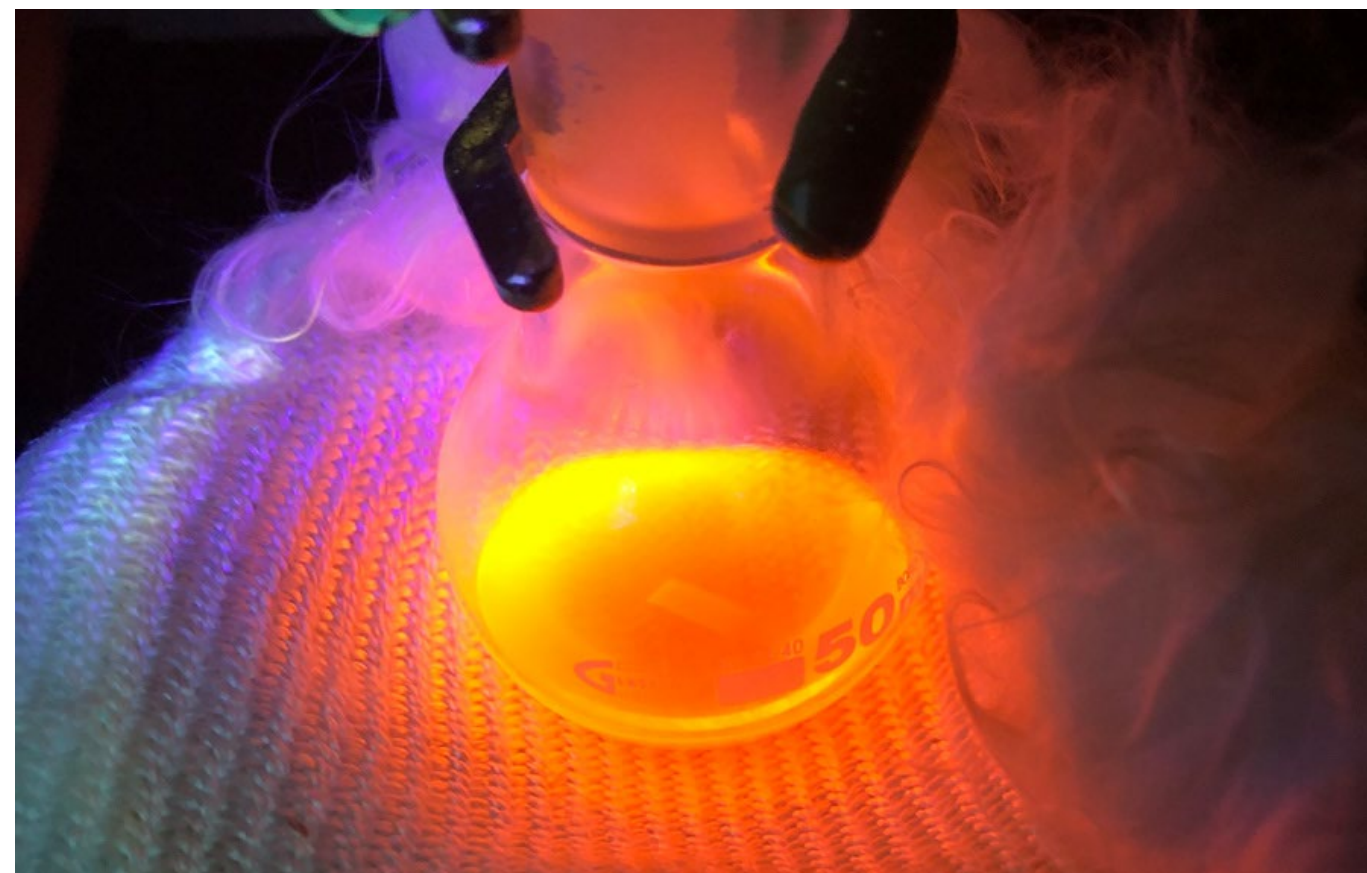


Overview

The office of management and budget for Defense Nuclear Nonproliferation (DNN) provides support for all aspects of DNN's planning, programming, budget, and evaluation. I worked on projects throughout MB-82 and had a large focus on budgetary and program management areas.

Outcomes

Our office provides all of the management and budget support to all of the DNN program offices. We worked on a plethora of things throughout the budget cycle. I liaised with the Office of Emergency Operations and the Office of Counterterrorism and Counterproliferation to provide budgetary assistance to ensure satisfactory outcomes for program work.



All of the amazing science experiments start with a budget!

I supported the budgetary work for DNN program offices, which allowed them to execute their missions.



Office
NA-MB-82 Management and Budget for Defense Nuclear Nonproliferation

"The NGFP fellowship gave me the unique opportunity to jump start my career in the Nuclear Security Enterprise, which I could not have done anywhere else this early in my career."

Education
Master of International Affairs, Global Security
American University

Chad Ummel

NA-113 Office of Experimental Science



Overview

The NA-113 Office of Experimental Science (OES) provides the scientific knowledge and expertise needed to maintain confidence in the safety, security, and effectiveness of the nuclear weapons stockpile in the absence of underground nuclear testing. I have contributed to several projects across many of the programs within OES.

Outcomes

I led a project identifying diagnostic components experiencing (or at risk of) supply chain issues at the nation's three inertial confinement fusion facilities. This led to a combined effort across the laboratories to develop and implement effective mitigation plans.

Additionally, I have aided in efforts related to the development and improvement of DT fuel targets, which led to the National Ignition



Ummel moderates a panel discussion on careers at the national laboratories for graduate students and postdocs at the 2023 Stewardship Science Academic Programs Symposium.

Facility achieving scientific breakeven on December 4, 2022.

I have also written the OES contribution to the FY 2024 Stockpile Stewardship and Management Plan, to be presented to Congress, and I delivered technical briefings to the office on a number of topics.



Office
NA-113 Office of
Experimental Science

“This fellowship allowed me to use my scientific background to have an impact. I really enjoyed being an advocate for the exciting science at the labs and sites.”

Education
BA, Physics
University of California, Berkeley
PhD, Physics
Rutgers University

Jose Veleta

NA-22 Defense Nuclear Nonproliferation Research and Development



Overview

Defense Nuclear Nonproliferation (DNN) R&D advances technical capabilities in support of national security and nuclear nonproliferation efforts of the U.S. government. DNN R&D is composed of the offices of Proliferation Detection and Nuclear Detonation Detection, which together fund and oversee research, technology demonstrations, and development of prototypes that meet the needs and requirements of the NNSA.

Outcomes

As an NGFP fellow, I worked closely with program managers and technical advisors, specifically within the Warhead Verification and Monitoring portfolio, where I served as an interim technical advisor. In this role, I learned and developed project management skills by evaluating timelines, budgets, deliverables, and milestones of ongoing projects in this portfolio. Similarly, we established routine communication with national laboratories to



Participants of the Quantum Sensing Workshop at the Lawrence Berkeley National Laboratory.

schedule and conduct project baseline reviews, independent assessments, and research update meetings.

As a scientist, I furthered my knowledge of the current state and future needs of technical projects, and how national laboratories contribute to national security and nuclear nonproliferation.



Office
NA-22 Defense Nuclear
Nonproliferation R&D

Education
PhD, Inorganic Chemistry
The University of Arizona

“This fellowship allowed me to expand my technical knowledge and professional skills. Working at the NNSA headquarters gave me a valuable understanding of how to apply my technical skills toward efforts in national security.”

Luis Vidana

NA-90 Office of Infrastructure



Overview

The NA-90 Office of Infrastructure mission is to provide NNSA with centralized infrastructure planning processes; program management for operations of facilities, maintenance, recapitalization, disposition, and line-item construction; and project and contract management of line-item construction and major end items. Throughout the fellowship, I assisted the Acting Director for Infrastructure Modernization Division on the NNSA Albuquerque Complex Project.

Outcomes

The purpose of this project was to replace outdated facilities and collocate 1,200 NNSA employees and contractors. The key performance parameters achieved were the following:

- 333,000 sq ft for up to 1,200 people, including uninterrupted power supply (UPS)
- New access road
- Designed and constructed to meet LEED gold standards

The building includes limited areas for classified work.

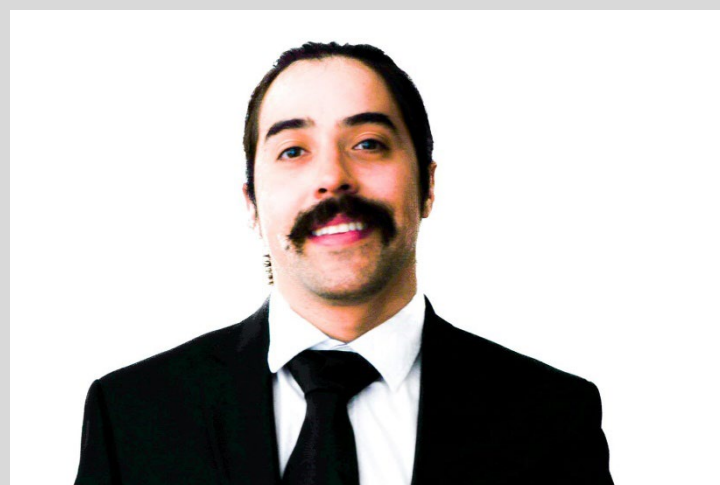


John A Gordon Albuquerque Complex

To succeed with the approval and completion of this construction project, NA-90 planned through the CRITICAL DECISION (CD) process, which includes the following five phases:

- CD-0 Approve Mission Need
- CD-1 Approve Alternative Selection and Cost Range
- CD-2/3 Approve Performance Baseline/ Start of Construction
- Finally, CD-4 Approve Start of Operations and Project Completion.

I assisted with the final stage of CD-4, turning the building over to operations and transitioning the project from construction phase to warranty phase.



Office
NA-90 Office of
Infrastructure

“Becoming an NGFP fellow allowed me to expand my knowledge for NNSA’s mission, and it provided a great opportunity to network and work alongside the leaders running the organization.”

Education

BS, Physics
University of Texas at El Paso
MS, Physics
University of Texas at El Paso

Katie Wernke

NA-10.2 International Programs

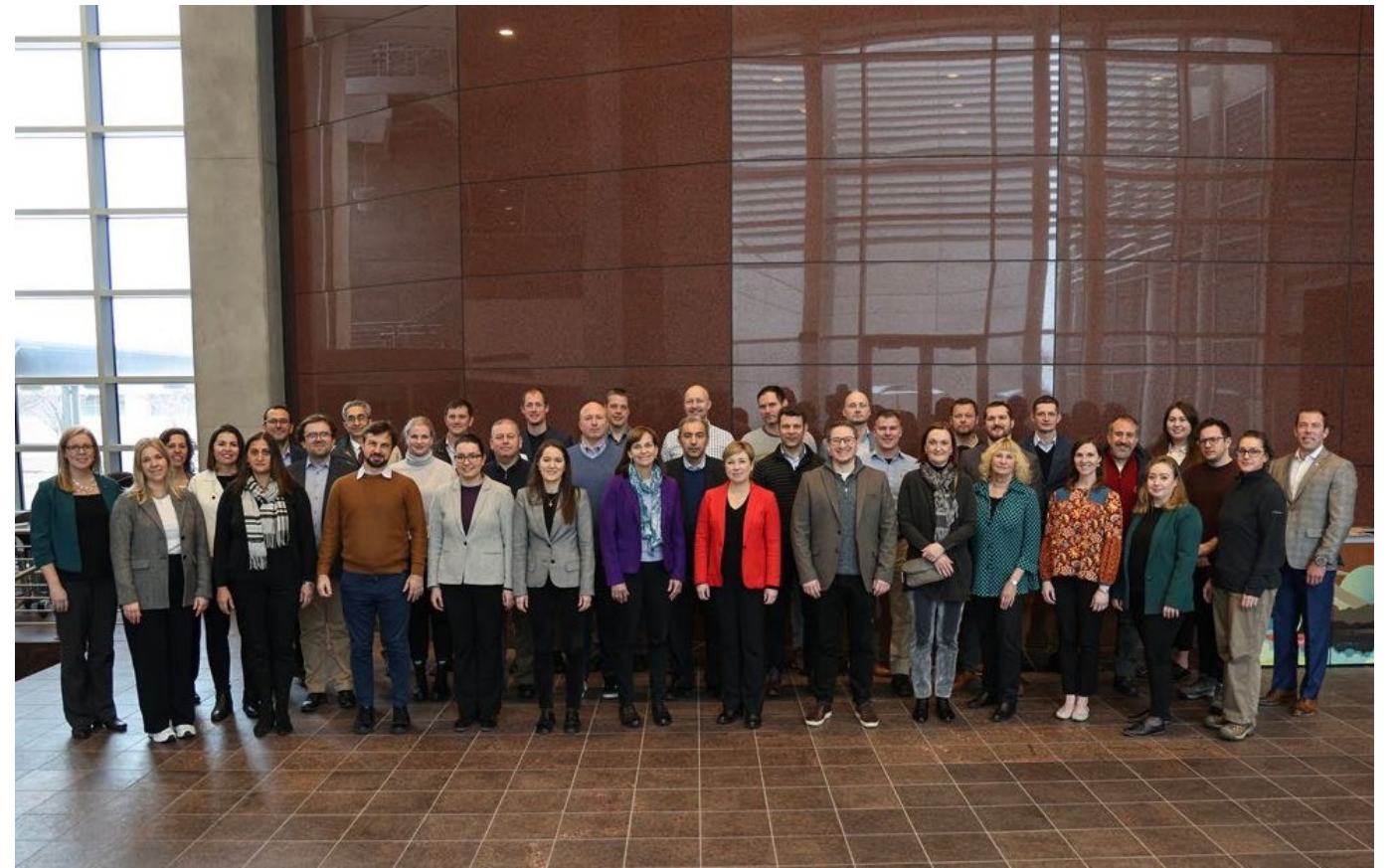


Overview

The Office of International Programs serves as the implementing office for mutual defense agreements (MDAs) with international partners and implements export control authorities for the Office of Defense Programs (DP). I worked on projects supporting the U.S./UK MDA, the U.S.-NATO ATOMAL Agreement, and export control questions on DP technology and export content.

Outcomes

I worked to improve key processes in reporting within both the UK and export control portfolios in NA-10.2. These improvements streamlined routine business processes and created more user-friendly products, ultimately leading to more accurate and complete data. I also represented my office in a number of new and relaunched initiatives under the U.S./UK MDA, which afforded me the opportunity to work with



Katie joins delegates to NATO's Nuclear Planning Group visiting Sandia National Laboratory.¹

international and lab partners as part of the agreement. Finally, I assisted in planning and executing a tour of several labs and sites for delegates from the NATO Nuclear Planning Group. This trip successfully raised awareness among delegates of NATO-allied countries about the U.S. nuclear security enterprise and demonstrated the credibility of the U.S. nuclear deterrent.



Office
NA-10.2 International Programs, Office of Defense Programs

Education
MA, International Relations
Johns Hopkins School of Advanced International Studies

"This fellowship has given me the chance to see first-hand what it is like to work in national security. My experience in the fellowship has opened doors to new opportunities I never considered before."

¹Source: https://www.linkedin.com/posts/sandia-national-laboratories_yesterday-we-were-honored-to-host-the-nato-activity-7021294419446304768-dXVz?utm_source=share&utm_medium=member_ios

Gregory Wiatrek

NA-10 Office of Defense Programs



Overview

I supported projects for several offices within NA-10: Production Modernization Front Office (NA-19), Tritium (NA-192), Secondary Stage Production Modernization (NA-195), and the Office of Strategic Planning and Analysis (NA-183).

Outcomes

During the fellowship, I conducted various vendor analyses, identifying risks and opportunities to ensure NNSA maintained a reliable stockpile supply chain. I investigated international policies and projected their future impact on U.S. nuclear policy. Other duties included briefing project leads and advising them on how to best mitigate private sector trends.



Most cross-office projects involved researching NNSA's domestic and international supply chains.

Additionally, I learned how the federal government allocates money through the Planning, Programming, Budgeting, and Evaluation process employed by NNSA and the Department of Defense. Attending the NNSA Budget Summit, Office of Management and Budget briefings, and IPG meetings taught me how complicated—but immensely important—the budgeting process is to our national security.



Office
NA-10 Office of Defense Programs

"The opportunity to support various missions within NNSA provided me invaluable insight into the domestic and international challenges and opportunities facing the United States. I am grateful for such an opportunity and will apply what I learned throughout the rest of my career."

Education
Master of International Service, U.S. Foreign Policy and National Security
American University

Caleb Yip

NA-10 Office of Defense Programs



Overview

The Deputy Administrator's Action Group (DAAG) provides critical support for a high-visibility, fast-paced front office that oversees the entirety of Defense Programs. As a member of the DAAG, I provided clear, succinct, and polished written deliverables for senior leadership while ensuring consistent strategic messaging.

Outcomes

I assigned and tracked hundreds of correspondence items on eDOCS, to include reports to Congress, Nuclear Weapons Council vote packages, and various communications from other departments and the public. I also improved the NA-10 command brief by displaying NNSA's warhead modernization programs in a more accessible manner for outside audiences.



Yip and other NGFP fellows attend the 2023 Nuclear Deterrence Summit in Washington, DC.

In addition, I served as a point of contact between NA-10 and the NA-12 Office of Stockpile Management. I also tracked congressional reporting requirements in the National Defense Authorization Act and drafted strategic messaging papers in support of the FY 2024 Budget Request.



Office
NA-10 Office of Defense Programs

“This fellowship gave me an incredible opportunity to immerse myself in the Nuclear Security Enterprise and to meet some of the dedicated men and women who work to uphold the nuclear deterrent. I am thankful for the opportunity to jump-start my career at NNSA.”

Education
MA, Security Studies, Georgetown University
BS, Foreign Service, Georgetown University