# ROSS Quarterly Call

17 December 2024

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# Agenda

- Welcome from FEMA Office of Emerging Threats (OET) Branch Chief and ROSS Program Manager – Jon Gill, PhD and Jeramie Calandro
- Welcome from CRCPD ROSS Program Manager – Bill Irwin, ScD, CHP, FEMA Type 1 ROSS
- Homeland Security Information Network (HSIN) Update – Jeff Semancik, FEMA Type 1 ROSS
- MissionEdge for task completion/documentation – Angela Leek, PhD, CHP, FEMA Type 1 ROSS
- ROSS Orientation and State ROSS Coordinator Training - Bill
- Open dialog with you – all participants
- December 2024 Competency Maintenance Problem Set – Adela Salame, PhD, FEMA Type 1 ROSS
- Closing Remarks – FEMA OET

# FEMA Office of Emerging Threats

## Welcome and Opening Remarks

## Jon Gill & Jeramie Calandro


Source: GAO. | www.gao.gov

https://www.gao.gov/products/gao-19-164 accessed 2/23/23.

# FEMA OET Updates

- Leadership discussion on Post PER-388 courses
  - Working with CTOS to develop VEST
  - Nuc/Det Scenario, PTB task numbers 47-51, 53-54, 56, 58-59, 62
  - Pilots are in-process (internal completed)
- Focusing on Cobalt Magnet Preparations
  - Participation in either CDC (Virtual) or Michigan (In-person)
  - 10- ROSS
  - Invitational Travel

# Welcome from CRCPD Homeland Security/Emergency Response Committee 4 (HS/ER-4)

Bill Irwin, ScD, CHP, FEMA Type 1 ROSS, CRCPD ROSS Program Manager

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Questions? william.Irwin@vermont.gov

# Welcome to New Initial ROSS Training Course Graduates!

- Fifty new people (20 from Georgia and 30 from Kansas) took the initial step to become a ROSS.
  - PER-388 is the initial step that more than 500 people have taken.
  - Documenting training and experience in the in the ROSS Position Task Book (PTB) is where the fuller ROSS development occurs.
- We are grateful to the folks in Topeka, Kansas, at the CDC and in Georgia who planned and prepared for the two newest classes!
- We are excited that CTOS is planning more classes for 2025:
  - Austin, Texas the week of June 16. 2025,
  - Wisconsin is planning one the summer of 2025, and
  - Pennsylvania, Connecticut, Massachusetts, and Illinois are working to host classes next year, too.


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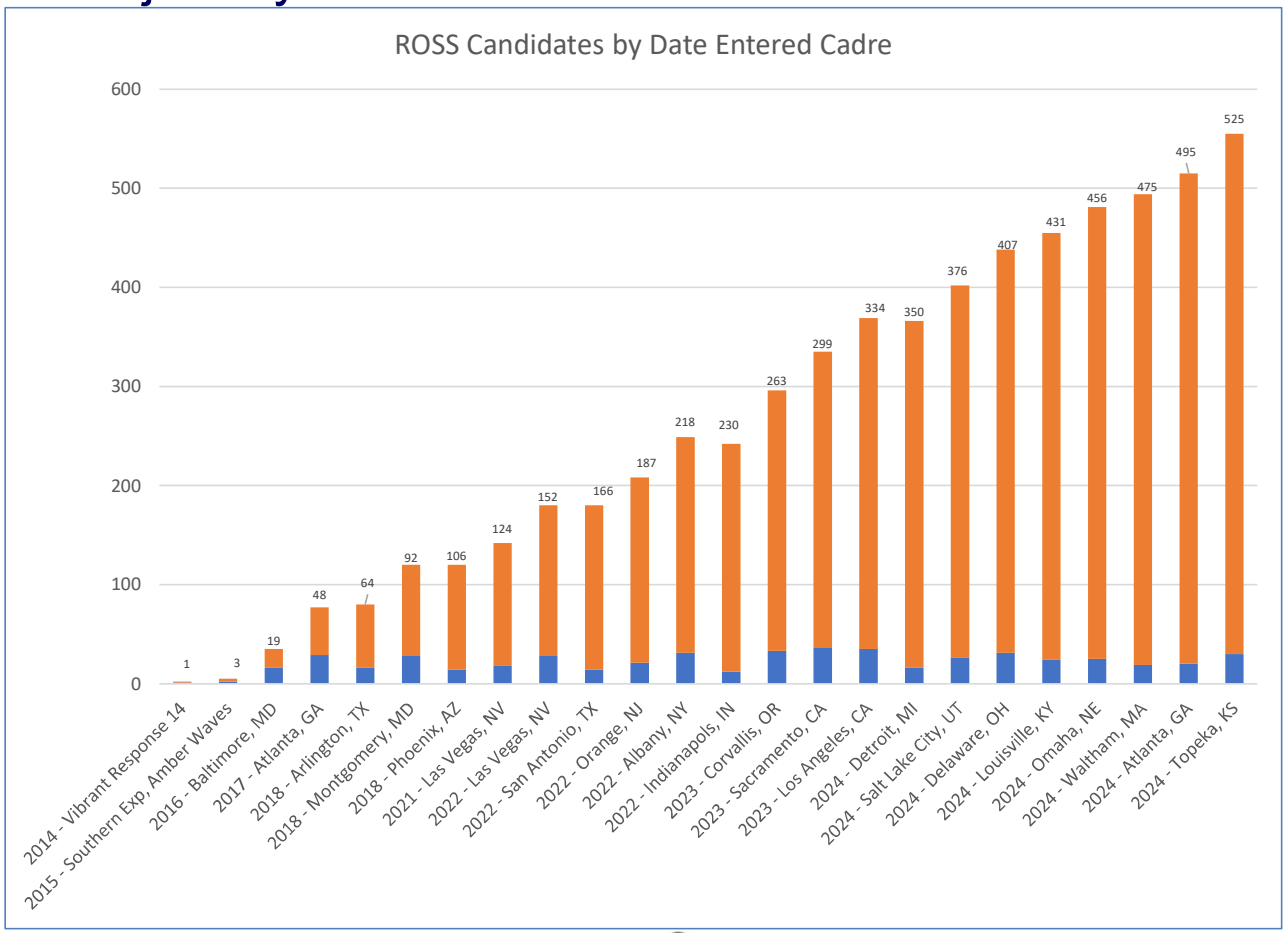
# The ROSS trajectory so far

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# The Next Steps

- A reminder to send your certificates for ROSS Type 4 Training to FEMA-ROSS@fema.dhs.gov: IS-100, IS-200, IS-700, IS-800, IS-836 or equivalents and PER-388.
- You will then be invited as a Type 4 ROSS to join MissionEdge and get assigned your Type 3 PTB to work on so you can work independently as a ROSS.
- We are doing our best to provide opportunities where you can advance by type:
  - The nuclear detonation Virtual Evaluation Scenario Tool (VEST) is planning its second internal pilot.
  - We are working with the DOE NNSA on additional Silent Thunder, Isotope Crossroads and CURRIE (Community Unified Response to Radiological Incidents and Emergencies) tabletop exercises.
  - ROSS quarterly competency maintenance problem sets.
  - Historical recognition to document competencies demonstrated in the past.

# Join CRCPD HS/ER-4 to Help Lead the ROSS for the Future

- Apply here: https://crcpd.org/join-crcpd/
- If you want to do become a member, email me and put “HS/ER-4 Membership” in the subject line.
- I will invite you to our next meeting.
- If you like our work, apply for membership to Homeland Security/Emergency Response Committee-4 here:
- With more than 500 people trained to become ROSS, and as a volunteer organization, we need a lot of help!

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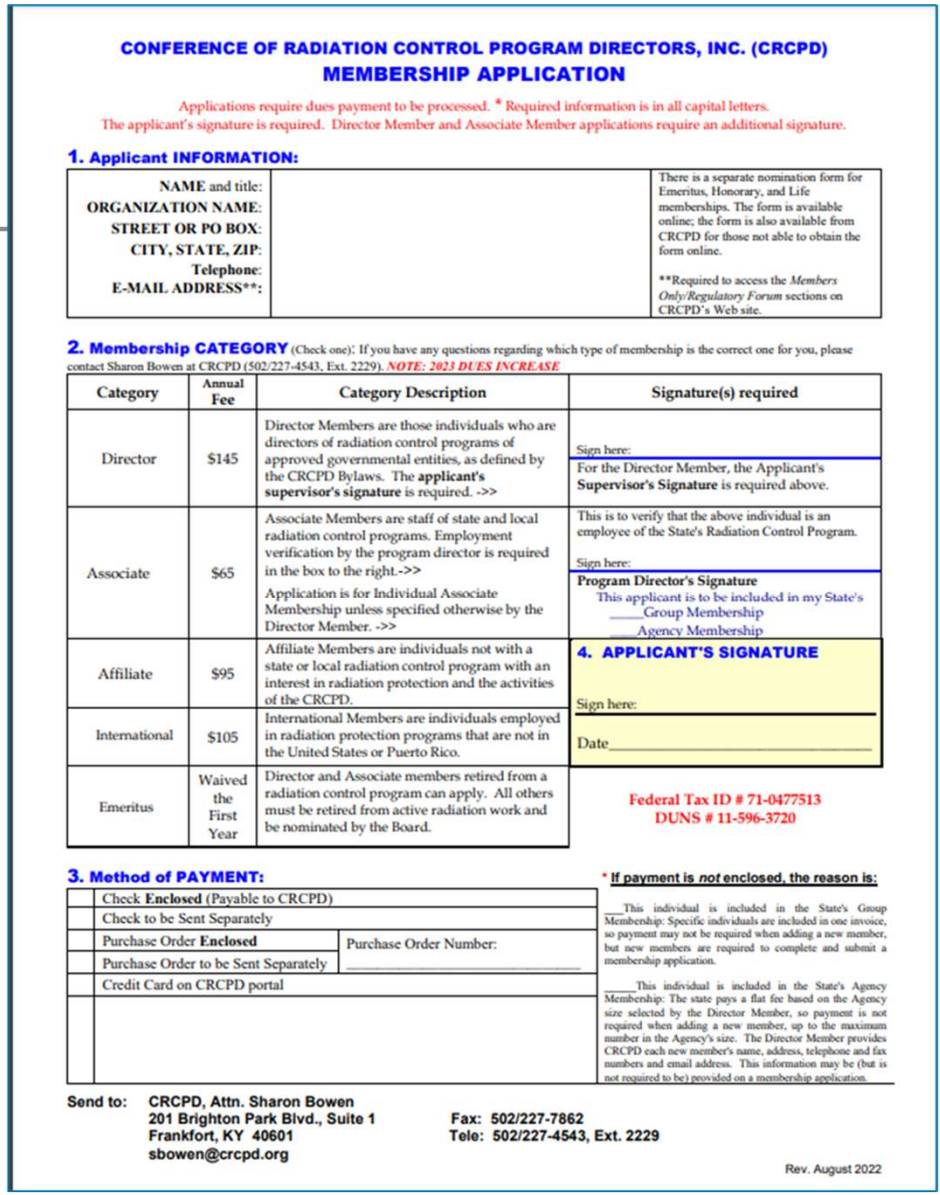


**CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS, INC. (CRCPD)**

**MEMBERSHIP APPLICATION**

Applications require dues payment to be processed. * Required information is in all capital letters.
The applicant's signature is required. Director Member and Associate Member applications require an additional signature.

**1. Applicant INFORMATION:**

| | | |
|---|---|---|
| **NAME** and title:<br>**ORGANIZATION NAME**:<br>**STREET OR PO BOX**:<br>**CITY, STATE, ZIP**:<br>**Telephone**:<br>**E-MAIL ADDRESS****: | | There is a separate nomination form for Emeritus, Honorary, and Life memberships. The form is available online; the form is also available from CRCPD for those not able to obtain the form online.<br><br>**Required to access the *Members Only/Regulatory Forum* sections on CRCPD's Web site. |

**2. Membership CATEGORY** (Check one): If you have any questions regarding which type of membership is the correct one for you, please contact Sharon Bowen at CRCPD (502/227-4543, Ext. 2229). ***NOTE: 2023 DUES INCREASE***

| Category | Annual Fee | Category Description | Signature(s) required |
|---|---|---|---|
| Director | $145 | Director Members are those individuals who are directors of radiation control programs of approved governmental entities, as defined by the CRCPD Bylaws. The **applicant's supervisor's signature** is required. ->> | Sign here:<br>For the Director Member, the Applicant's **Supervisor's Signature** is required above. |
| Associate | $65 | Associate Members are staff of state and local radiation control programs. Employment verification by the program director is required in the box to the right.->><br>Application is for Individual Associate Membership unless specified otherwise by the Director Member. ->> | This is to verify that the above individual is an employee of the State's Radiation Control Program.<br>Sign here:<br>**Program Director's Signature**<br>This applicant is to be included in my State's<br>_____Group Membership<br>_____Agency Membership |
| Affiliate | $95 | Affiliate Members are individuals not with a state or local radiation control program with an interest in radiation protection and the activities of the CRCPD. | **4. APPLICANT'S SIGNATURE**<br>Sign here:<br>Date |
| International | $105 | International Members are individuals employed in radiation protection programs that are not in the United States or Puerto Rico. | |
| Emeritus | Waived the First Year | Director and Associate members retired from a radiation control program can apply. All others must be retired from active radiation work and be nominated by the Board. | |

Federal Tax ID # 71-0477513
DUNS # 11-596-3720

**3. Method of PAYMENT:**

| | | |
|---|---|---|
| | Check **Enclosed** (Payable to CRCPD) | |
| | Check to be Sent Separately | |
| | Purchase Order **Enclosed** | Purchase Order Number: |
| | Purchase Order to be Sent Separately | |
| | Credit Card on CRCPD portal | |

* If payment is *not* enclosed, the reason is:

___This individual is included in the State's Group Membership: Specific individuals are included in one invoice, so payment may not be required when adding a new member, but new members are required to complete and submit a membership application.

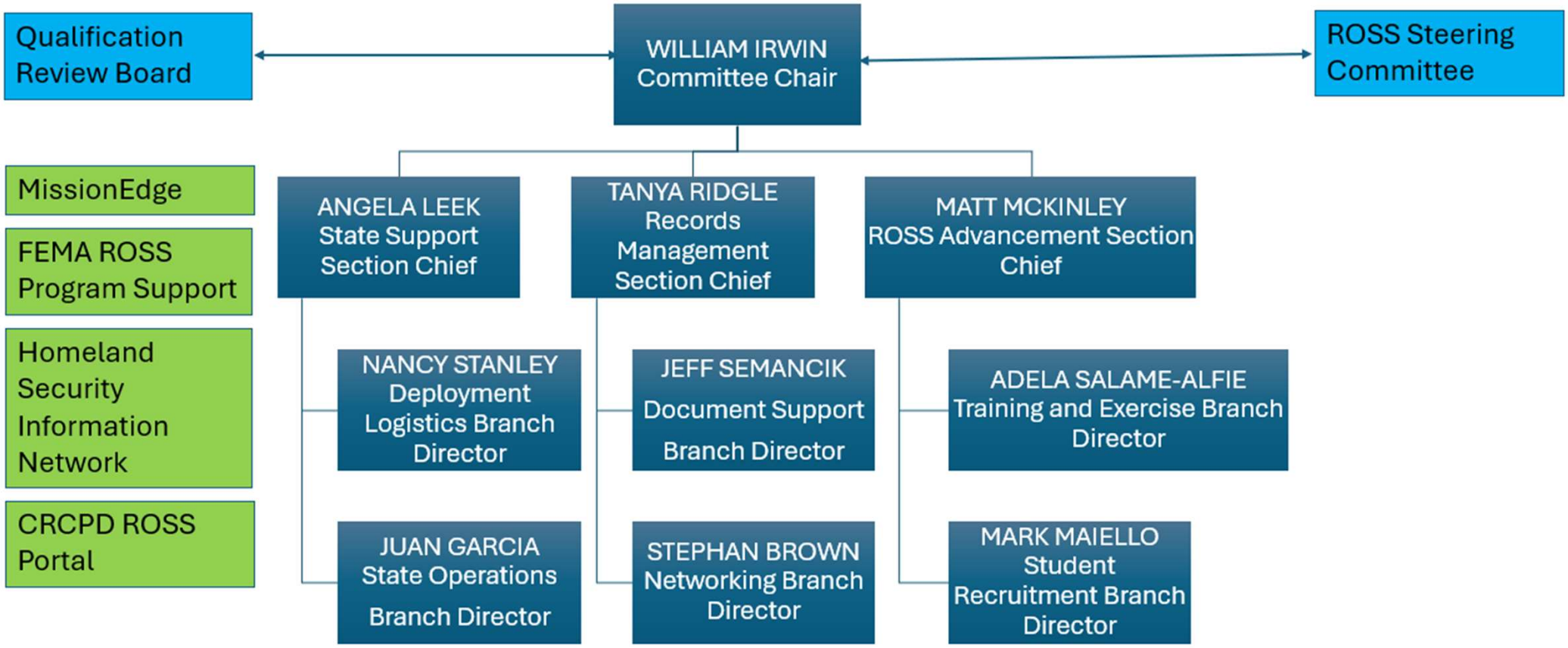
____This individual is included in the State's Agency Membership: The state pays a flat fee based on the Agency size selected by the Director Member, so payment is not required when adding a new member, up to the maximum number in the Agency's size. The Director Member provides CRCPD each new member's name, address, telephone and fax numbers and email address. This information may be (but is not required to be) provided on a membership application.

**Send to:** CRCPD, Attn. Sharon Bowen
201 Brighton Park Blvd., Suite 1
Frankfort, KY 40601
sbowen@crcpd.org

Fax: 502/227-7862
Tele: 502/227-4543, Ext. 2229

Rev. August 2022

# ROSS Working Group Annual Meeting, 10–12 September 2024

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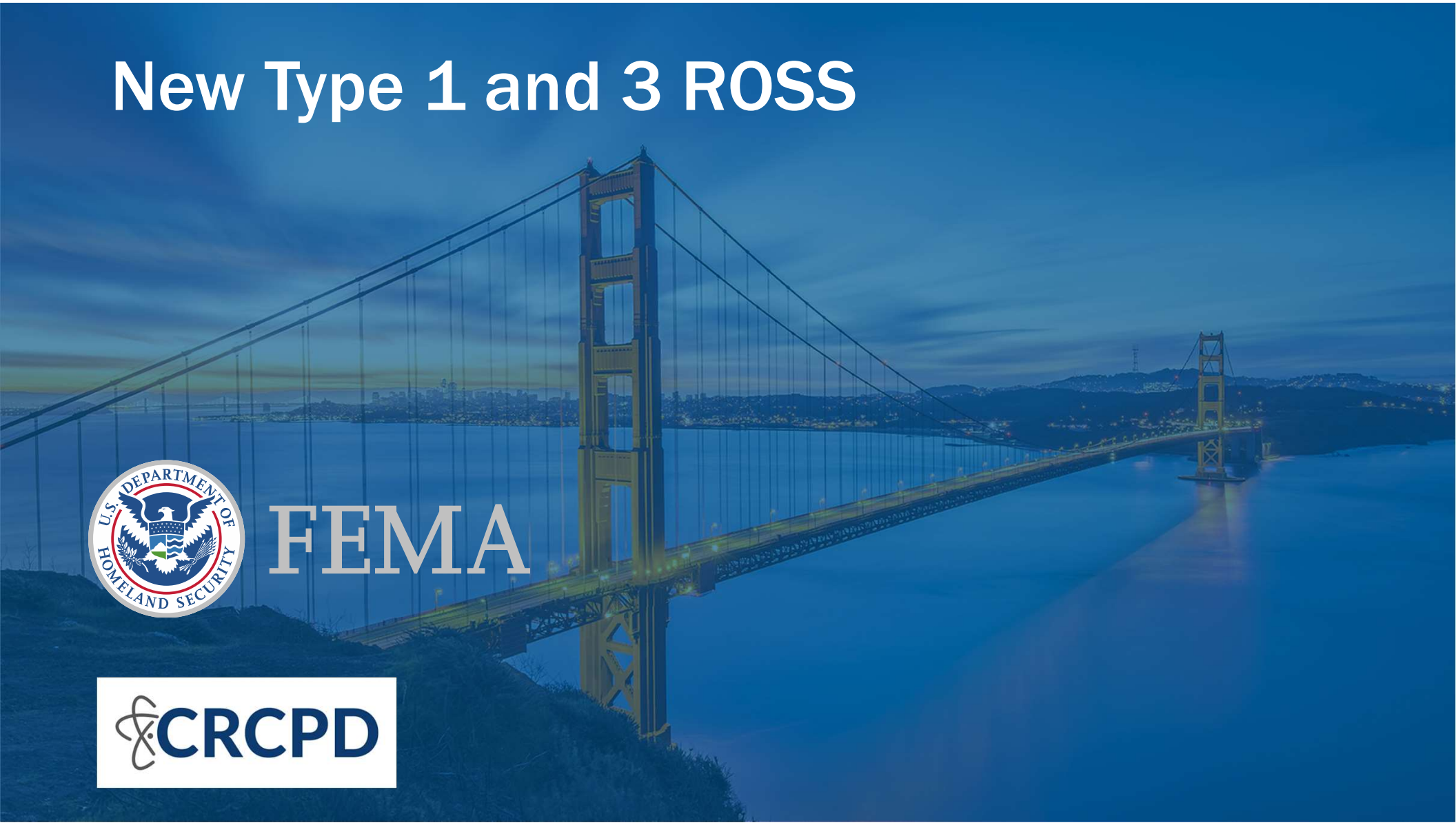
# The ROSS and the Reserve Corps


- The Department of Energy Nuclear Emergency Support Team (NEST) is building a Reserve Corp
- Several ROSS were recommended for it and some have been offered opportunities to join.
  - The Reserve Corps is designed to assist full-time NEST when relief is needed or when full-time resources could use help.
  - The Reserve Corps assists the National Nuclear Security Administration (NNSA) in its Office of Nuclear Incident Response, especially in exercises like Marble Challenge and Cobalt Magnet.
  - The Reserve Corps assists the Ukraine Task Force and the Office of Nuclear Incident Policy and Cooperation.
- With similar goals to build a radiological and nuclear emergency workforce, we hpope the ROSS and Reserve Corps can help each other long-term.

# New Type 1 and 3 ROSS



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## CRCPD Qualification Review Board Recommends 3 Newly Typed ROSS

- New Type 3
  - Greg Funderburk of California
  - Peter Hill of Ohio
- New Type 1 ROSS
  - Paul Schmidt of Wisconsin
- Unique elements to each certification
  - Greg used his employer, his Fire Department Chief, as his Authority Having Jurisdiction
  - Peter's documentation was entirely using MissionEdge
  - Wisconsin has its own Qualification System, but uses both theirs and ours to certify ROSS

# ROSS Participation in Cobalt Magnet 25

Jon Gill and Bill Irwin

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CRCPD

Questions? william.Irwin@vermont.gov

# Cobalt Magnet 25 and ROSS

- March 17 through 21, 2025
- Twenty-three ROSS have responded to the MissionEdge deployment request stating they could participate in person in Michigan or virtually at the CDC.
  - We seek ten at each site.
  - Those in Michigan will have travel funding from FEMA OET.
  - Those serving the CDC virtually will be part of their long-term response organization.

# Cobalt Magnet 25 and ROSS

- More than ten responding ROSS want to go to Michigan, so those not chosen will be offered positions assisting the CDC.
- A summary of ROSS recommendations will be offered to Michigan and the CDC in January.
- All responding ROSS are exceptional!
- Thank you to all who volunteered for this critically important exercise!

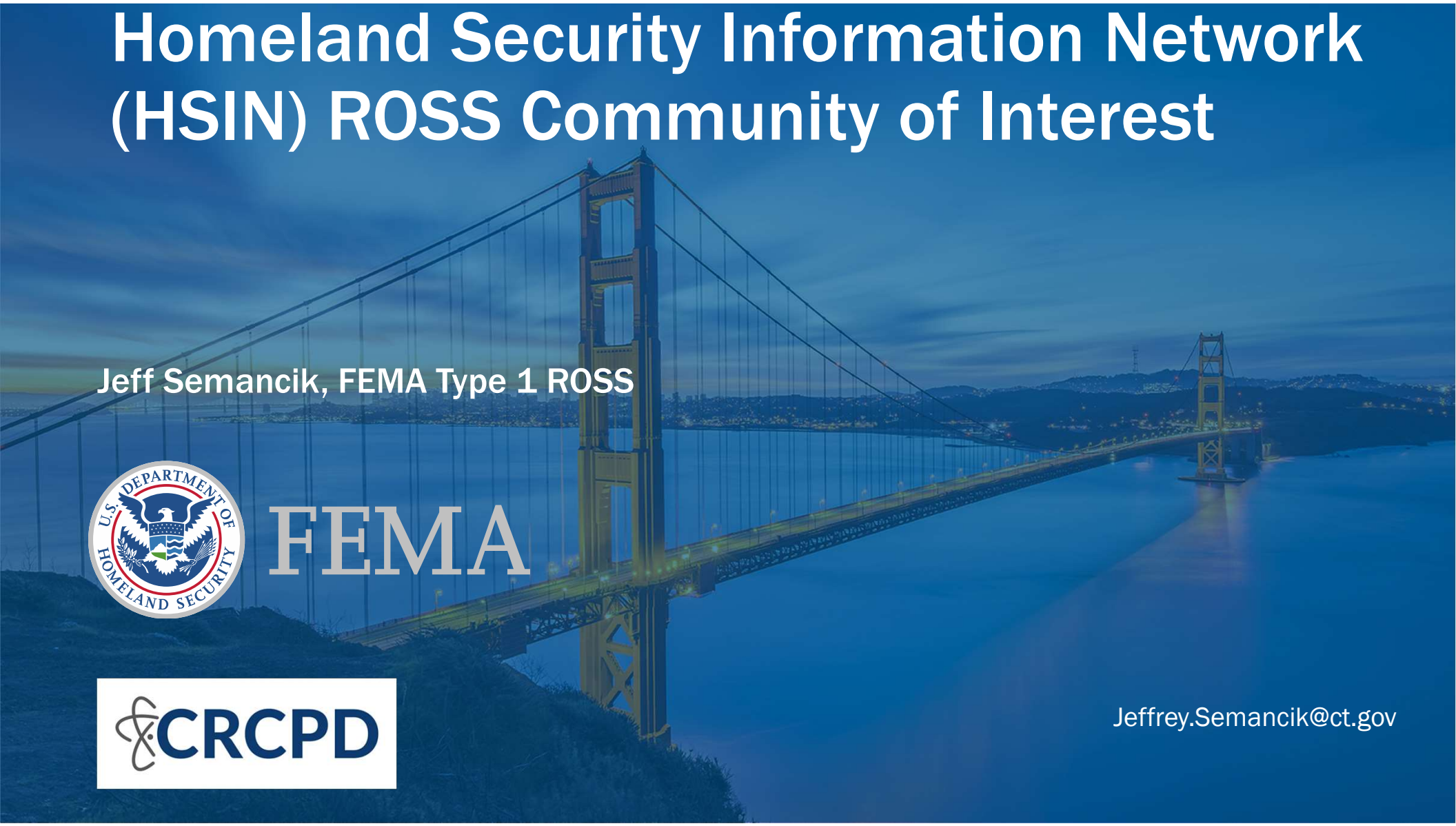
# Cobalt Magnet Review

- Cobalt Magnet 25 is a nuclear power plant (NPP) exercise with a scenario centered where the Fermi II plant is located.
- Because it involves multiple states, two countries and hundreds of players, this will be a very high-profile national level exercise unlikely to be repeated for some time.
- Likely sites for players and controllers in Michigan include the:
  - Federal Radiological Monitoring Assessment Center (FRMAC)
  - The Master Control Center/Simulation Cell
  - Michigan's Joint Information Center, Community Reception Center, Emergency Coordination Center, Department of Environment, Great Lakes and Energy, and the Department of Agriculture and Rural Development/

# Cobalt Magnet 25 in Atlanta

- The CDC is seeking to augment their pool of radiation subject matter experts.
- ROSS there would all be players.
- We would choose one or two to be ROSS Task Force Leaders.
- You should expect to float from need-to-need within the CDC Emergency Operations Center.

# Homeland Security Information Network (HSIN) ROSS Community of Interest



Jeff Semancik, FEMA Type 1 ROSS

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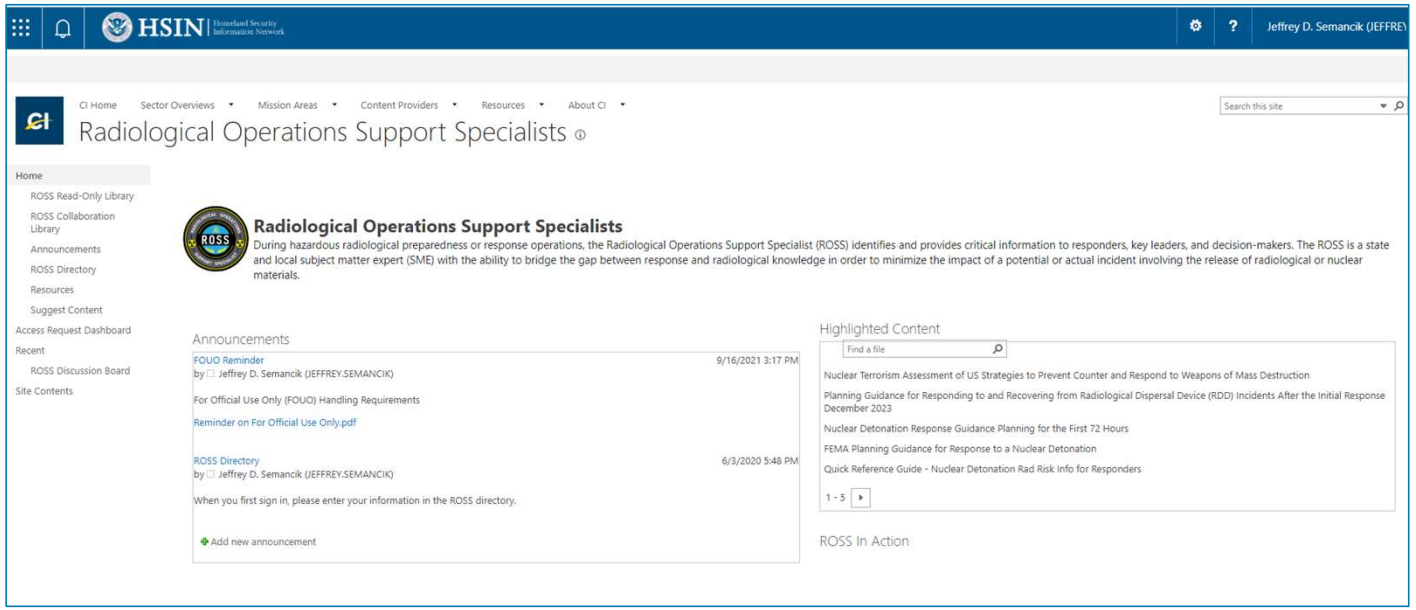
Jeffrey.Semancik@ct.gov

# HSIN

## ROSS Community of Interest

## Registration Changes

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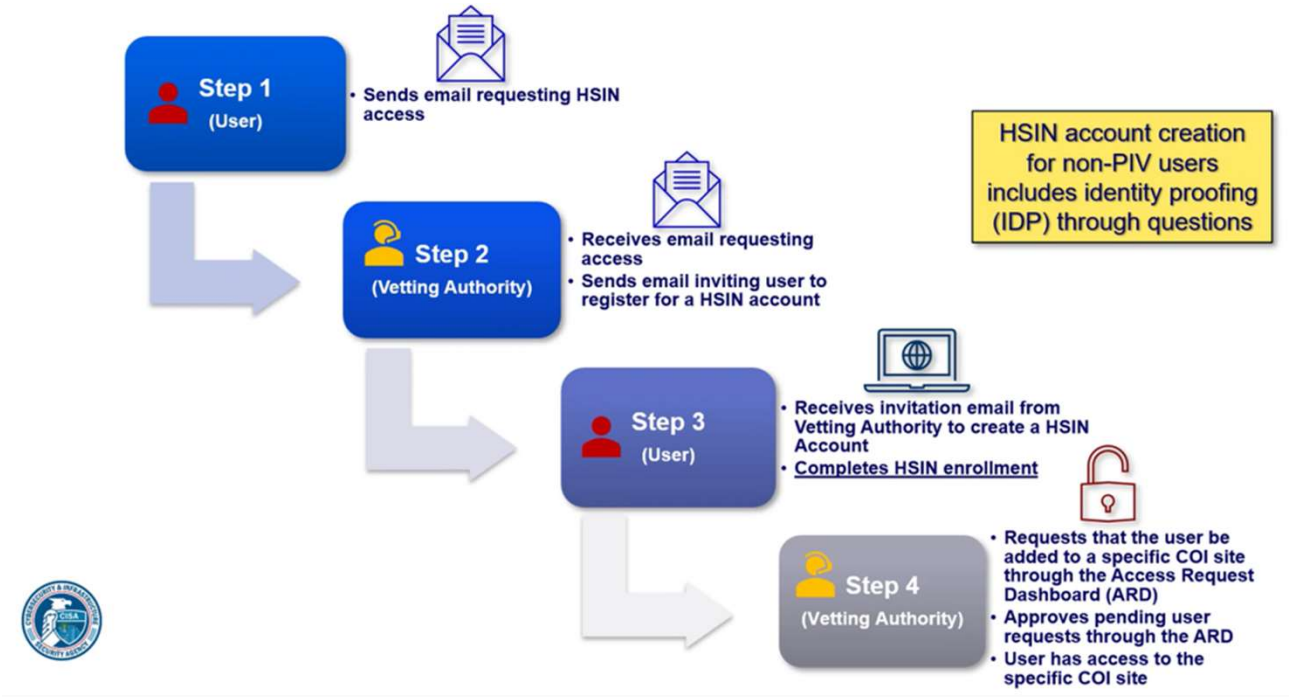
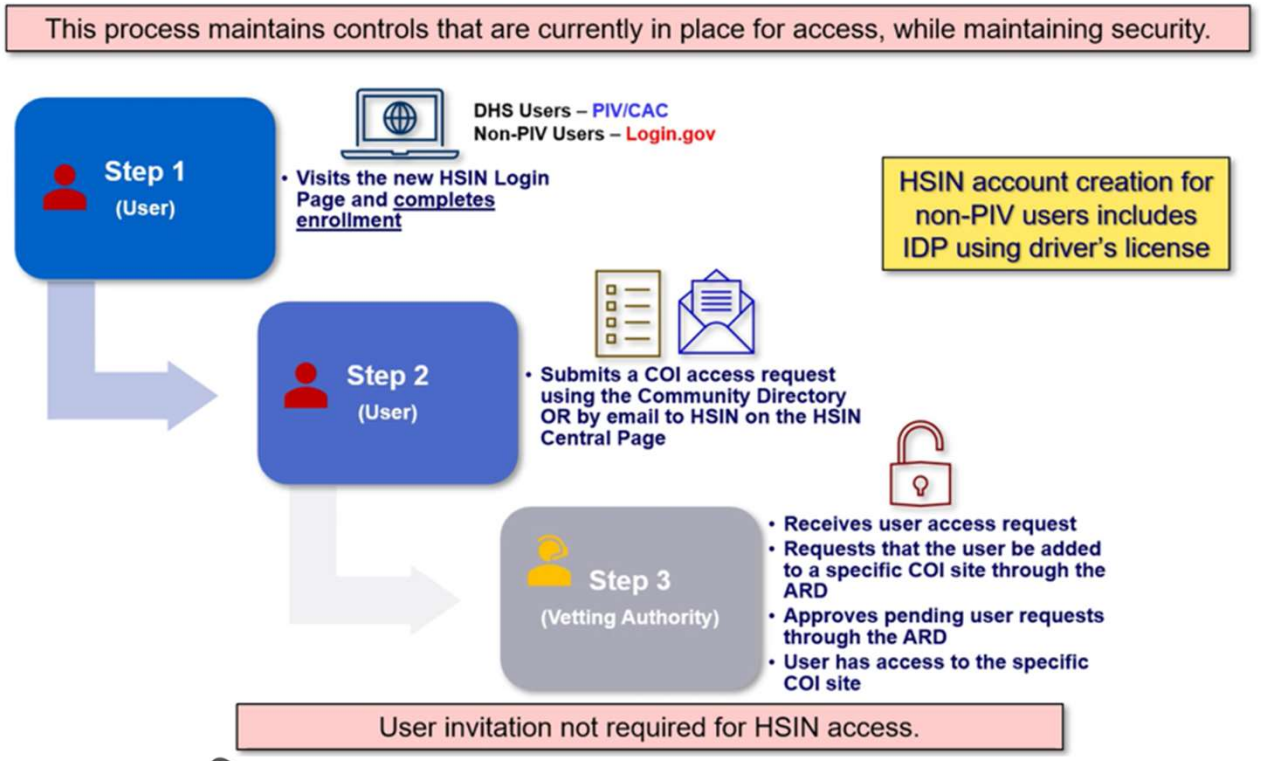
# Current HSIN Registration Workflow



# New Process – Self Service Registration

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# Comparison

## Current HSIN Registration

1. Invitation be sent from HSIN vetting authority
2. IDP via credit bureaus
    1. Alternately supervisor vetting if credit locked
3. COI Access issued by vetting authority after verifying requestor has completed ROSS initial training
    1. Requests via HSIN homepage or COI Directory request
    2. Email COI administrator directly after you have HSIN account

## Self Service Registration

1. Self registration via through login.gov
2. IDP via drivers license upload
    1. Alternately present at a US Post Office
3. COI Access issued by vetting authority after verifying requestor has completed ROSS initial training
    1. Requests via HSIN homepage or COI Directory request
    2. Email COI administrator directly after you have HSIN account

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# Questions/Requests

Jeff Semancik

Jeffrey.Semancik@ct.gov

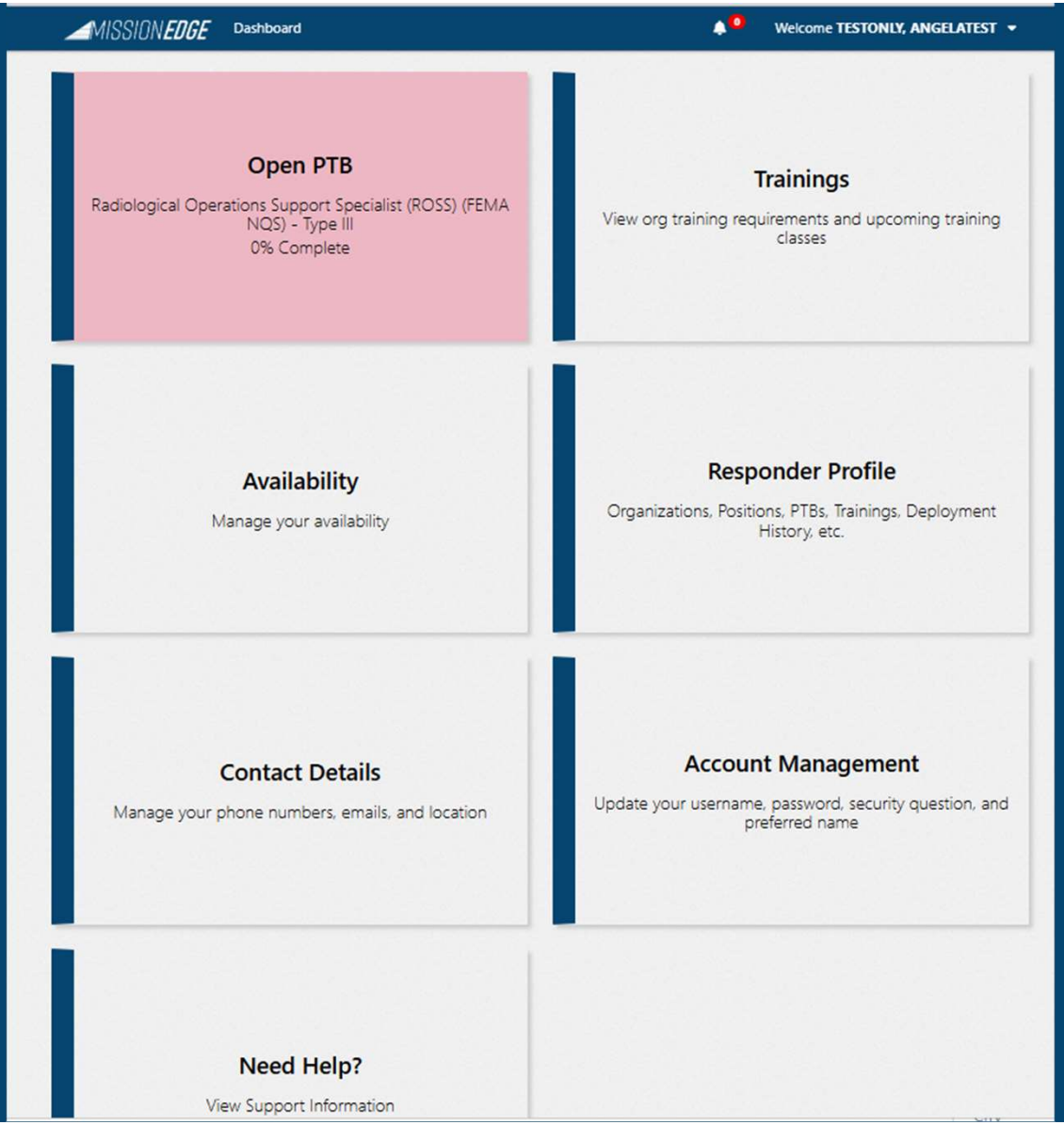
860-597-3628

# MissionEdge Overview

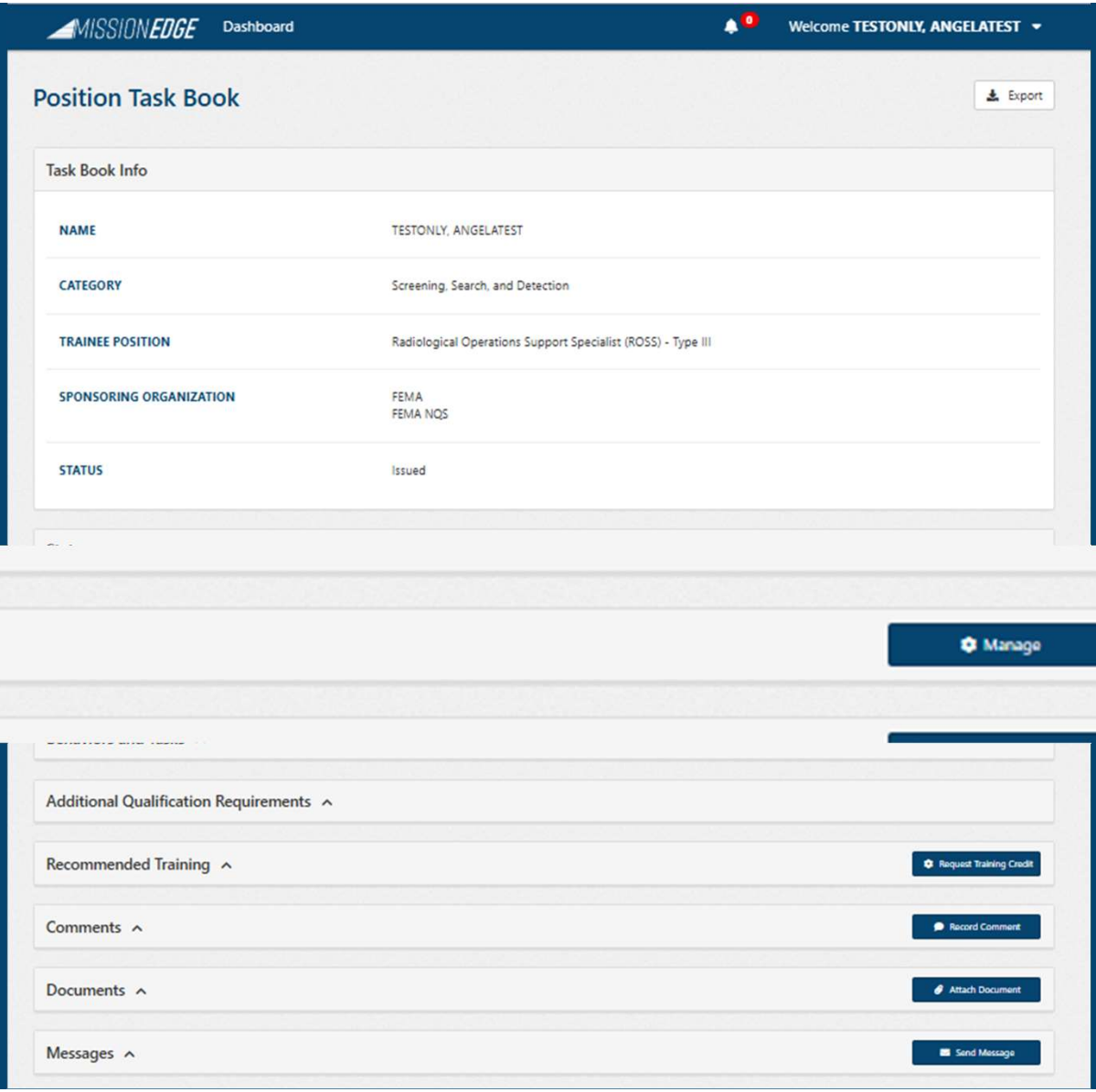
Documenting and Endorsing Tasks

Angela Leek, PhD, CHP, FEMA Type 1 ROSS

# MissionEdge Portal Overview



# Requesting Evaluators



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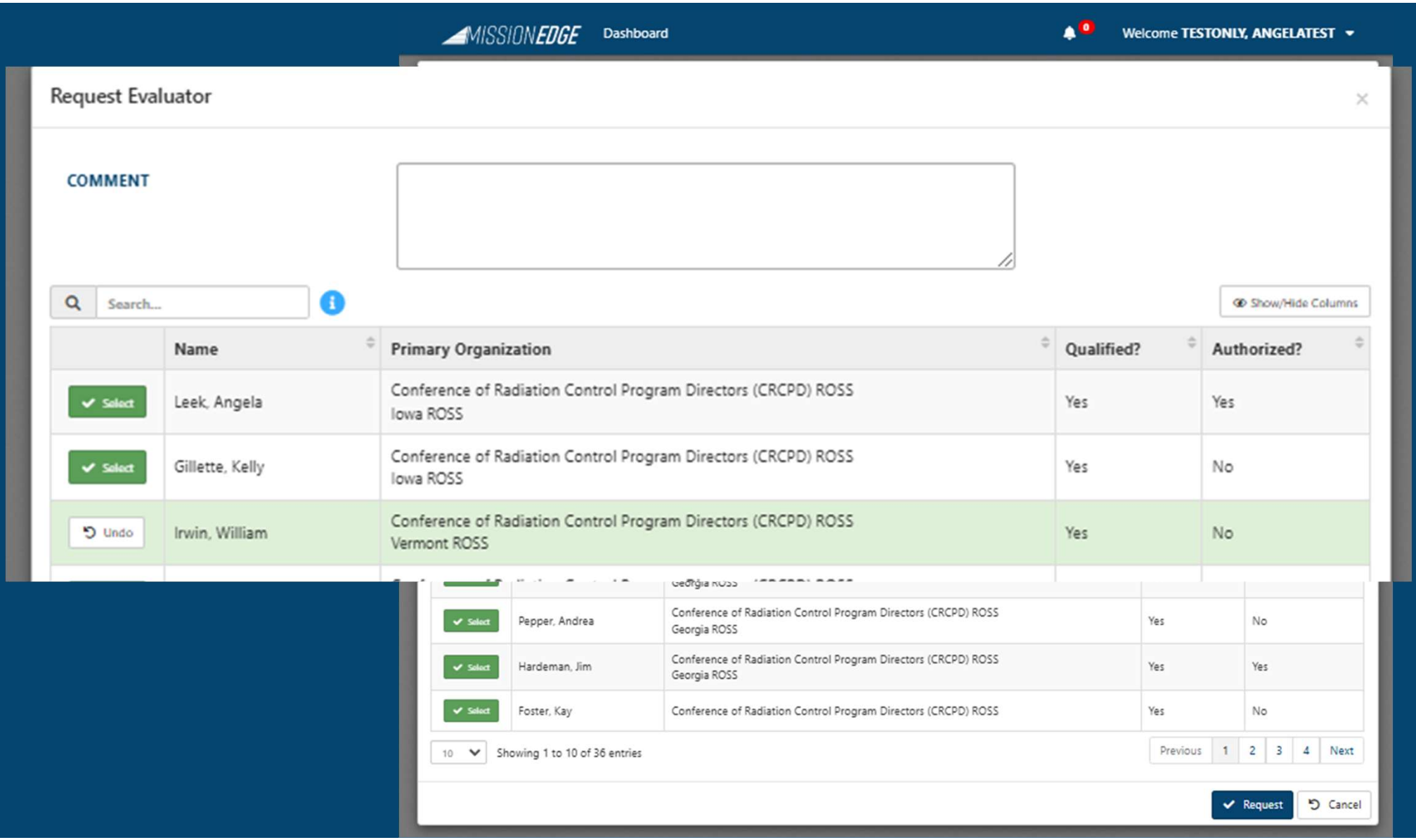
MISSIONEDGE
Dashboard
Welcome TESTONLY, ANGELATEST
Request Evaluator
COMMENT
Search...
Show/Hide Columns
Name
Primary Organization
Qualified?
Authorized?
Select
Leek, Angela
Conference of Radiation Control Program Directors (CRCPD) ROSS
Iowa ROSS
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Gillette, Kelly
Conference of Radiation Control Program Directors (CRCPD) ROSS
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Irwin, William
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Pepper, Andrea
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Hardeman, Jim
Conference of Radiation Control Program Directors (CRCPD) ROSS
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Foster, Kay
Conference of Radiation Control Program Directors (CRCPD) ROSS
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No
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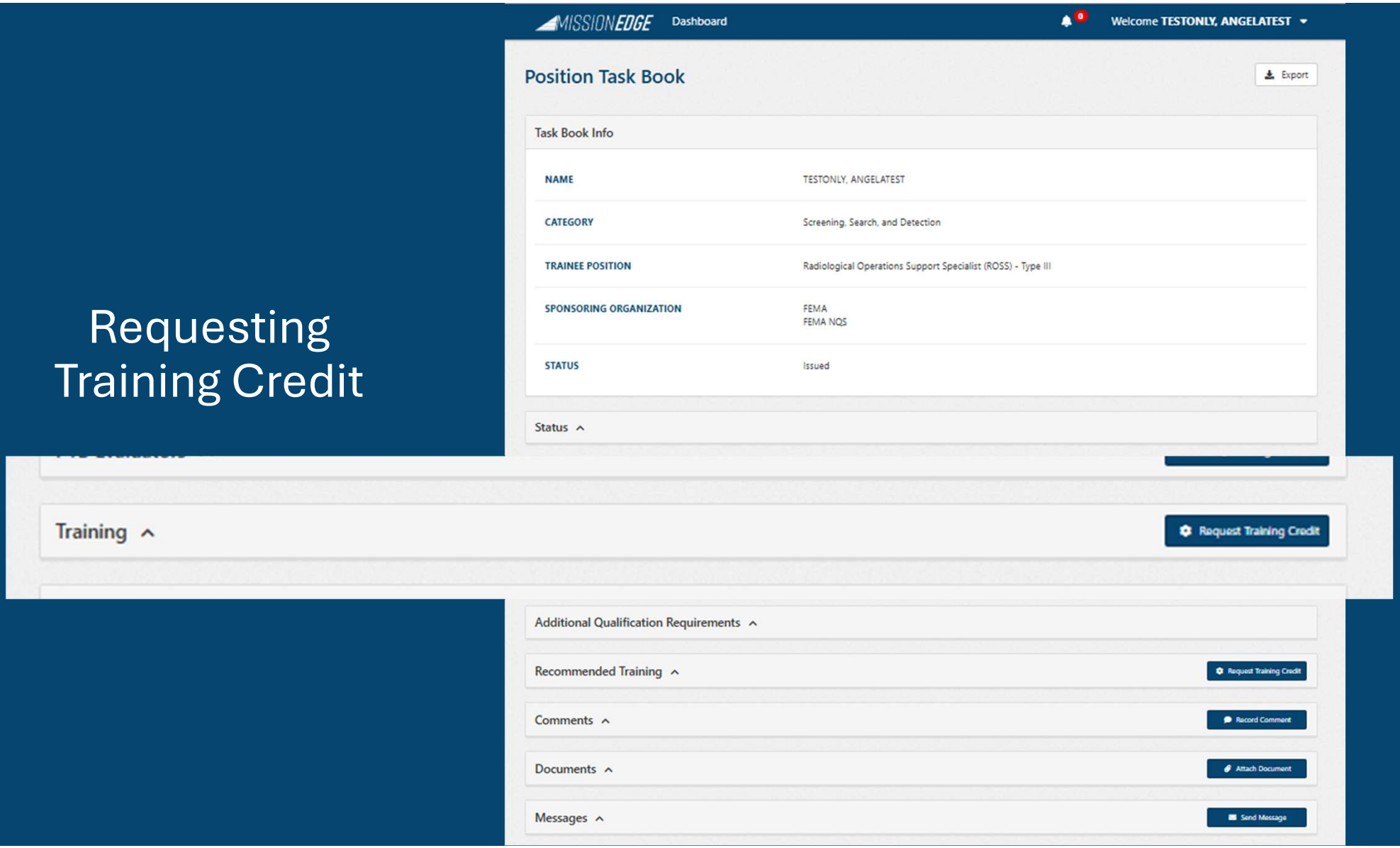
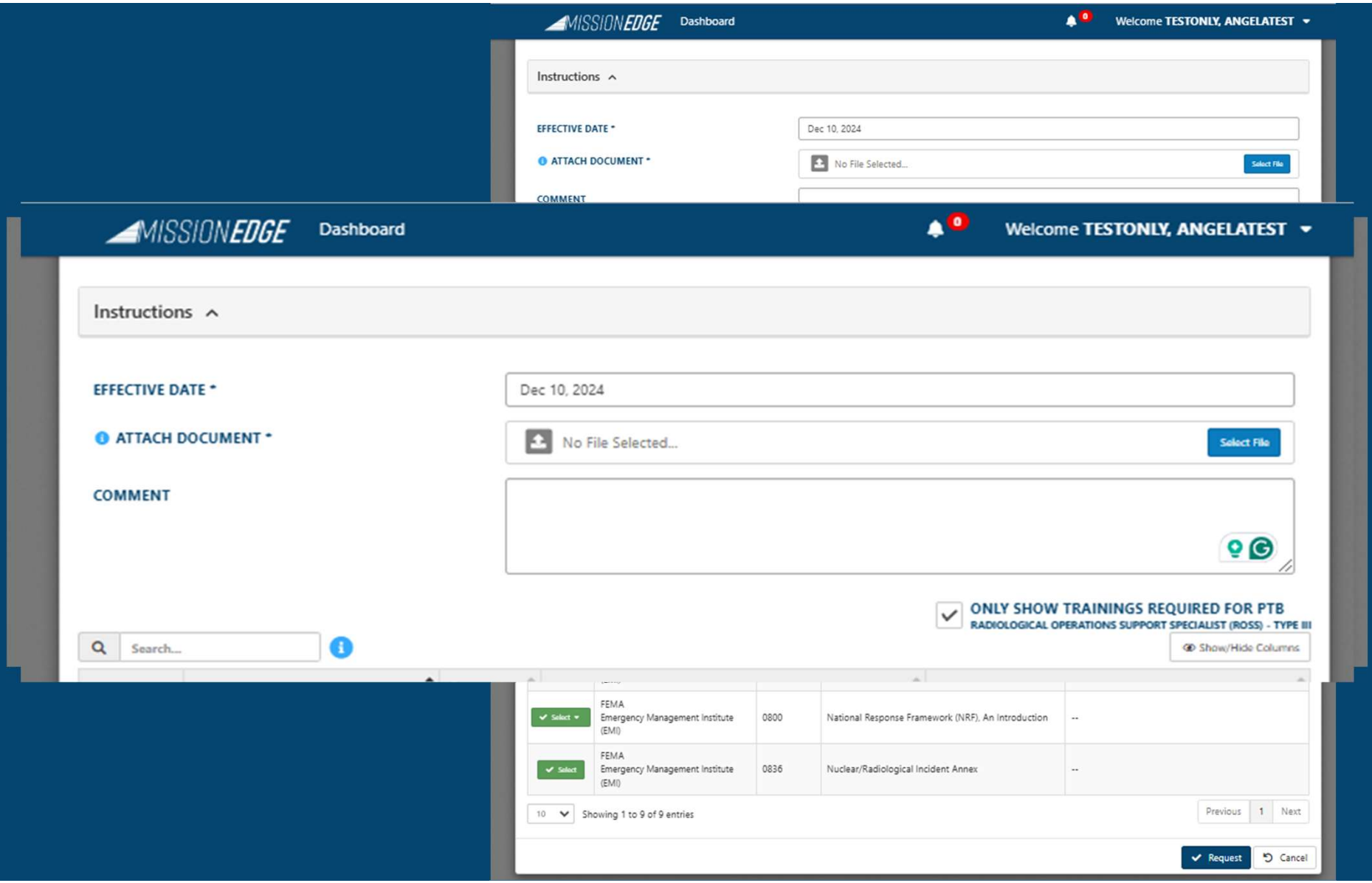
Request
Cancel

# Requesting Training Credit




MISSIONEDGE
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Dec 10, 2024
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ONLY SHOW TRAININGS REQUIRED FOR PTB
RADIOLOGICAL OPERATIONS SUPPORT SPECIALIST (ROSS) - TYPE III
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Show/Hide Columns
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FEMA
Emergency Management Institute (EMI)
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National Response Framework (NRF), An Introduction
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Emergency Management Institute (EMI)
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Nuclear/Radiological Incident Annex
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Next
Request
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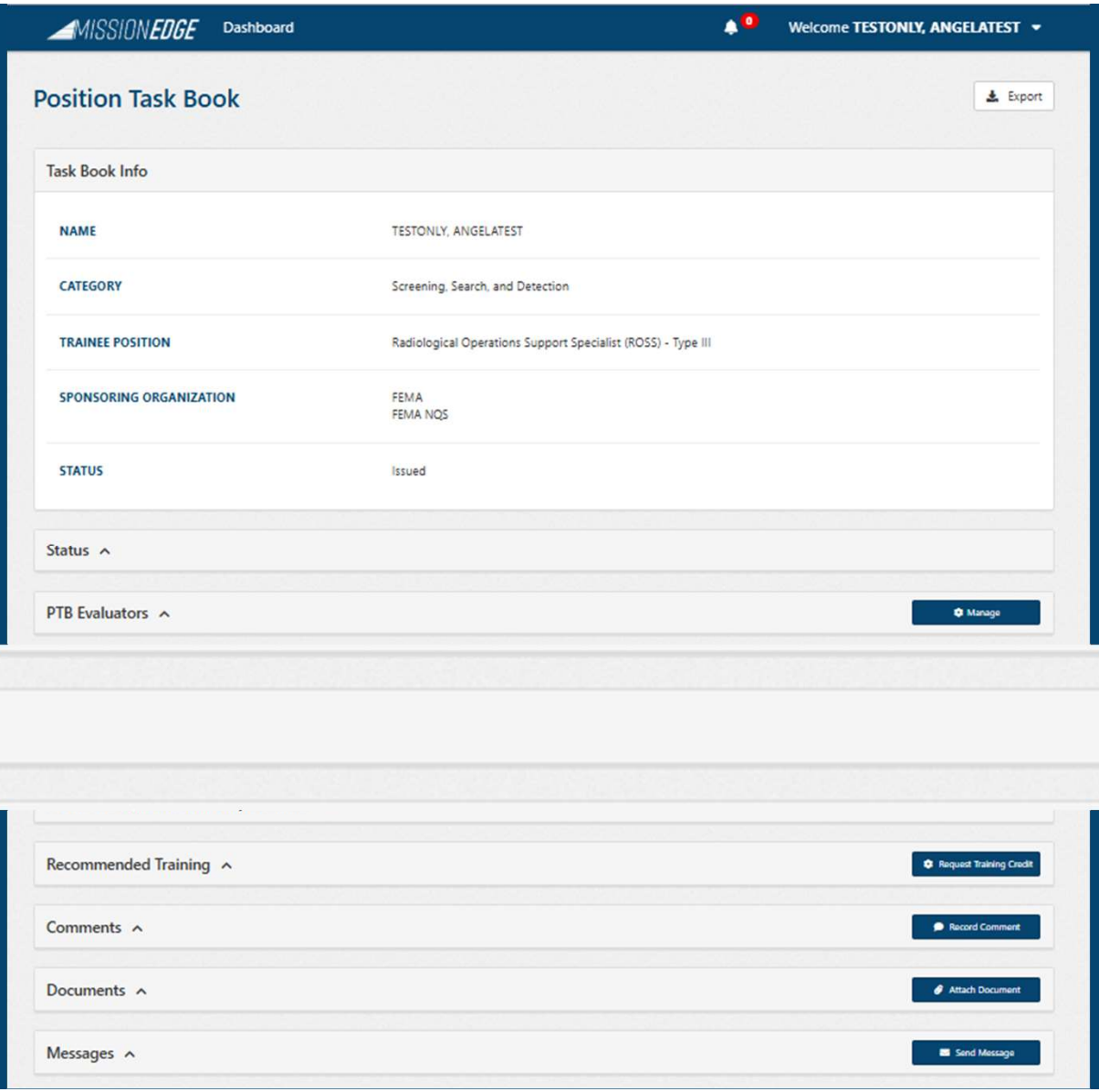
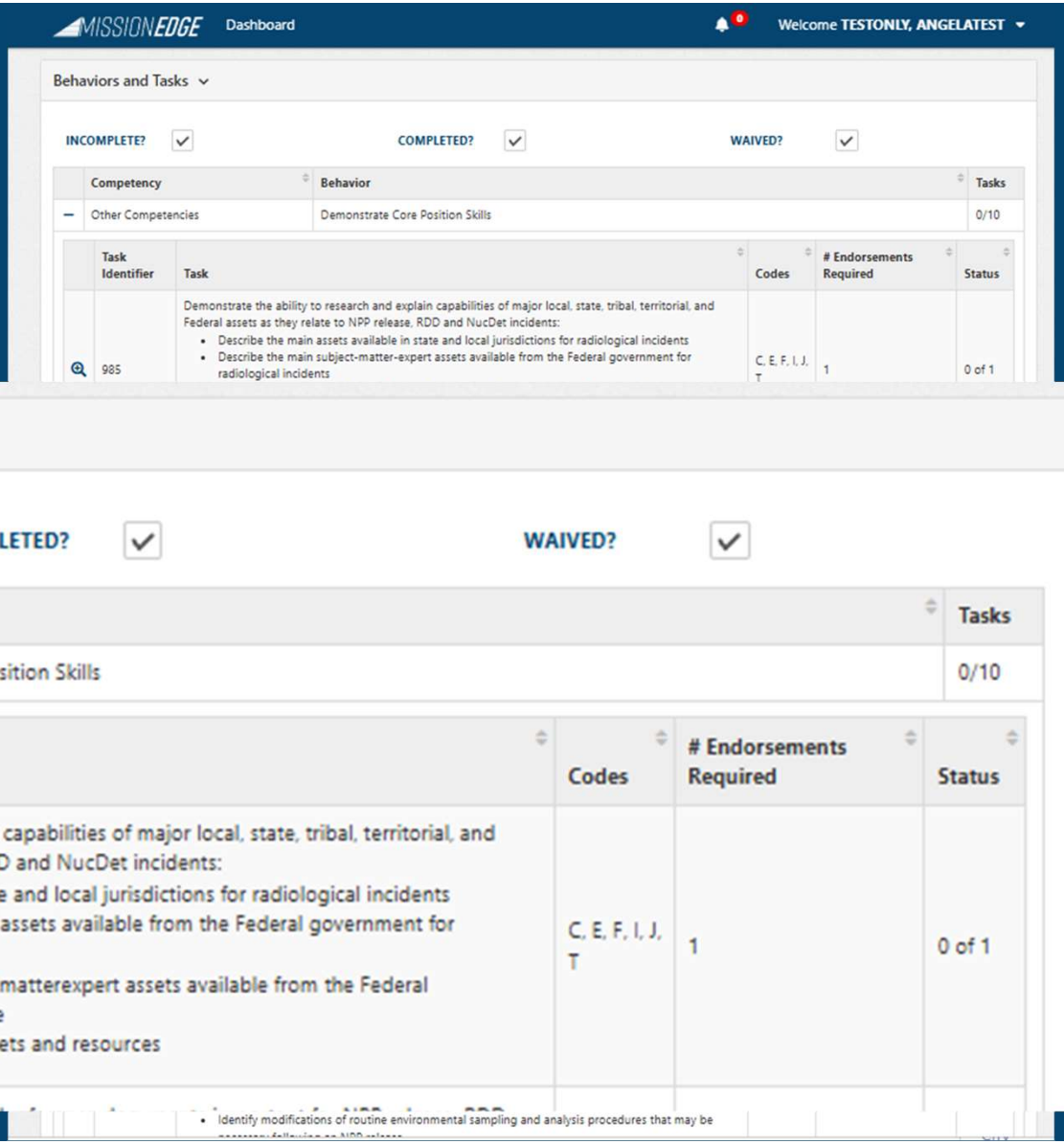
# Position Tasks

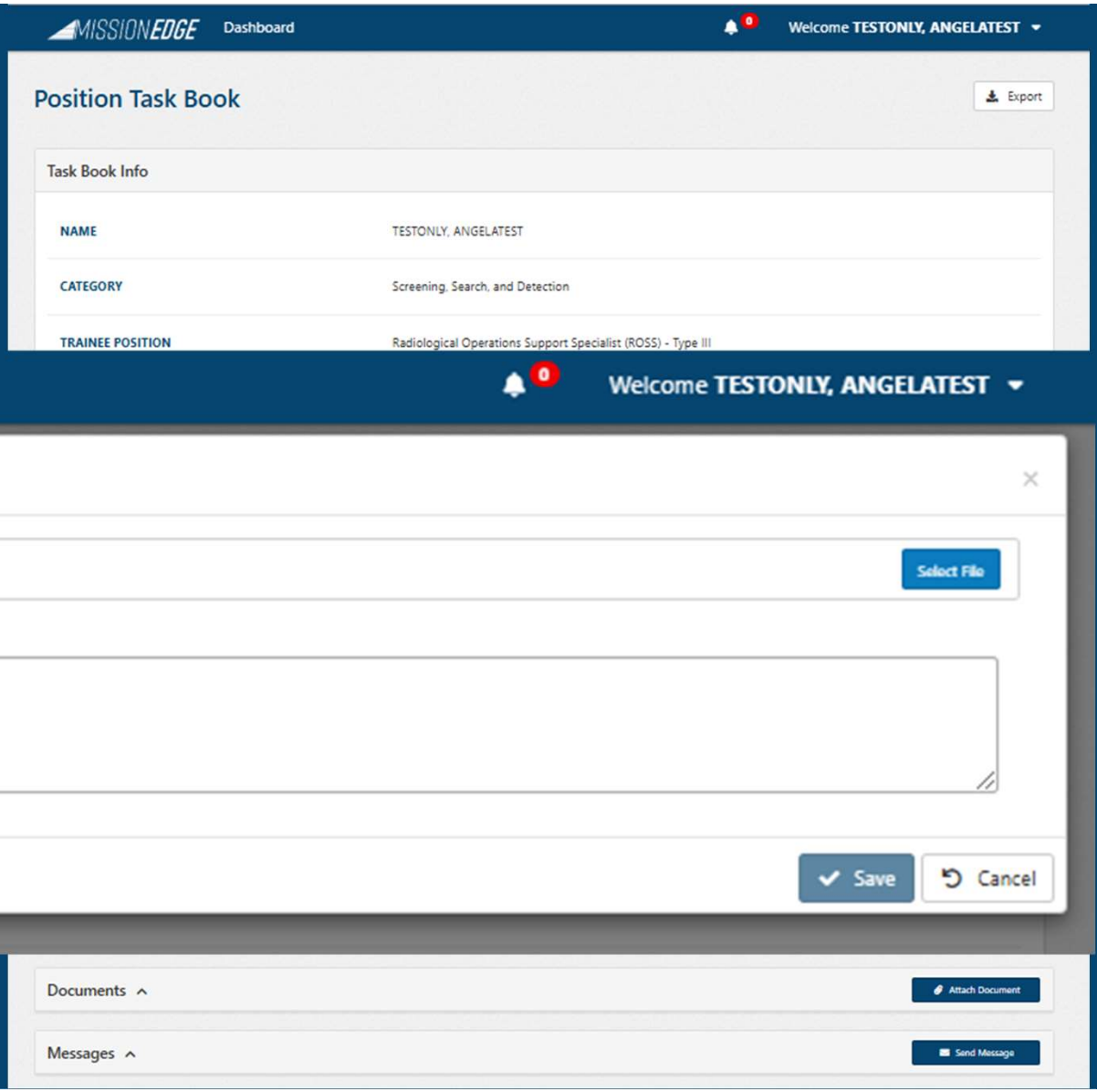


# ROSS can only view their Tasks

# An evaluator must Endorse on their login



# Providing supporting documentation for a Task



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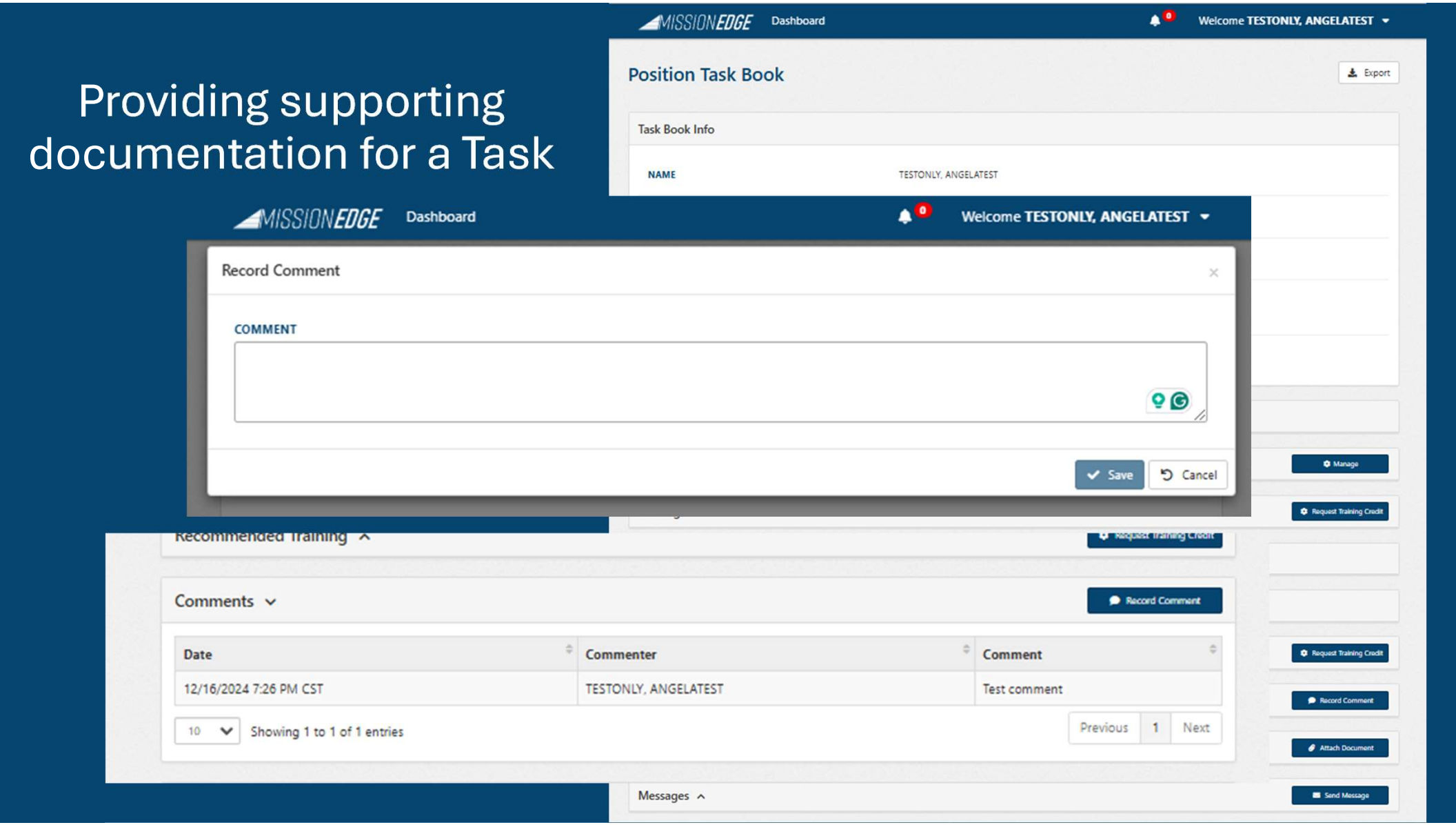
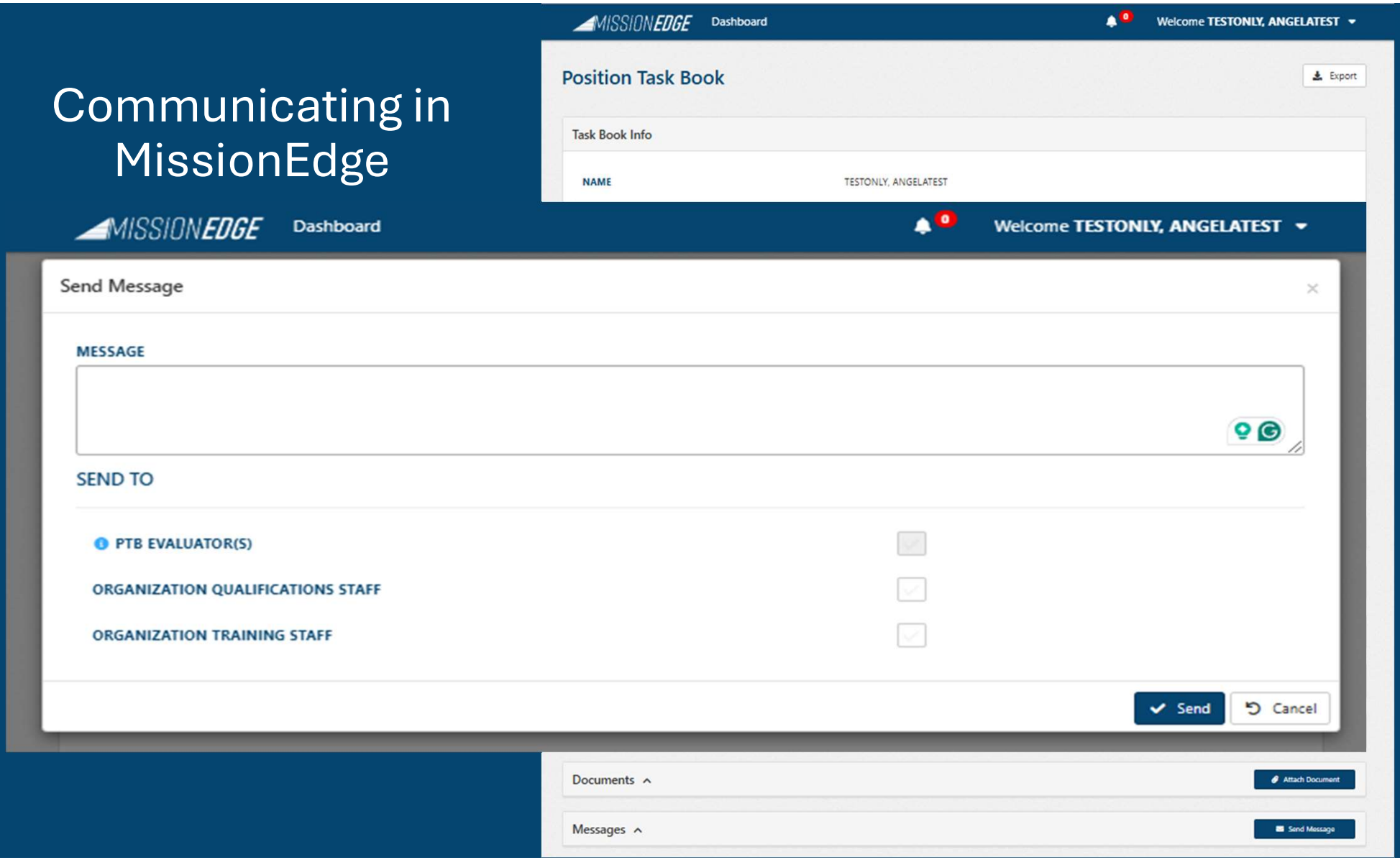


# Communicating in MissionEdge



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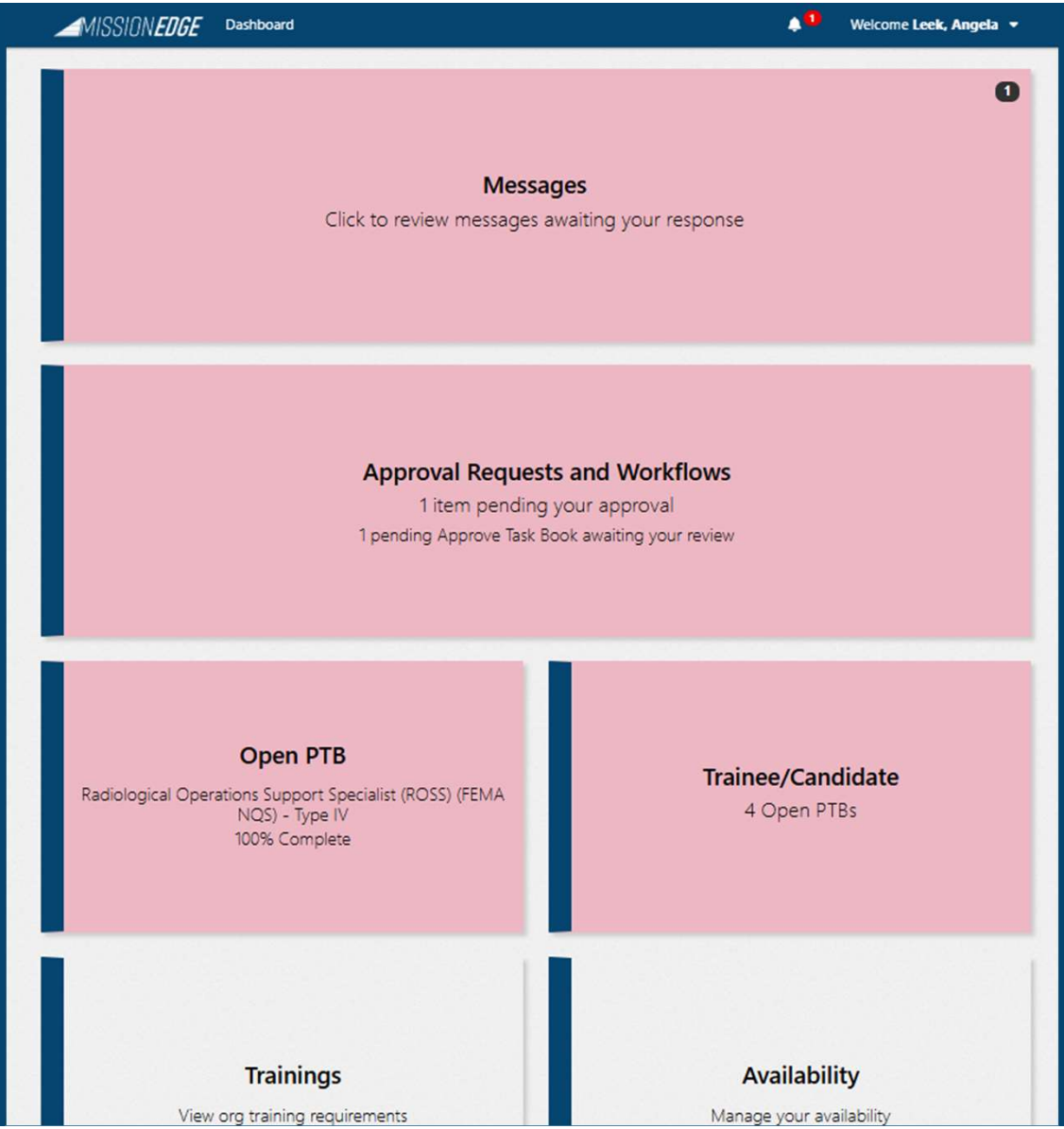

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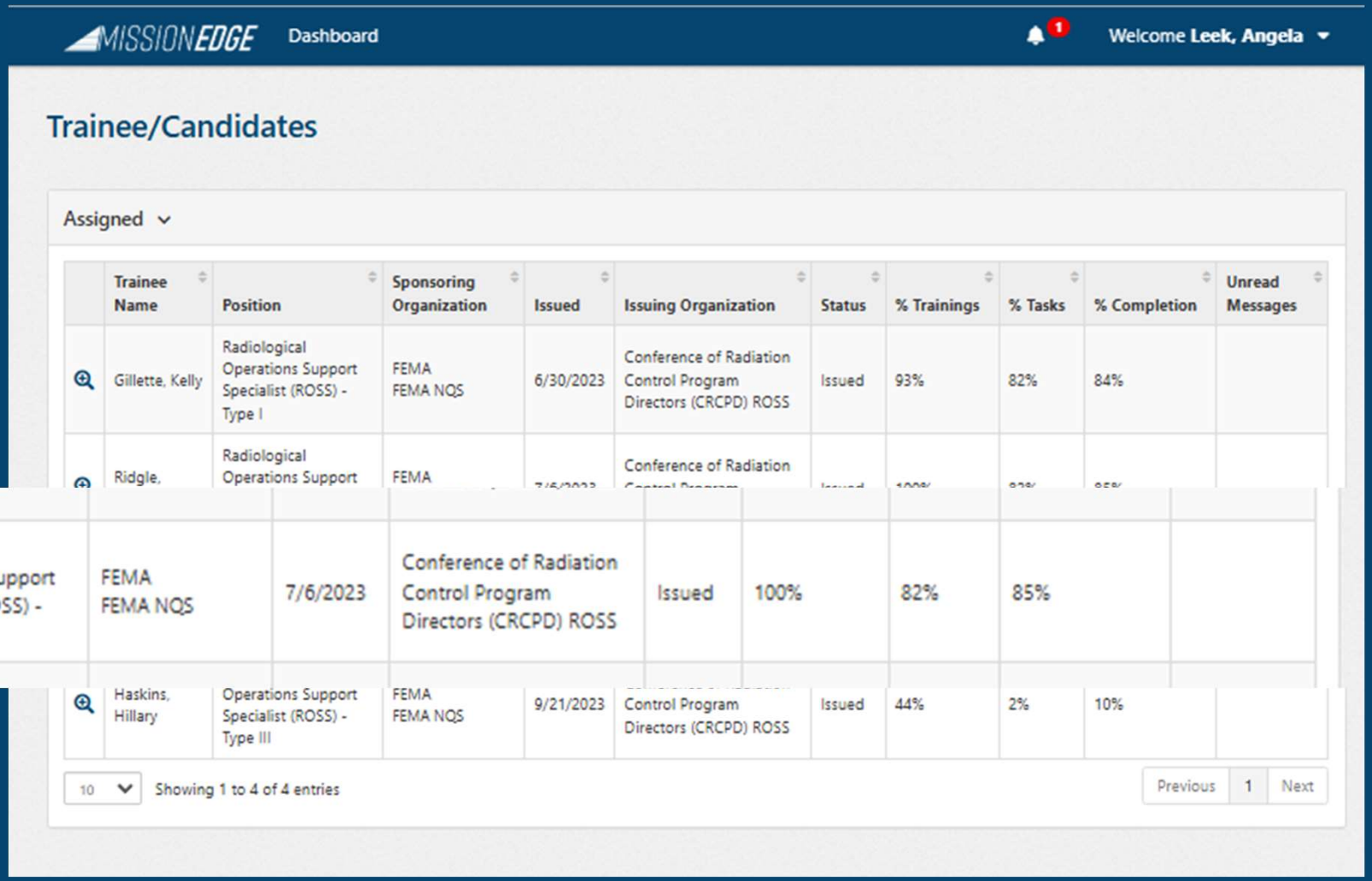

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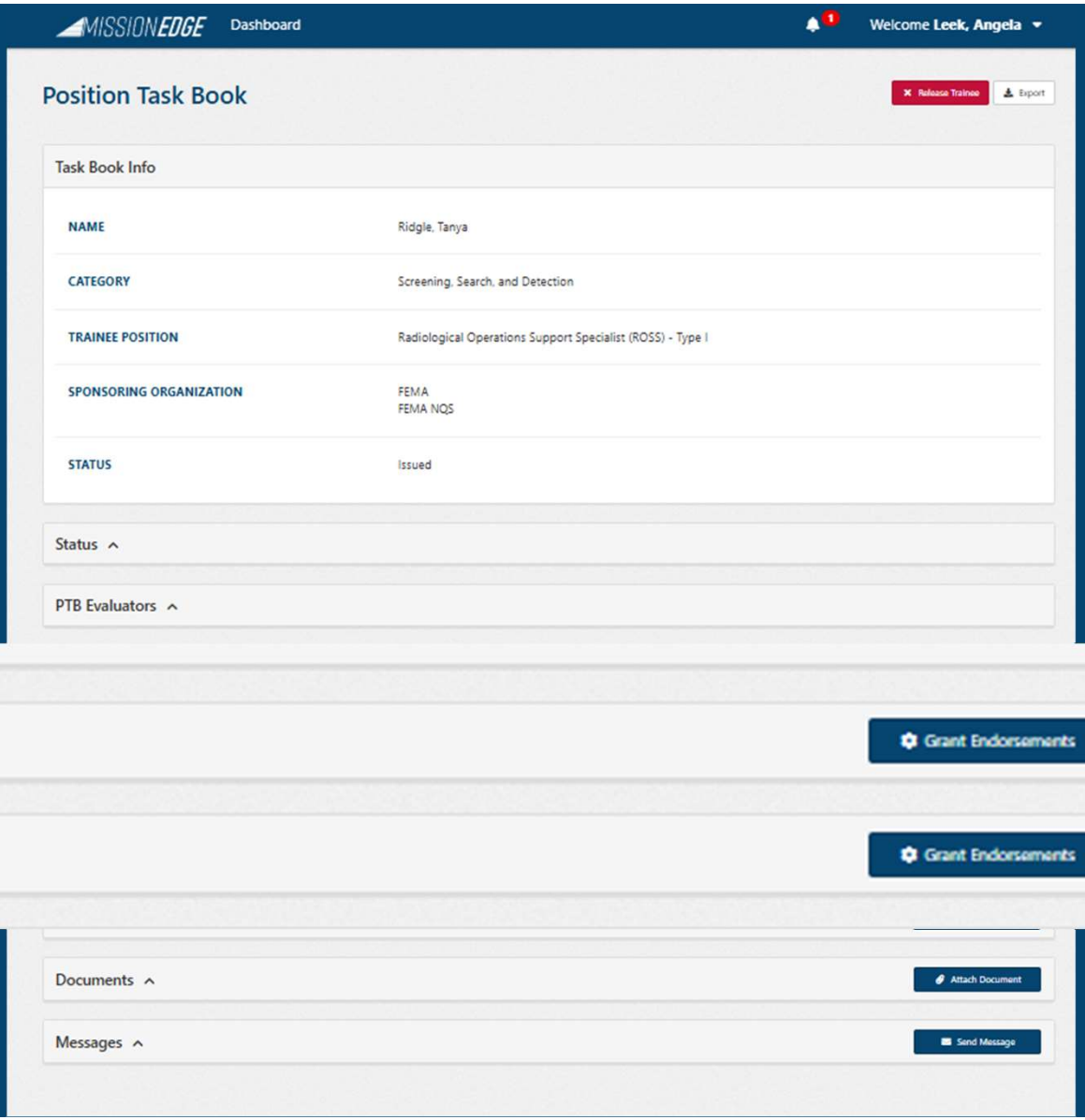

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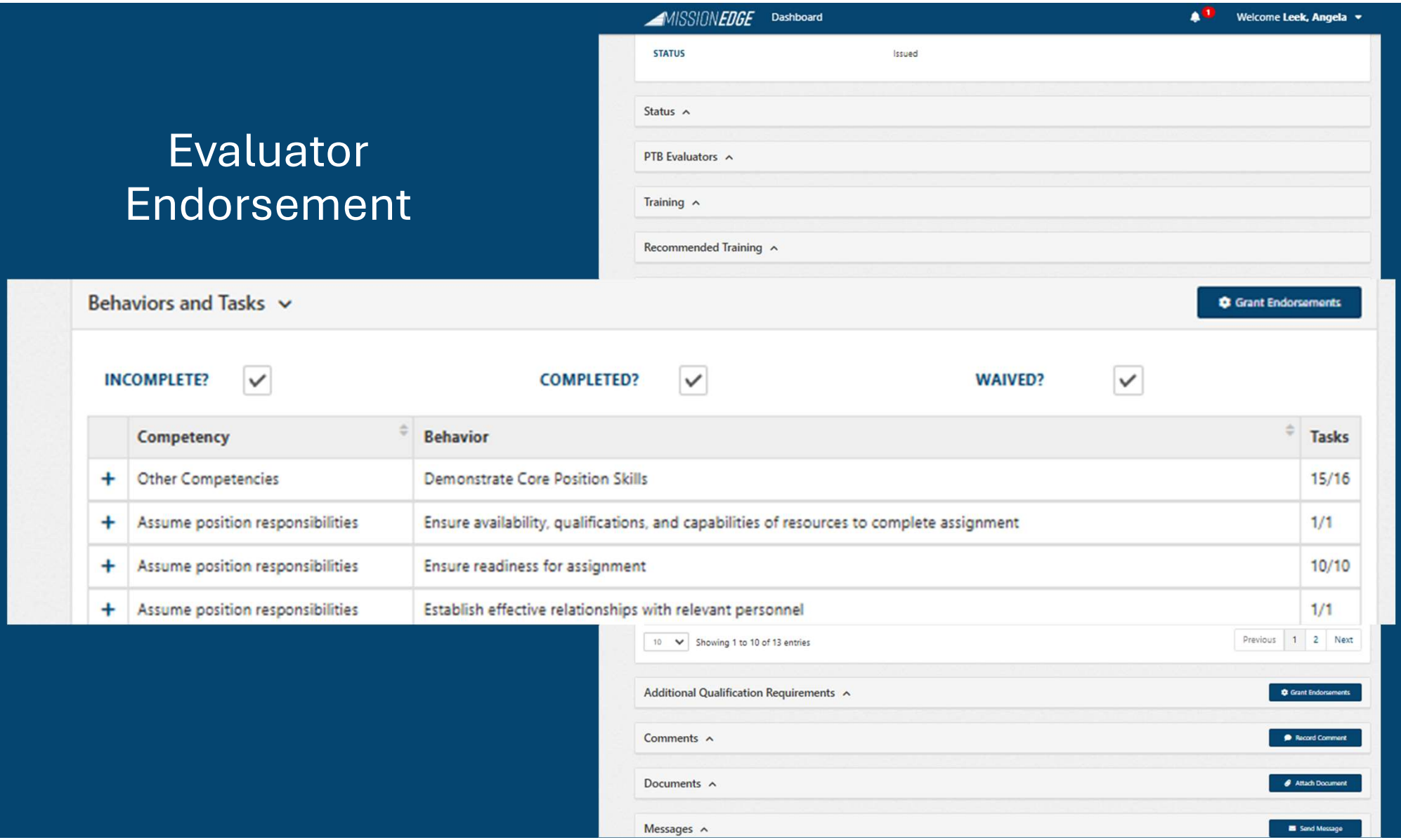

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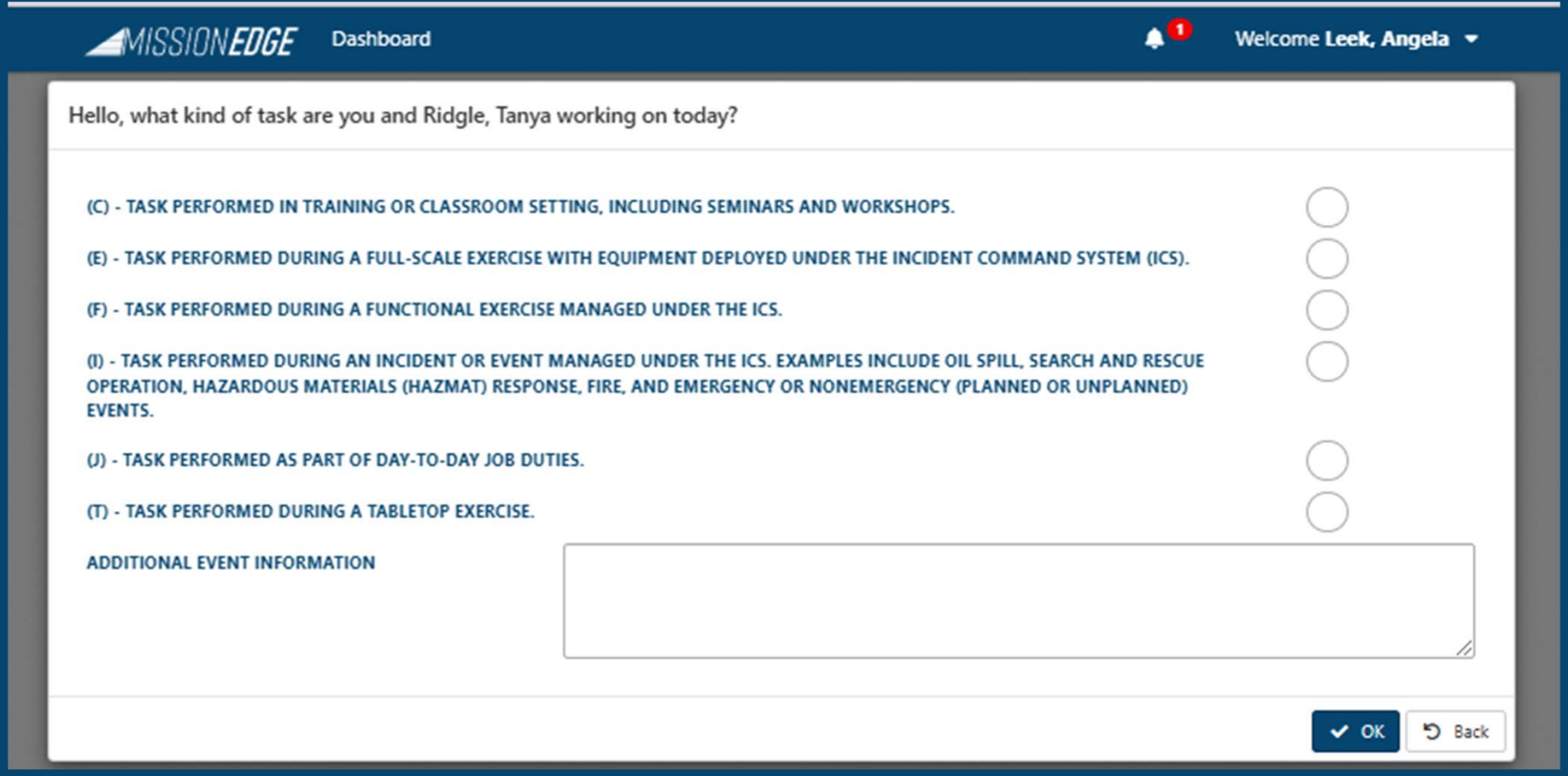

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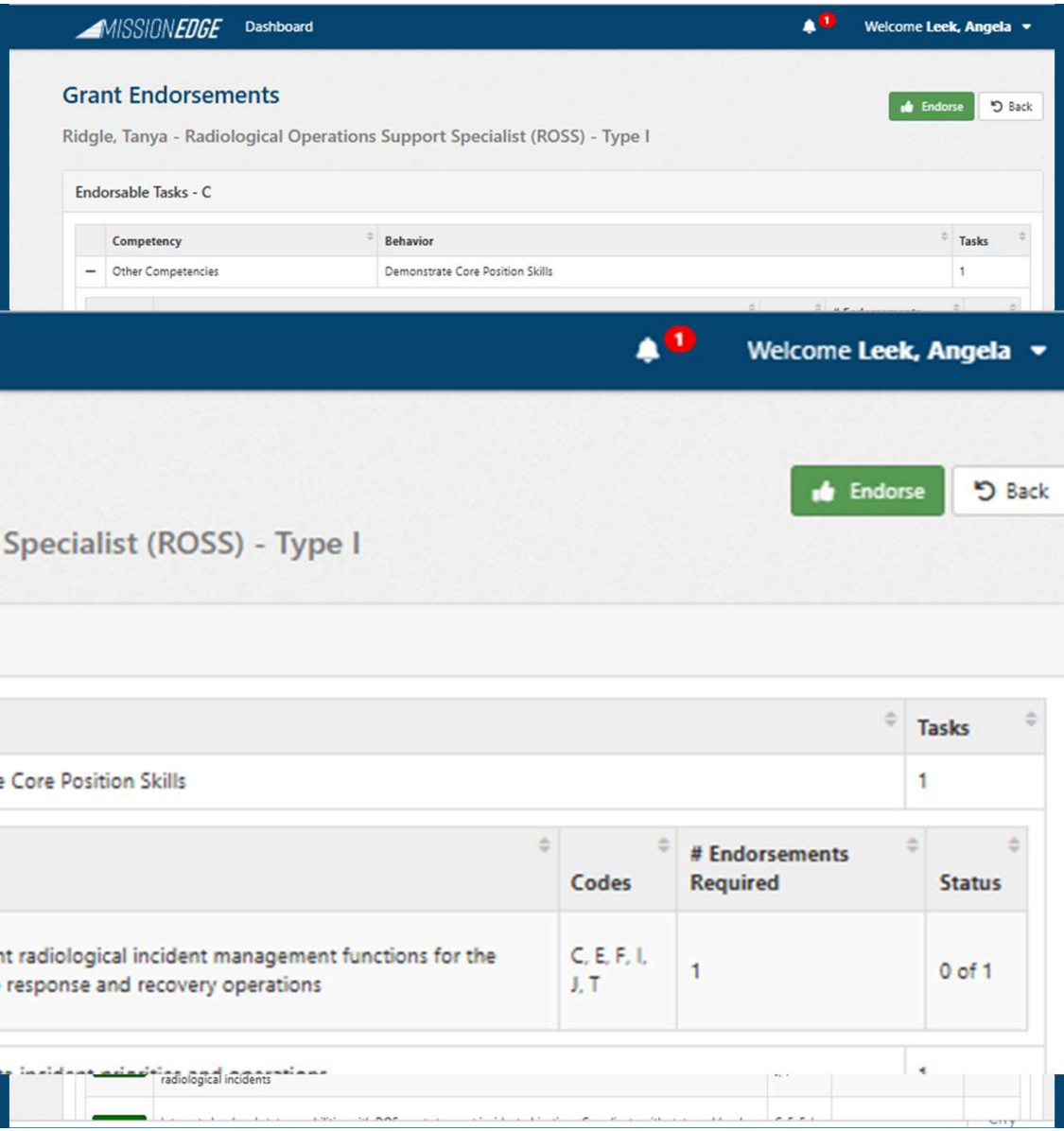

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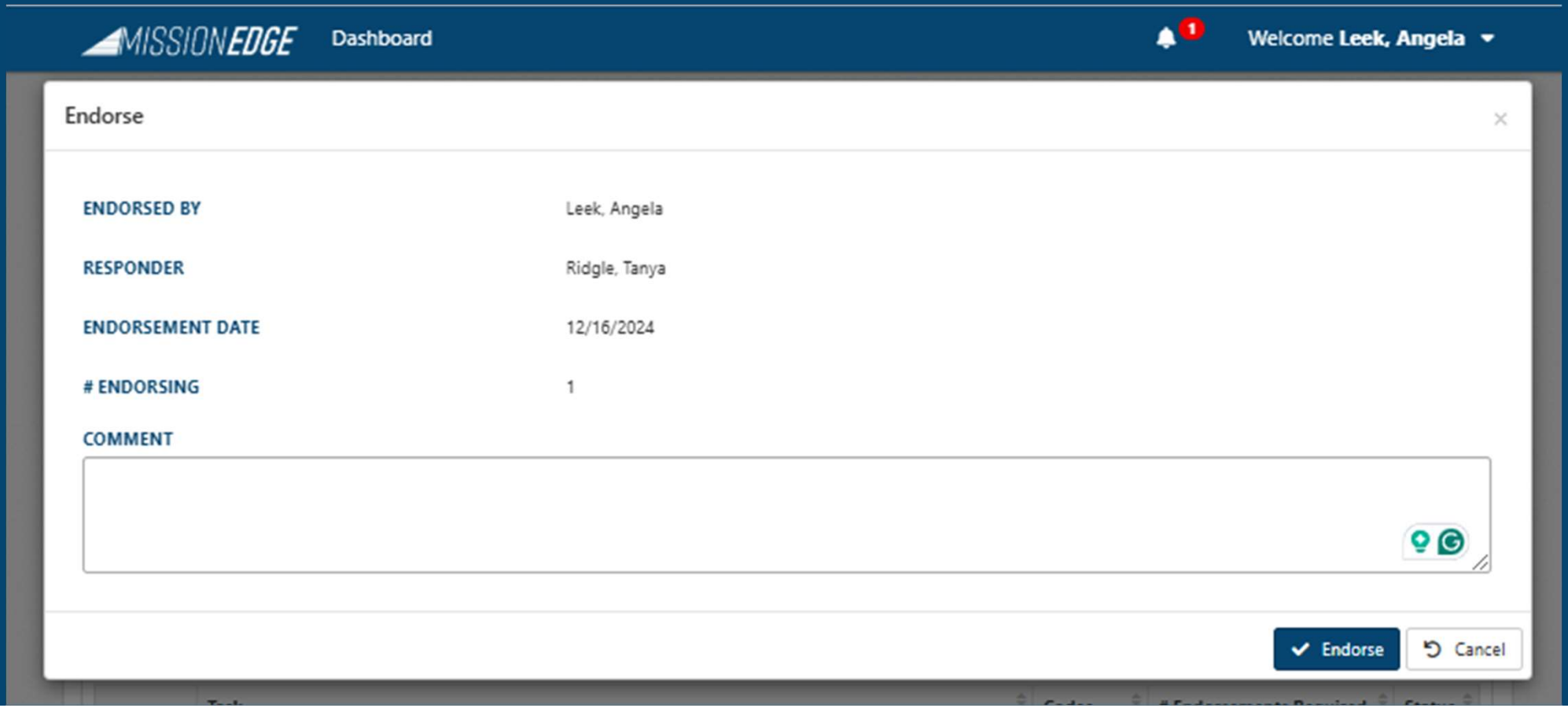

# ROSS Orientation and State ROSS Coordinator Training

Bill Irwin, ScD, CHP, FEMA Type 1 ROSS, CRCPD ROSS Program Manager

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Questions? william.Irwin@vermont.gov

# ROSS, Authority Having Jurisdiction, & State ROSS Coordinator Training

- Key roles in the ROSS Program
- History of the ROSS
- ROSS Qualification
- State ROSS Coordinators


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# Key Roles in the ROSS Program

- Radiological Operations Support Specialist (ROSS)
  - A FEMA National Qualification System (NQS) position.
  - A radiological and nuclear emergency response and recovery subject matter expert.
- Authority Having Jurisdiction (AHJ)
  - The individual to whom a ROSS reports for duty within their home jurisdiction.
  - In most cases, this is the state Radiation Control Program Director
- State ROSS Coordinator (SRC)
  - Appointed by AHJ to assist those who want to become ROSS and to assimilate ROSS into the jurisdiction's radiological emergency preparedness capability.
  - They do not have to be ROSS, but most are.
- FEMA Office of Emerging Threats (OET)
  - Federal government ROSS Program Management.
  - Has been leading the ROSS effort since soon after 9/11.

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# Players in the ROSS Program

- Conference of Radiation Control Program Directors (CRCPD)
  - Represents the state and territorial radiation protection agencies.
  - A non-profit organization directed by STT RCPDs.

- CRCPD Homeland Security/Emergency Response Committee 4 (HS/ER-4)
  - Manages ROSS functions within states and compatible with NQS guidance.
  - Host the Qualification Review Board (QRB) to independently assess advancement by type.

- ROSS Steering Committee
  - Leadership that help ensure ROSS activities meet federal, state, local, territorial and tribal needs.
    - FEMA OET
    - CRCPD HS/ER-4 Chair
    - DHS National Urban Security Technology Laboratory (NUSTL) leadership
    - DOE National Nuclear Security Administration (NNSA) leadership

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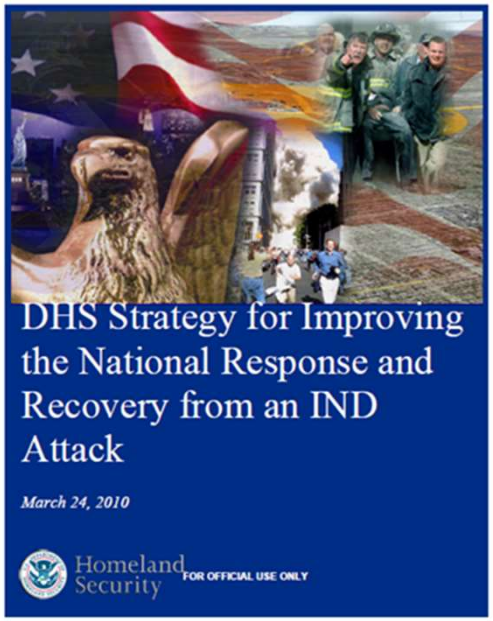
# History of the ROSS – the Beginning




- The ROSS grew out of the Improvised Nuclear Device (IND) Forum, an assessment of gaps in the nation's preparedness for an IND.
- One gap identified: an insufficient number of subject matter experts (SMEs) to respond to a nuclear detonation, especially at the state and local level.
- FEMA led a program to develop these SME responders with the support of the DHS NUST and the DOE NNSA.
- Starting in 2014, the role was piloted in nuclear detonation exercises, including the Department of Defense's Vibrant Response series.
- State SMEs were provided to test the ROSS by the CRCPD.

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# History of the ROSS – the Focus Areas

**National Planning Scenarios** FEMA

| Key Scenario Sets | National Planning Scenarios |
|---|---|
| 1. Explosives Attack – Bombing Using Improvised Explosive Device | Scenario 12: Explosives Attack – Bombing Using Improvised Explosive Device |
| 2. Nuclear Attack | Scenario 1: Nuclear Detonation – Improvised Nuclear Device |
| 3. Radiological Attack – Radiological Dispersal Device | Scenario 11: Radiological Attack – Radiological Dispersal Device |
| 4. Biological Attack – With annexes for different pathogens | Scenario 2: Biological Attack – Aerosol Anthrax<br>Scenario 4: Biological Attack – Plague<br>Scenario 13: Biological Attack – Food Contamination<br>Scenario 14: Biological Attack – Foreign Animal Disease |
| 5. Chemical Attack – With annexes for different agents | Scenario 5: Chemical Attack – Blister Agent<br>Scenario 6: Chemical Attack – Toxic Industrial Chemicals<br>Scenario 7: Chemical Attack – Nerve Agent<br>Scenario 8: Chemical Attack – Chlorine Tank Explosion |
| 6. Natural Disaster – With annexes for different disasters | Scenario 9: Natural Disaster – Major Earthquake<br>Scenario 10: Natural Disaster – Major Hurricane |
| 7. Cyber Attack | Scenario 15: Cyber Attack |
| 8. Pandemic Influenza | Scenario 3: Biological Disease Outbreak – Pandemic Influenza |

Scenario 1: Nuclear Detonation – Improvised Nuclear Device

Scenario 11: Radiological Attack – Radiological Dispersal Device

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# History of the ROSS – the Job Task Analysis

- Evaluators followed the ROSS and wrote after action reports on the skills, knowledge and abilities (SKAs) ROSS used in the exercises.
- Lawrence Livermore National Laboratory (LLNL) conducted focused outreach to the health physics and response communities to document the SKAs useful to people who might become ROSS and people who might need ROSS.
- LLNL used the SKAs as objectives for a set of training lesson plans

Lawrence Livermore National Laboratory

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# History of the ROSS – the Job Task Analysis

- A pilot course was hosted by the CRCPD and delivered to sixteen health physicists in 2016.
- After a second pilot hosted by the Centers for Disease Control and Prevention (CDC), the lesson plans were turned over to Counterterrorism Operations Support (CTOS).
- CTOS conducted three pilot courses to have the course PER-388 accepted into FEMA's National Domestic Preparedness Consortium catalog in 2018.
- Leading ROSS teach the CTOS class technical content.


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# Job Task Analysis

- It is important that the ROSS not just be book smart, but also skilled in radiation protection, rad/nuc emergency response and specialized software.
- ROSS must equally do well leading teams and working within teams.

## Basic Health Physics Knowledge

*Note: Passing Part 1 of the AAHP Exam represents at least an "Intermediate" proficiency in all categories. CHP or PhD in Radiological Health Physics represents at least "Advanced" in all categories. NRRPT Certification represents at least a "Novice" proficiency in all categories.*

| | ROSS Minimum Knowledge | | |
|---|---|---|---|
| **1. Measurements and Instrumentation** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| 1.1 Types of Measurements | Intermediate | Novice | Novice |
| 1.2 Selection of Instruments | Intermediate | Novice | Novice |
| 1.3 Analytical Techniques for Sampling | Intermediate | Novice | Novice |
| 1.4 Measurement Methods | Intermediate | Novice | Awareness |
| 1.5 Interpretation and Reporting of Results | Intermediate | Novice | Awareness |
| 1.6 Quality Control and Data Quality Objectives | Awareness | Awareness | Awareness |
| 1.7 Instrument Calibration, Maintenance, and Performance Testing | Novice | Awareness | Awareness |
| **2. Standards and Requirements** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| 2.2 History and Development (regulation basis and past exposures and events) | Intermediate | Novice | Awareness |
| 2.3 Use and Application | Intermediate | Novice | Awareness |
| 2.4 Types of Regulations (jurisdiction / authorities) | Intermediate | Novice | Awareness |
| 2.5 Interpretation and Knowledge | Intermediate | Novice | Awareness |
| **3. Hazards Analysis and Controls** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| 3.1 Hazard Identification | Novice | Awareness | |
| 3.2 Evaluate and Assess Significance/Consequence | Novice | Awareness | Awareness |
| 3.3 Devise and Implement Controls | Intermediate | Novice | Novice |
| 3.4 Types of Engineered Controls | Novice | Awareness | |
| 3.5 Designs and Specifications | Novice | Novice | Awareness |
| 3.6 Selection and Evaluations (PPE, dosimetry, shielding, & decon) | Intermediate | Novice | Novice |
| 3.7 Use and Operations | Awareness | Awareness | Awareness |
| 3.8 Document and Communicate | Novice | Novice | Awareness |
| **4. Operations and Procedures** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| 4.1 Standard Operating Practices and Procedures | Intermediate | Novice | Novice |
| 4.2 Emergency Response (see Radiological Response Knowledge and Tools) | Advanced | Intermediate | Novice |
| 4.3 Basis for Operations and Program | Novice | Novice | Awareness |
| 4.4 Program Types | Novice | Awareness | |
| 4.5 Records | Novice | Awareness | |
| **5. Fundamentals and Education** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| 5.1 Skills of the Trade - explain | Intermediate | Intermediate | Novice |
| 5.2 Types | Novice | Novice | Awareness |
| 5.3 Other Fundamentals | Intermediate | Intermediate | Intermediate |

Note: these are taken from CHP required knowledge categories

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# Job Task Analysis

## Radiological Response Knowledge & Tools

| | ROSS Capability Type | | |
|---|---|---|---|
| **RR1. Models and Software Tools** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| RR1.1 Atmospheric Dispersion Modeling (e.g. Hot Spot, RASCAL, HPAC, NARAC) | Novice | Awareness | Awareness |
| RR1.2 Dose Assessment Modeling (e.g., RESRAD-RDD & TurboFRMAC) | Awareness | Awareness | |
| RR1.3 Monitoring Planning (10 point strategy, MARSIM Methodology, & Visual Sample Plan) | | | |
| Emergency Monitoring Strategies (e.g., 10 point Strategy) | Intermediate | Intermediate | Intermediate |
| Software tool (e.g., Visual Sampling Plan (VSP) & MARSIM) | Awareness | | |
| RR1.4 Information Management / Data Telemetry / Databases | | | |
| RadResponder | Intermediate | Intermediate | Intermediate |
| CMWeb | Intermediate | Novice | Awareness |
| HSIN | Novice | Awareness | Awareness |
| RR1.3 FRMAC/IMAAC Product Interpretation & Customization | Intermediate | Intermediate | Novice |
| **RR2. Radiological Emergency Response Standards and Guidance (e.g., NCRP, ICRP, ANSI, & IAEA - see references)** | Intermediate | Novice | Awareness |
| **RR3.0 Response Doctrine and Framework** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| RR3.1 Federal, State, and Local Radiological Response Doctrine (Federal, State, and Local Plans manuals frameworks, & playbooks - see reference list) | Intermediate | Novice | Awareness |
| RR3.2 Federal Radiological Response Assets & Capabilities | | | |
| Advisory Team for the Environment, Food, and Health | Intermediate | Intermediate | Novice |
| FRMAC | Intermediate | Novice | Awareness |
| All other resources (see ROSS Resource Guide) | Novice | Awareness | Awareness |
| RR3.3 State Radiological Response (e.g. implication of a NRC agreement vs. non-agreement State & Impact on Home Rule vs Dillon Rule governance) | Intermediate | Novice | Awareness |
| **RR4. Radiological Threats** | **Type 1 (Highest)** | **Type 2** | **Type 3** |
| Understanding Radiological Terrorism, sources of concern, and potential impacts | Intermediate | Novice | Awareness |
| Understanding Nuclear Terrorism and potential impacts | Intermediate | Novice | Awareness |

| Note: For resources that require an account to access | |
|---|---|
| Awareness | Know how to request access |
| Novice | Have an active account and understand how to navigate |
| Intermediate | Active account and familiar with sending, receiving, and requesting data |

| | |
|---|---|
| Awareness | Know it exists and what it does |
| Novice | Know how to activate and use asset |
| Intermediate | Know activation, expected timelines, and response integration. |

# History of the ROSS - - a National Qualification

*"There is a shared recognition that FEMA cannot only plan for events we are capable of responding to; rather, we must plan for catastrophic events that will overwhelm capabilities at all levels of the government and private sector and challenge even the most scalable structures and systems."*

***– Administrator Craig Fugate***

- In 2019, the FEMA National Integration Center assisted in the development of a FEMA NQS Position Qualification (NIMS 509) and a Position Task Book (PTB) for the ROSS.
- It follows the SKAs in the job task analysis and builds on the initial training in CTOS PER-388.
- After national engagement to answer questions and respond to comments about the NIMS 509 and PTB, they were incorporated into the NQS.
- The NIMS 509 is here: Radiological Operations Support Specialist
- The PTB is here: Radiological Operations Support Specialist PTB

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Resource Typing Definition for Response
Situational Assessment

Provides a description of Types 1, 2, 3 and 4 and the experiential, educational and training requirements of each type.

# RADIOLOGICAL OPERATIONS SUPPORT SPECIALIST

| | |
|---|---|
| **RESOURCE CATEGORY** | Radiological and Nuclear Response |
| **RESOURCE KIND** | Personnel |
| **OVERALL FUNCTION** | The Radiological Operations Support Specialist (ROSS):<br>1. Provides subject-matter expertise and guidance on questions about radiation, the environment, hazard modeling, data and risk management, public protective actions and other scientific and technical issues to incident response leaders at any level<br>2. Gathers, organizes, synthesizes, documents and distributes incident and resource information to improve situational awareness at all levels of incident management<br>3. Is able to clearly explain the implications of modeling, measurement and analysis methods, as well as the health risks and hazards that exist during a radiological or nuclear incident<br>4. May function as a ROSS Strike Team Leader when serving as a Type 1 or Type 2 ROSS as part of a ROSS Strike Team |
| **COMPOSITION AND ORDERING SPECIFICATIONS** | 1. This position can be ordered as a single resource<br>2. Requestor specifies any additional qualifications necessary based on incident complexity and needs<br>3. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation, and meals, prior to deployment |

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

| COMPONENT | TYPE 1 | TYPE 2 | TYPE 3 | TYPE 4 | NOTES |
|---|---|---|---|---|---|
| **DESCRIPTION** | Same as Type 2, PLUS:<br>1. Has the capacity to work at the Incident Command Post (ICP) and Emergency Operations Center (EOC) levels and to advise Authority Having Jurisdiction (AHJ) and elected officials<br>2. Helps the AHJ integrate Federal radiological response assets and capabilities from across the government into the response, as necessary<br>3. Coordinates radiological activities and technical data management with | Same as Type 3, PLUS:<br>1. Creates exposure estimates for a variety of internal and external exposure scenarios<br>2. Understands key state and Federal radiological response assets, capabilities, and reporting structures, and integrates them into an effective response<br>3. Communicates complex radiological issues to large groups and senior managers, and supports public message development | Same as Type 4, PLUS:<br>1. Works as a technical specialist and advises response personnel and AHJ on issues pertaining to radiological and nuclear (rad/nuc) response<br>2. Provides radiological incident assessment and resource information through:<br>a. Interpreting and communicating model and measurement results and data products<br>b. Proficient use of the CBRNResponder mobile app and website to collect and share data<br>3. Has knowledge of state radiation control programs and other radiological emergency preparedness assets, as | The National Incident Management System (NIMS) Type 3 ROSS:<br>Has completed initial ROSS training and can work as a technical specialist under the supervision of a Type 3 or higher ROSS | When serving as part of a ROSS Strike Team, a NIMS Type 1 or Type 2 ROSS may also function as a team leader. |

# History of the ROSS – Management & Facilitation

- The FEMA Office of Emerging Threats manages the ROSS Program.
- A ROSS Steering Committee is comprised of a representative from FEMA, DHS NUSTL, DOE NNSA and the CRCPD.
- The ROSS Steering Committee provides guidance from a national perspective.
- The FEMA OET ROSS Program may be contacted at FEMA-ROSS@FEMA.DHS.GOV.

# History of the ROSS – Continuing Support

- The FEMA OET ROSS Program and the ROSS Steering Committee help ensure ROSS are built on a consistent national framework through the:
  - NQS FEMA 509 and PTB
  - CTOS initial training (PER-388)
  - ROSS Toolkit in CBRNResponder
  - ROSS Job Aids
  - ROSS-Ready curriculum for college and university health physics programs
  - Virtual Evaluation Scenario Tool (VEST) for ROSS continuing education
  - National level tabletop and full-scale exercises


Vibrant Response 2014
National Nuclear Security Administration
U.S. Department of Energy

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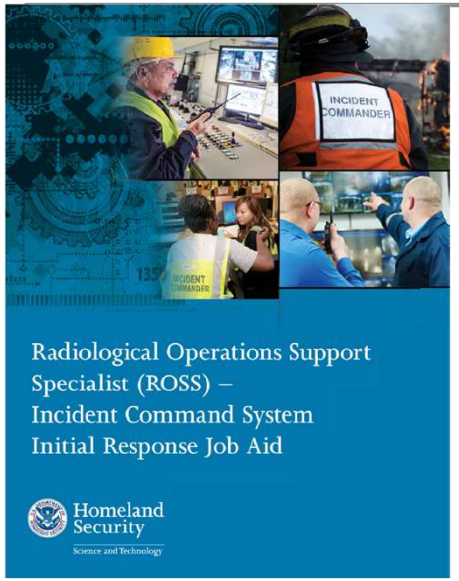
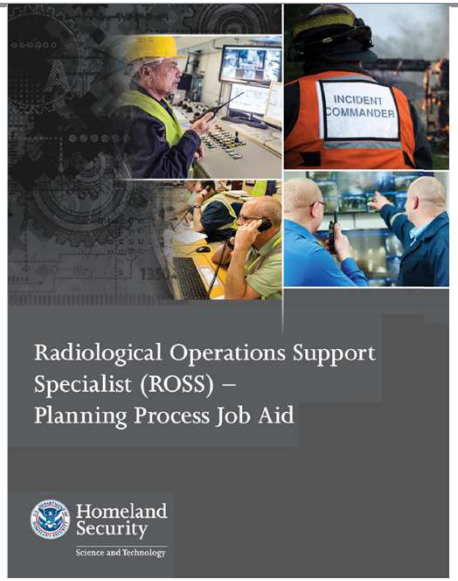
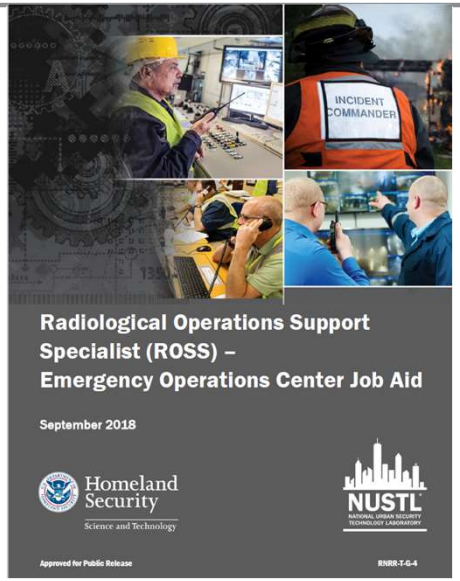
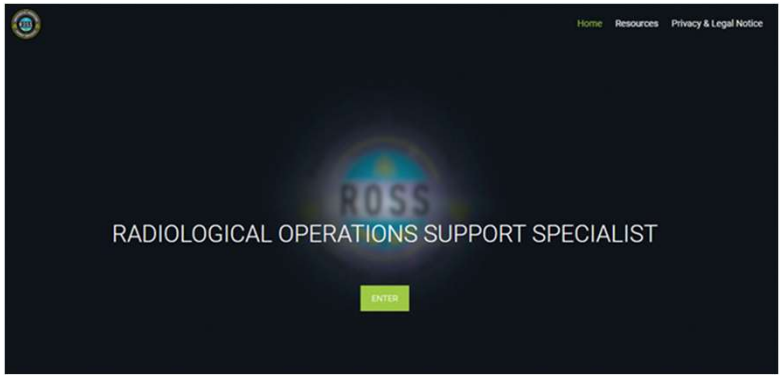
# History of the ROSS – Continuing Support




All the ROSS Job Aids and the ROSS Toolkit of critical guidance information are in RadResponder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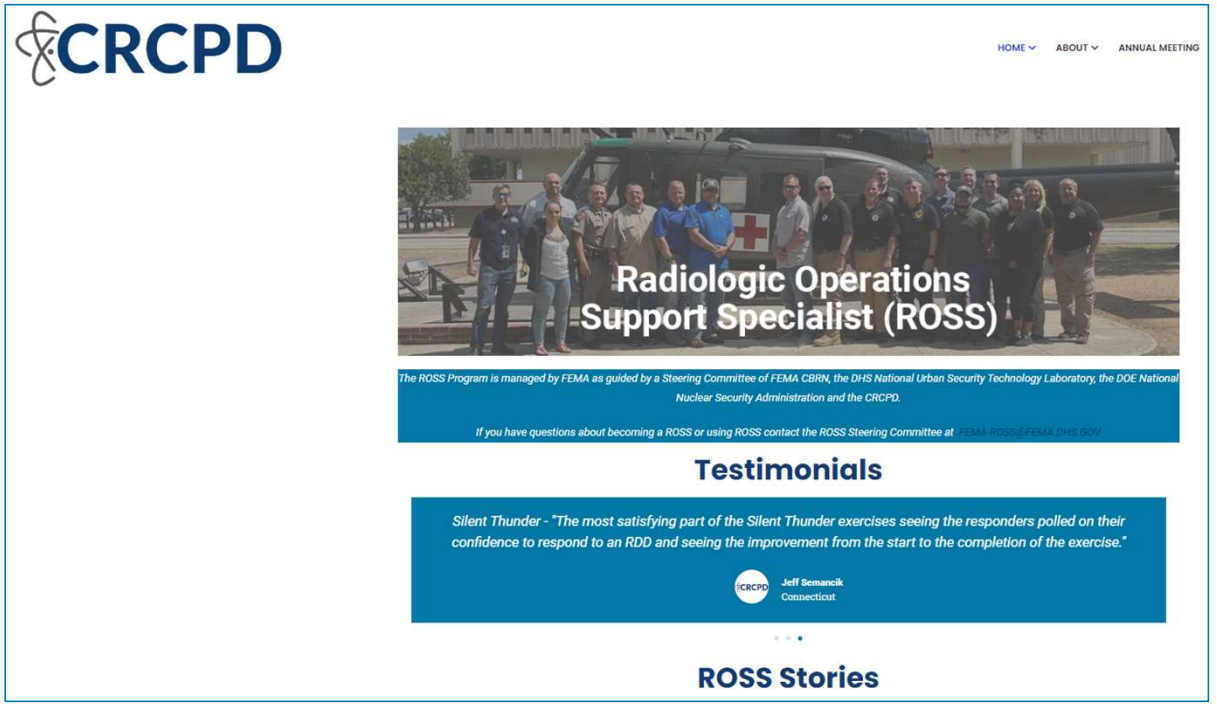
# History of the ROSS – Continuing Support

- CRCPD HS/ER-4 helps foster connections among ROSS and between ROSS and government agencies.
- CRCPD supports ROSS training and exercise opportunities, quarterly calls and competency maintenance problem sets.
- CRCPD supports relationships between ROSS and the ROSS Steering Committee, State RCPDs and the State ROSS Coordinators
- https://crcpd.org/ross-portal/

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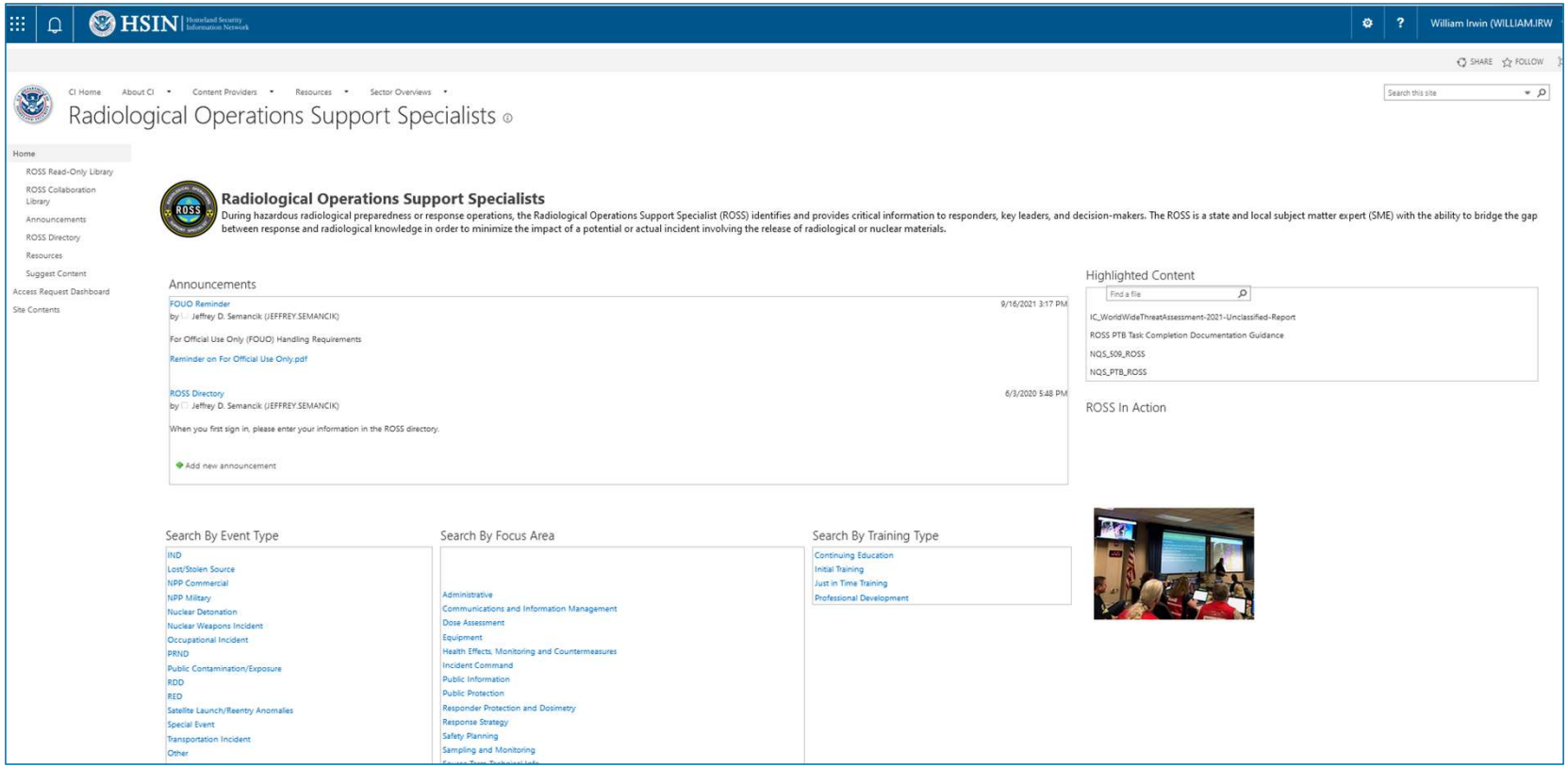
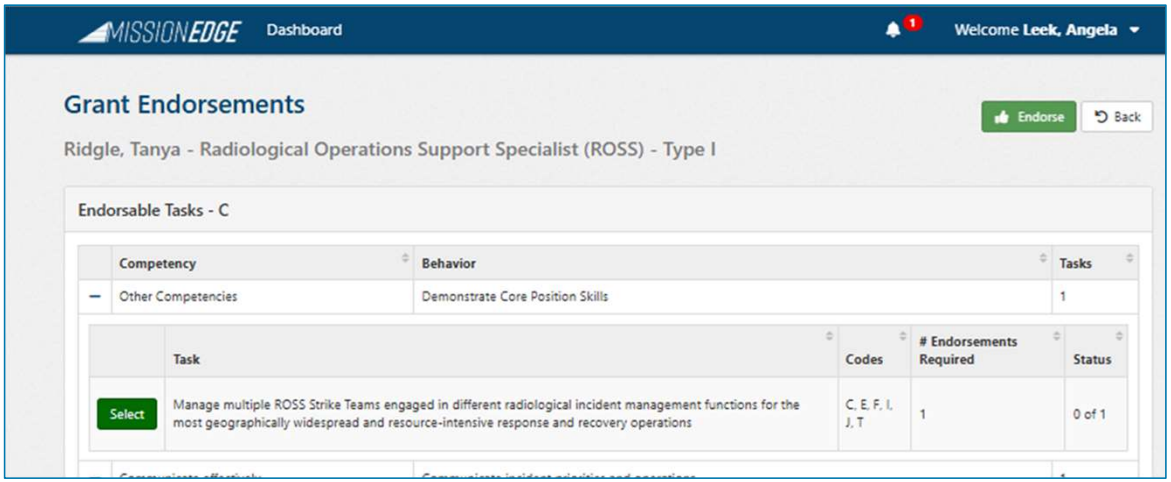
# History of the ROSS – Continuing Support

## Homeland Security Information Network ROSS Community of Interest is also provided by the CRCPD



# ROSS Qualification

- The initial step in ROSS Qualification is training in accordance with the Position Qualification and completing PER-388 and its prerequisites.
- The remaining steps use the PTB to complete tasks to advance from Type 4 to Type 3 to Type 2 and to Type 1.
- Task sign off by higher ranked ROSS and the authority having jurisdiction (AHJ).

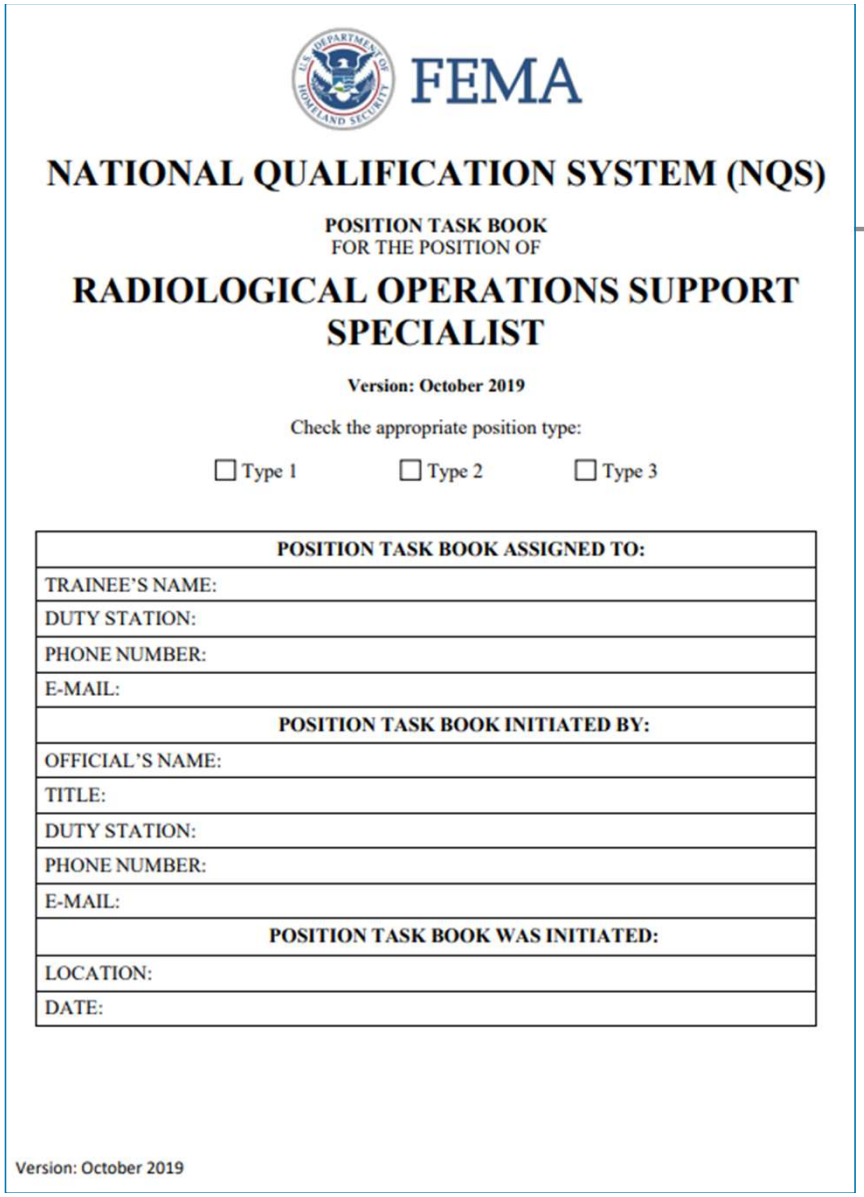



MissionEdge, a tool provided to the ROSS by Chainbridge Technologies through the CRCPD is the easy means to document the qualification.

See MissionEdge training for more!

# ROSS Qualification

- Once all the tasks of a Type 3, 2 or 1 PTB are signed off by an evaluator, the PTB is sign-off by the AHJ.
- Independent review is then conducted by the CRCPD HS/ER-4 Qualification Review Board (QRB).
- Credentialing as Type 3, Type 2 or Type 1 ROSS is completed by the AHJ as the Certifying Official.



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NATIONAL QUALIFICATION SYSTEM (NQS)

POSITION TASK BOOK
FOR THE POSITION OF

RADIOLOGICAL OPERATIONS SUPPORT SPECIALIST

Version: October 2019

Check the appropriate position type:

☐ Type 1 ☐ Type 2 ☐ Type 3

| POSITION TASK BOOK ASSIGNED TO: |
|---|
| TRAINEE'S NAME: |
| DUTY STATION: |
| PHONE NUMBER: |
| E-MAIL: |
| **POSITION TASK BOOK INITIATED BY:** |
| OFFICIAL'S NAME: |
| TITLE: |
| DUTY STATION: |
| PHONE NUMBER: |
| E-MAIL: |
| **POSITION TASK BOOK WAS INITIATED:** |
| LOCATION: |
| DATE: |

Version: October 2019

- There are 63 tasks (41 for Type 3, 15 more for Type 2, and 7 more for Type 1).
- The toughest is Type 3, as we want all Type 3 to be technically sound.
- Type 2 can lead a ROSS Task Force, and a Type 1 can lead multiple ROSS Task Forces.
- Like most FEMA Type 1 positions, it takes a lot to reach the highest level.
- The AHJ, his/her designees, and higher Typed ROSS can sign off tasks.

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**EVALUATION RECORD FORM**

| |
|---|
| **TRAINEE NAME:** |
| **TRAINEE POSITION:** |
| **Evaluation Record Number:** |
| **Evaluator's name:** |
| **Incident/office title and agency:** |
| **Evaluator's home unit address and phone:** |
| **Name and location of incident or simulation/exercise:** |
| **Incident kind:** |
| **Number and kind of resources:** |
| **Evaluation period:** |
| **Position type:** |
| **Recommendation:**<br>The above named trainee performed the initialed and dated tasks under my supervision. I recommend the following for this trainee's further development:<br>_____ The trainee has successfully performed all required tasks for the position. The AHJ should consider the individual for certification.<br>_____ The trainee could not complete certain tasks or needs additional guidance. See comments below.<br>_____ Not all tasks were evaluated on this assignment. An additional assignment is needed to complete the evaluation.<br>_____ The trainee is severely deficient in the performance of tasks and needs further training prior to additional assignment(s) as a trainee for this position. |
| **Additional recommendations/comments:** |
| **Date:** |
| **Evaluator's initials:** |
| **Evaluator's relevant qualification:** |

- For all tasks completed during an evaluation period, an Evaluation Record Form (PTB page 6) must be completed.
- A completed Type 3 PTB may require several Evaluation Record Forms for the 41 tasks as each ERF is for a training event like a class, an exercise, on the job work activity, or an incident response.
- MissionEdge can also be used for these steps.

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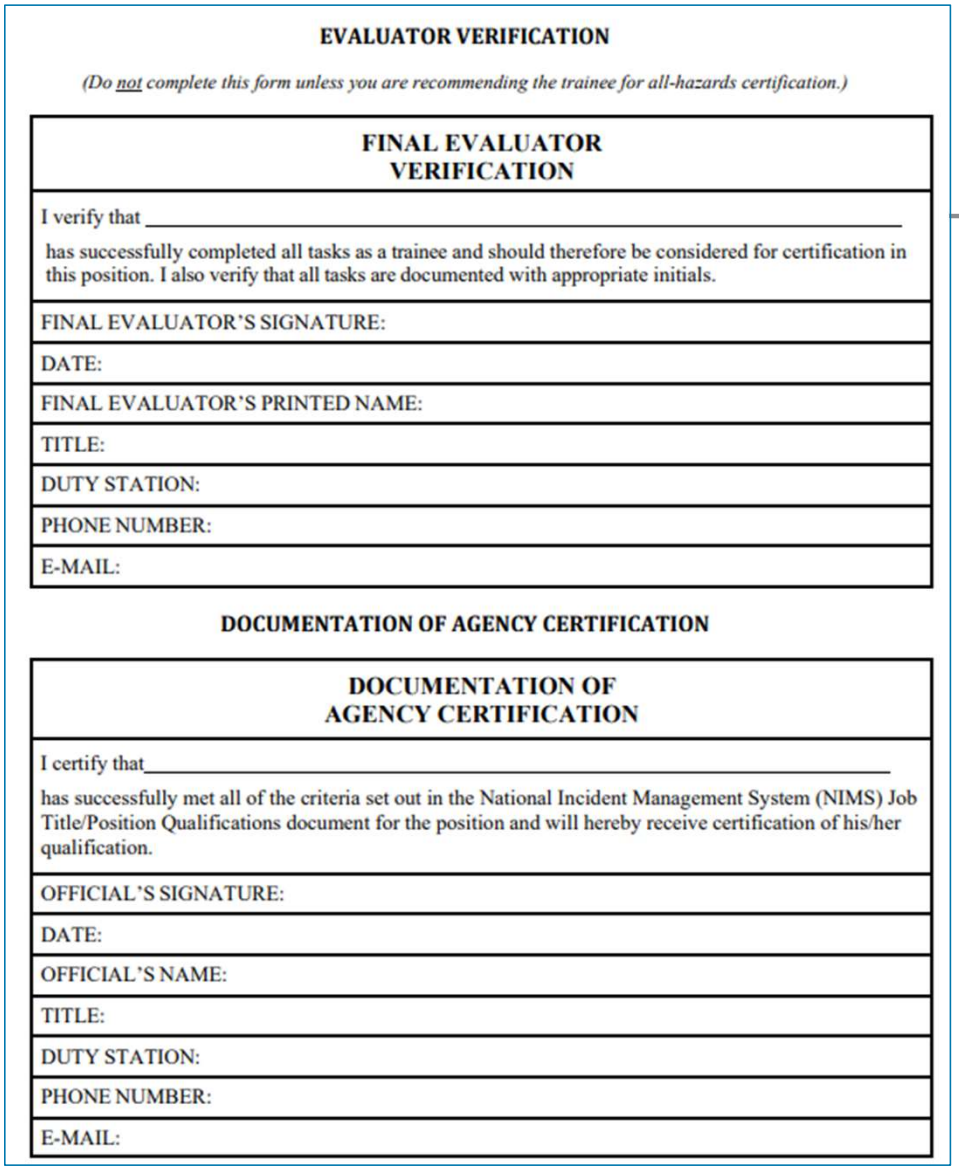

**EVALUATOR VERIFICATION**

*(Do not complete this form unless you are recommending the trainee for all-hazards certification.)*

| **FINAL EVALUATOR VERIFICATION** |
|---|
| I verify that _____ has successfully completed all tasks as a trainee and should therefore be considered for certification in this position. I also verify that all tasks are documented with appropriate initials. |
| FINAL EVALUATOR'S SIGNATURE: |
| DATE: |
| FINAL EVALUATOR'S PRINTED NAME: |
| TITLE: |
| DUTY STATION: |
| PHONE NUMBER: |
| E-MAIL: |

**DOCUMENTATION OF AGENCY CERTIFICATION**

| **DOCUMENTATION OF AGENCY CERTIFICATION** |
|---|
| I certify that_____ has successfully met all of the criteria set out in the National Incident Management System (NIMS) Job Title/Position Qualifications document for the position and will hereby receive certification of his/her qualification. |
| OFFICIAL'S SIGNATURE: |
| DATE: |
| OFFICIAL'S NAME: |
| TITLE: |
| DUTY STATION: |
| PHONE NUMBER: |
| E-MAIL: |

- Once all tasks for a Type are completed, the AHJ completes the Final Evaluator Verification.
- The AHJ then sends the Final Evaluation Verification and Documentation of Agency Certification, along with a text or spreadsheet linking the PTB tasks to ERFs to the QRB. Both forms are on Page 2 of the PTB.
- The QRB will notify the AHJ of the finding of its independent review.
- MissionEdge can also be used for these steps.

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# State ROSS Coordinators

The vital link between the National ROSS Program and the Authority Having Jurisdiction for the ROSS

## The State ROSS Coordinator fills a key role in emergency preparedness

- ROSS are trained as radiological and nuclear emergency response and recovery subject matter experts with most being developed at the state and local level where the need for them is greatest.
  - We hope all State ROSS Coordinators eventually become ROSS themselves. We hope State Radiation Control Program Directors do, too.
- Some ROSS, especially those from government agencies, will easily integrate into state and local emergency plans and emergency management organizations.
  - These ROSS, however, are more likely to be engaged by their home agency and unavailable to help other jurisdictions.

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## Connecting Unaligned ROSS to Other State Radiological and Nuclear Emergency Responders

- ROSS from medicine, academia, laboratories, other industries and even retirement, are essential as "forces in reserve" both within the home jurisdiction and other jurisdictions.
  - It is critical that we help these "unaligned" ROSS integrate into their state and local response plan and organizations or another State's organization.
- Once connected to your jurisdiction's radiological/nuclear emergency plan and organization, these ROSS are available to serve when a major emergency arises or in exercises, as well as beforehand as a plan development and training resource.
  - Except when a State activates via EMAC or otherwise chooses to compensate these "volunteer" ROSS, this resource is free to the State. Most ROSS will enjoy volunteering to help!
  - COVID taught us we can never have enough technical experts who can readily work within the incident management system. ROSS are specifically trained to be effective SMEs within the ICS.

# Three primary functions of the State ROSS Coordinators: The first is maintaining a roster of ROSS in your jurisdiction

- Share the up-to-date roster with the CRCPD on an annual basis.
  - The CRCPD will ask you to verify the name, email and phone number each year.
  - CRCPD will share the roster with the ROSS Program at the FEMA OET to connect all ROSS to the national efforts of competency maintenance and cadre management.
- Together, the FEMA OET and CRCPD will support:
  - Competency maintenance through ROSS Quarterly Calls where program updates and problem sets are provided, and through national level exercise opportunities.
  - Cadre management through MissionEdge and Emergency Management Assistance Compact (EMAC) tools, maintenance of the Position Task Book (PTB) and Position Qualification, and national certification of ROSS by Type.

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# Three primary Coordinators: The second is helping ROSS connect to evaluators who functions of the State ROSS can sign off tasks in their PTB

- There are two evaluators who can sign off tasks in the ROSS PTBs:
  - The Authority Having Jurisdiction (AHJ) for radiological and nuclear emergency decisions in each jurisdiction.
    - This is a statutory role usually held by the jurisdiction's Radiation Control Program Director.
  - Any higher Type ROSS can sign off tasks for lower Typed ROSS.
    - A Type 1 can sign off any other ROSS' PTB; a Type 2 can sign off for Type 3 ROSS; and a Type 3 can sign off for Type 4 ROSS working to become Type 3.
- The rostering function should also help connect ROSS to the AHJ and higher Typed ROSS.

## Three primary functions of the State ROSS Coordinators: The third is helping people who want to take the ROSS training register for it

- Connect the interested person to the Counter Terrorism Operations Support Specialist (CTOS) registrar at ctosreg@nv.doe.gov.
- There are instructions for registering at the CTOS webpage (Center for Radiological Nuclear Training Home Page)
- Get the interested person to complete the FEMA registration form.
- The prospective student fills the form out, signs, obtains his or her supervisor's approval and then gets the State Training Coordinator's approval.
    - The State Training Coordinator often works for the Homeland Security or Emergency Management agency in States. CTOS has a list of them.

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## Other functions that will benefit from State ROSS Coordinator assistance

- Advocating for ROSS:
  - Integration into jurisdictional emergency plans and response and recovery organizations;
  - Planning for scenarios too often neglected, but where the ROSS has been specifically trained – nuclear detonations, radiological dispersal devices and nuclear power plants.
  - Inclusion in exercises in the jurisdiction; and
  - Training the emergency response workforce.
- Share radiological and nuclear emergency response and recovery information with the ROSS.
  - For example, jurisdictional plans and procedures and information about upcoming training or exercises within the jurisdiction that ROSS may attend.
- Be a point of contact for ROSS deployed for real incidents in the State whether the ROSS are “home grown” or mutual aid.
- The FEMA OET (fema-ross@fema.dhs.gov) and CRCPD HS/ER-4 (william.Irwin@vermont.gov) are available to help.

CRCPD

- State ROSS Coordinators
- 37 States participating in ROSS development to date
- There are some vacant positions due to turnover.

| No. | State | Certifying Official | Email | State ROSS Coord. | Email |
|---|---|---|---|---|---|
| 1 | Alabama | Cason Coan | cason.coan@adph.state.al.us | Jerome Coleman | jerome.coleman@adph.state.al.us |
| 2 | Arizona | Brian Goretzki | brian.goretzki@azdhs.gov | Sonia Carpena | Sonia.Carpena@azdema.gov |
| 3 | Arkansas | Bernard Bevill | bernard.bevill@arkansas.gov | Bernard Bevill | bernard.bevill@arkansas.gov |
| 4 | California | Anthony Chu, Acting | Anthony.Chu@cdph.ca.gov | Juan Garcia | juan.garcia@cdph.ca.gov |
| 5 | Connecticut | Jeff Semancik | Jeffrey.Semancik@ct.gov | Jeff Semancik | Jeffrey.Semancik@ct.gov |
| 6 | Florida | Clark Eldridge | clark.eldredge@flhealth.gov | John Williamson | john.williamson@flhealth.gov |
| 7 | Georgia | David Matos | david.matos@dnr.ga.gov | Shelly Stancil | shelly.stancil2@dnr.ga.gov |
| 8 | Indiana | Courtney Eckstein | ceckstein@dhs.IN.gov | Courtney Eckstein | ceckstein@dhs.IN.gov |
| 9 | Illinois | Adnan Khayyat | adnan.khayyat@illinois.gov | David Culp | dave.culp@illinois.gov |
| 10 | Iowa | Patty Riesberg | patty.riesberg@hhs.iowa.gov | Scott Wendt | khequ@iastate.edu |
| 11 | Kansas | Jason Meinholdt | jason.meinholdt@ks.gov | Jason Meinholdt | jason.meinholdt@ks.gov |
| 12 | Kentucky | Matt McKinley | matthew.mckinley@ky.gov | Matt McKinley | matthew.mckinley@ky.gov |
| 13 | Louisiana | Jerry Lang | jerry.lang@la.gov | Jessica Walker | jessica.walker@la.gov |
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# Summary of ROSS Cadre Orientation

- The ROSS journey starts with State ROSS Coordinators helping interested people getting into CTOS' PER-388 to include completion of its prerequisite courses (the requirements for Type 4).
- Position Task Books are assigned to new ROSS by the FEMA OET Office.
- ROSS interested in advancing by Type work with their AHJ and higher typed ROSS to complete tasks toward Type 3, 2 and 1 certification by work:
  - For the ROSS Quarterly Calls
  - In exercises
  - In Virtual Evaluation Scenario Tool (VEST) sessions
  - On the job
  - As radiological and nuclear emergency planners and trainers
- If an emergency arises, we work within our own jurisdictions and, if available, through EMAC mutual aid to other jurisdictions.

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# ROSS Open Dialog

All ROSS as Facilitated by Bill Irwin


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Questions? william.Irwin@vermont.gov

# Questions for you, and to stimulate discussion

1. What subjects would you like in ROSS continuing training, where we do a deep dive into a specific radiological or nuclear emergency response and recovery subject especially those related to PTB tasks?

2. How many of you would like to develop a deep dive training course for our cadre?

3. Is there more that we could do to make the Competency Maintenance Problem Sets better for you?

4. If we put all the past Competency Maintenance Problem Sets on the CRCPD ROSS Portal, how many of you would seek the time to complete them so you can get tasks signed off.

# December 2024 ROSS Competency Maintenance Problem Set

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## Radiological Operations Support Specialist Continuing Education Competency Maintenance Program

| ROSS Quarterly Problem Set | September 2024 |
|---|---|
| Answers Due By: | No end date |
| Submit Answers and Supporting Attachments to: | Your State ROSS Task Force Leader<br>or<br>Adela Salame-Alfie – salamealfie8@gmail.com |
| Questions about problem: | Adela Salame-Alfie – salamealfie8@gmail.com |
| Task Sign Off Potential<br>*Successful completion of this quarterly problem allows you to request signoff* | ROSS Position Task Book (PTB)<br><br>Task Number 1, 9, 19,21, 37, 48C, 50, 51 |
| Expected Answer Format | Ten short answers to ten questions. |

We have also worked out a means to complete this Competency Maintenance Problem Set using MissionEdge, too.

## Problem Set Instructions

***Scenario***

*You are a Radiological Operations Support Specialist (ROSS) Type 3 supporting the State EOC responding to a nuclear detonation that occurred 6 hours ago. The radiological assessment teams for the state are responding to make initial protective action recommendations/decisions and are assessing initial field surveys reported from first responders around the impacted area. The state has requested the support of the Radiological Assistance Program (RAP) team, and those assets will be arriving on scene soon to provide field support.*

*The first responders are asking what levels to use to set up the hot zone and they are concerned that setting it up at twice background will unnecessarily define a very large area that would be very hard to manage.*

**Question 1**

Using the tools available in the ROSS toolkit (ROSS Toolkit | RadResponder) how would you define a manageable hot zone area based on radiation measurements?

**Question 2**

What considerations beyond radiation measurements would you use to make your recommendations?

***Additional Scenario detail***

*The state radiation control program is being asked questions regarding beta/gamma contamination screening levels for people that are being sent to Community Reception Centers to get screened.*

**Question 3**

Provide recommendations based on three different scenarios:

- Severely resource constrained conditions (estimated screening wait times in excess of several hours)
- Resource constrained conditions (screening wait times longer than one hour)
- Nominal (able to screen everyone within a reasonable time frame)

***Scenario detail***

*The state radiation control program is being asked questions regarding dose estimation and treatment for survivors arriving at hospitals from near the blast who may have received large doses of radiation.*

**Question 4**

How would you identify areas with the highest radiation levels?

**Question 5**

Would you request IMAAC products?

**Question 6**

If so, which IMAAC products would be most useful in the first 12 hours?

This Competency Maintenance Problem Set has the most tasks that can be signed off with its completion.

***Additional Scenario Detail***

*In addition to the large numbers of survivors, the state is dealing with a significant number of casualties.*

**Question 7**

What resource would best advise medical professionals on the triage and treatment of survivors with significant radiation doses?

**Question 8**

How soon could they be available to the state? Are there any algorithms that emergency departments can use for quick triage?

**Question 9**

What resource would be available to advise on fatality management? Does their expertise typically include radiological-specific knowledge?

**Question 10**

What resource could provide disposal or alternate processing options for milk that is potentially contaminated?

Stephan Brown is publishing all the Competency Maintenance Problem Sets on the ROSS portal at www.CRCPD.org.

# Closing Remarks


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