

CERTREC'S

FRMS User's Group Meeting

Clint Anonyei
Bridget Johns



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OPENING FORUM

Agenda

- Welcome
- Introductions
- Day 1
 - New to FRMS
 - Top 3 favorite things and desired enhancements
 - FRMS Survey Results
- Day 2
 - Annual Membership Benefits
 - System Configuration Review
 - New Features Discussion and Overview
 - AI Workshop
- Day 3
 - Key Takeaways
 - Benchmarking



WELCOME TO FRMS!

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Point Beach



Seabrook



St. Lucie



Turkey Point

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WELCOME TO FRMS!

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Palo Verde Nuclear Generating Station



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WE VALUE YOUR INPUT!

Collaborative feedback focused on strengths and future improvements

— *Top 3* —
FAVORITE THINGS ABOUT
— **FRMS** —

— *Top 3* —
MOST DESIRED ENHANCEMENTS FOR
— **FRMS** —

OPENING FORUM

2025 End of Year Survey

4.16

Average Rating



- Overall positive sentiment toward the FRMS program
- Key strengths identified by users:
 - ease of use
 - technical support satisfaction
 - likelihood to recommend FRMS to others
- Primary enhancement request to develop a time entry workflow
- Increased demand for:
 - additional training opportunities
 - timely notifications of system issues and enhancements
 - improved communication practices by the stations
- Strong interest in learning more about new FRMS features and capabilities

CERTREC[®] **FRMS** FATIGUE RULE MANAGEMENT SYSTEM

USERS GROUP



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Daily Check-In:

Wednesday



Please take a moment
to check in for today's
session.

System Updates

- 8 patch revisions = 10 resolutions, 2 enhancements
 - Added overtime standard entry types
 - Enhanced waiver configuration
- 1 system revision
 - v2.3 deployed 4/1/2026
 - Added the date of birth validation configuration



OPENING FORUM



Upcoming Events/Meetings

- NRC Revision of Security Requirements – June 24th
- FRMS Microlearning (virtual) – June 24th & July 22nd
- NEI AA/FFD Conference – July 13th – 16th
- Nuclear Fatigue Rule Management Training (virtual) – August 4th – 5th
- FRMS User Group Meeting (virtual) – September 15th
- Certrec offices closed
 - July 3rd – Independence Day (observed)
 - September 7th – Labor Day
- Mirion Connect (FRMS User Group Meeting) – July 19 – 22, 2027 – Naples, FL

GENERAL FORUM

Fatigue Rule Management System



- Celebrating 6 years!
- Industry wide, universal platform with annual membership
- Certrec technical support
- Regulatory compliance expertise
- Dedicated Project Manager
- Customer driven development
- FRMS User's Group

Annual Membership Benefits

- Dedicated cloud hosting
- Automatic software updates and security patching
- Ongoing system maintenance and support
- Backup and disaster recovery services
- Performance monitoring and system health management
- Access to a test environment for training and validation purposes
- Change management support for major system updates and enhancements
- Regulatory updates and compliance support, including ISO 27001, SOC 2, and nuclear regulatory consulting
- Dedicated Project Manager
- Technical support during normal business hours (≤200 hours annually per station)
- Escalation support for critical system issues affecting availability
- FRMS training through Certrec Academy and just-in-time user training resources
- Participation in the FRMS User's Group

Non-Membership Examples

- Custom feature development
- Significant client-driven product enhancements or modifications
- Enterprise integrations with third-party systems, APIs, SSO, and specialized tools
- Data migration and data remediation
- Complex imports from external systems
- Live, onsite or customized training
- Extended support coverage (24/7), including after-hours assistance for non-critical issues
- Accelerated response and resolution timelines beyond standard service times
- Advanced data analysis and investigations exceeding standard change history troubleshooting
- Support for customer-led audits and assessments
- Comprehensive cybersecurity reviews, questionnaires, and audit support

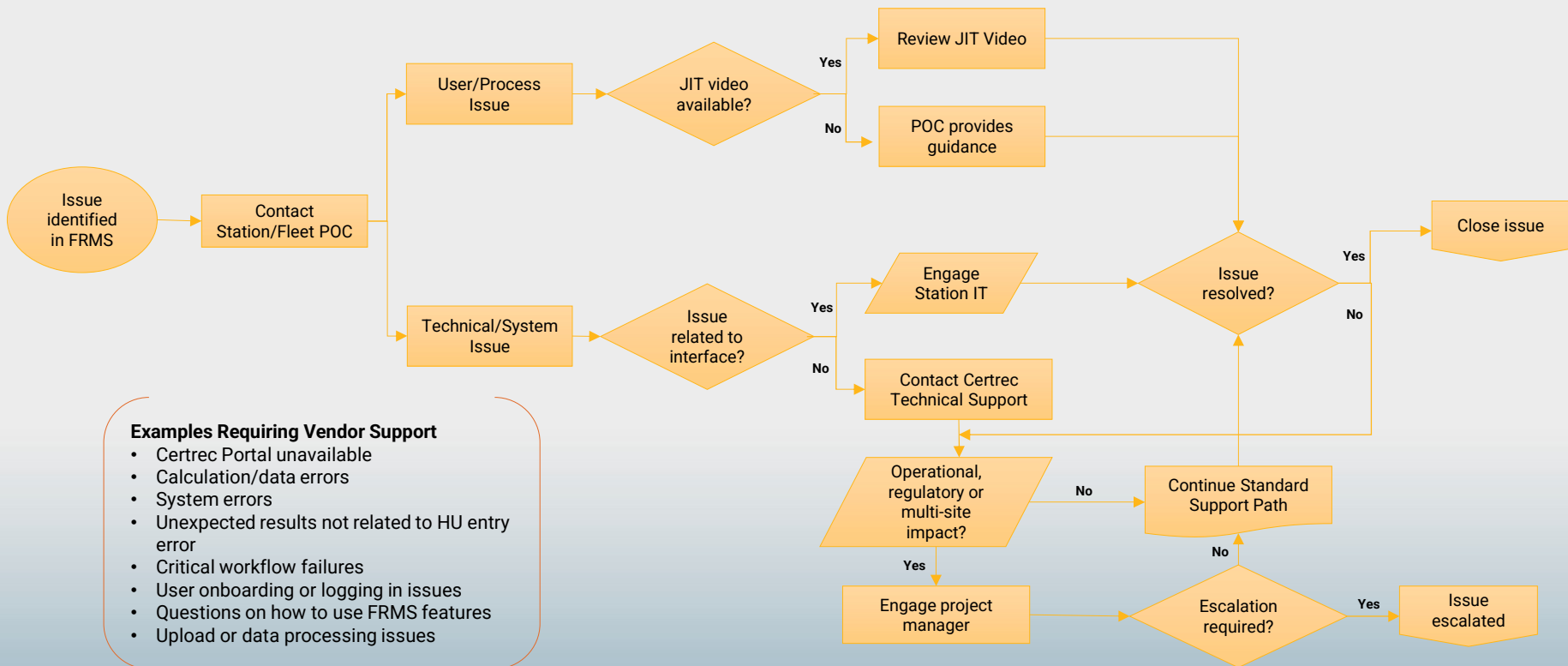
GENERAL FORUM

Client Partnership Standards

- Designating a primary point of contact (station/fleet)
- Providing internal coordination, ensuring timely communication and responsiveness on initiatives
- Monitoring communications including system updates and maintenance notifications
- Handling “how to” questions
- Perform basic troubleshooting to validate issues before escalating
- Provide accurate issue details to reproduce the issue; description of issue, steps taken, screenshots
- Respond promptly to request for additional information or clarification
- Notify users of significant changes that impact the platform
- Provide updates to station users on training opportunities
- Submit enhancement requests through dedicated Project Manager
- Participate in surveys
- Engage in FRMS User Group meetings



Troubleshooting Decision Tree



GENERAL FORUM

Dedicated Project Manager

- Primary point of contact for coordination, planning and overall project support
- Key benefits:
 - a consistent point of contact who understands your organization and project goals
 - proactive coordination of deliverables, timelines and resources
 - clear communication and faster resolution of project-related questions
 - structured oversight to help keep FRMS implementation and activities on schedule
 - streamlined coordination between your team and Certrec's technical support staff
 - email: certrec-frmspm@mirion.com
- Project Managers:
 - Bridget Johns – Cooper, D.C. Cook, Entergy, Framatome, NextEra
 - Paul Smith – Fermi, Holtec Palisades, PSEG, TVA

SYSTEM CONFIGURATION



CUSTOMER DRIVEN. BETTER SYSTEMS. STRONGER RESULTS.

We listen. You provide feedback. We act. We build better.
Your feedback drives real enhancements.



SYSTEM ENHANCEMENTS DRIVEN BY YOUR FEEDBACK



92% COMPLETED

Enhancements requested by users are completed and delivered.
Your feedback creates meaningful improvements.



8% SCOPED FOR FUTURE REVISION

Due to complexity, these items have been scoped for a future revision of the program to ensure the right solution is delivered.



**YOUR FEEDBACK IS THE FOUNDATION.
OUR COMMITMENT IS THE RESULT.**

SEVEN SYSTEM UPGRADES

THAT IMPROVED SYSTEM OPTIMIZATION AND ADDED NEW FEATURES



1

PERFORMANCE OPTIMIZATION

Faster system performance and improved responsiveness.



2

ENHANCED SECURITY

Stronger security controls and improved data protection.



3

PROCESS AUTOMATION

Automated workflows reduce manual effort and increase efficiency.



4

ADVANCED REPORTING

Richer insights with new reports and configurable dashboards.



5

INTEGRATION EXPANSION

Seamless integration with more systems and platforms.



6

NEW FEATURES ADDED

New features designed to meet your evolving needs.



Every suggestion helps shape a better system.

THANK YOU

for helping us improve every day.



GENERAL FORUM

FRMS System Configuration Review

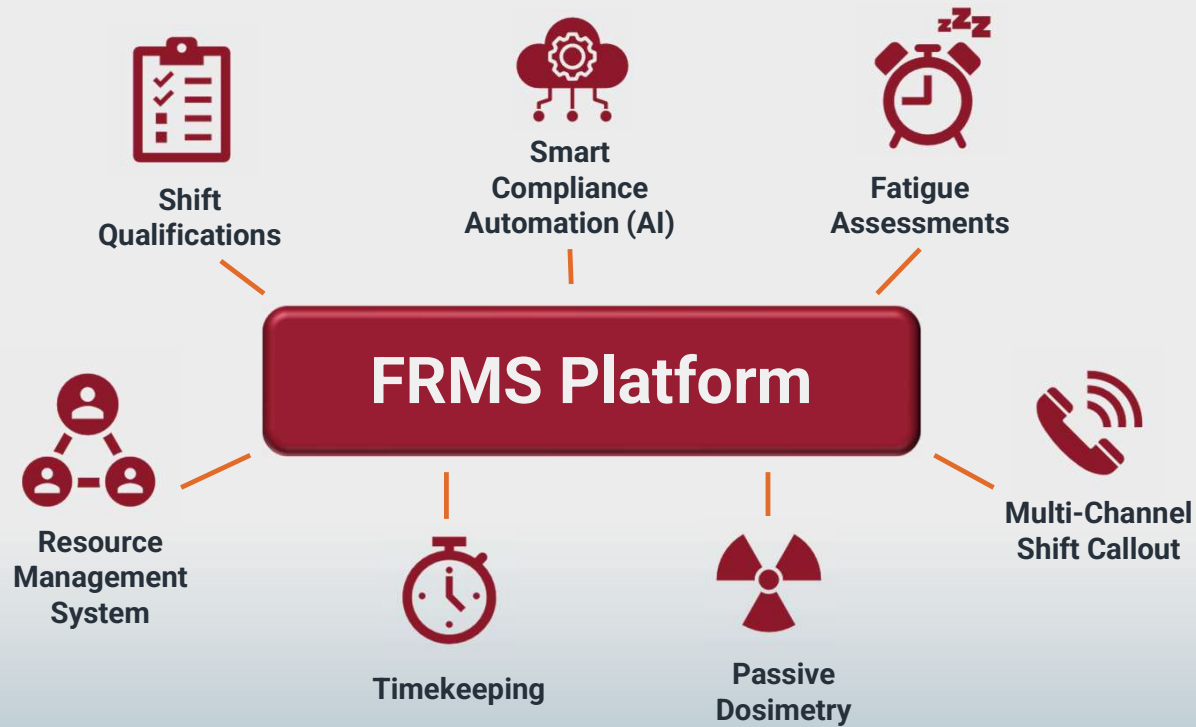
- PIIR-13845 – Late entry report modifications (D.C. Cook)
- PIIR-14322 – Add validation that prevents Break with Rest from being applied if less than 30 minutes (Certrec)
- PIIR-14351 – Update the shift callout to give an option to bypass the verification of fatigue rules if ‘Did Not Call’ option is selected (Browns Ferry)
- PIIR-14415 – Add CR number field to the Schedule Builder (Grand Gulf)
- PIIR-14445 – Add a new report for time off (Browns Ferry)
- PIIR-14446 – Add a new report for training qualifications (Certrec)
- Anything additional?

General Forum

FRMS System Configuration Review

- PIIR-14541 – Add an exception report filter for sick time (D.C. Cook)
- PIIR-14581 – Add the change history and user initiation for Teams (Fermi)
- PIIR-14582 – Add an alert when creating a new team if the team name already exists (Fermi)
- PIIR-14714 – Modify or remove MDO Online alert for average shift length transition (Certrec)
- PIIR-14748 – Allow a SUP and SPA to modify the schedule after a waiver is initiated (Cooper)
- PIIR-14749 – Turnover time is excluded when applied to a non-covered shift when transitioning to covered work (TVA)
- PIIR – 14828 – Add 5-weeks as an option to the Home page configuration (Fermi)

SYSTEM DEVELOPMENT



NEW FRMS FEATURES

User Interface Upgrade

- Updated Home page with cleaner navigation
- Redesigned Schedule Builder with a modernized workflow
- Reorganized My Account section with dedicated tabs for features
- Improvements to the Teams page with new layout and customization
- Station View renamed to Change Station (SPA only)
- Refreshed Template Management page for a modern look
- Implementation: July 29 – Aug 5 (tentative)



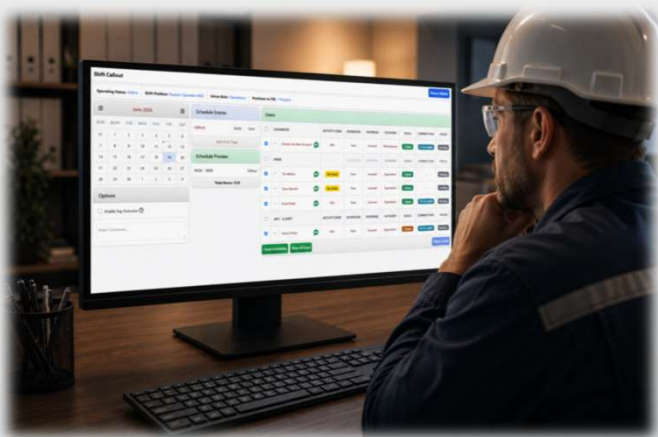
NEW FRMS FEATURES



Fatigue Assessment

- Automated workflow makes it easier to conduct, document, retrieve, and manage fatigue assessments
- Automatically determines fatigue results
- Standardizes evaluation of acute, cumulative and circadian fatigue risks
- Enforces compliance actions based on type of fatigue assessment selected
- Provides management actions to take when fatigue is a factor

NEW FRMS FEATURES



Multi-Channel Shift Callout

- Removes burden by automatically evaluating worker eligibility to fill shifts
- Applies fatigue thresholds, union rules, and qualification in real time
- Options for Manual, Automatic or All Call processes
- Notifies workers using multiple communication channels (e.g., text, phone)
- Automatically records worker responses to shift callout
- Updates worker schedule when shift is accepted

NEW FRMS FEATURES



Timekeeping

- Single entry system eliminating redundancy for recording employee work hours
- Time & Attendance workflow integrates directly with fatigue rule calculations, improving record accuracy
- Automated approval workflow from initiation through payroll processing
- Generate audit ready timekeeping reports instantly
- Sarbanes Oxley (SOX) compliant

NEW FRMS FEATURES



Passive Dosimetry

- Each worker's current dose is always visible
- Real time alerts when approaching or exceeding thresholds
- Accumulated dose integrated into scheduling workflow
- Filter individuals or entire crews by dose criteria
- Displays federal and site-specific administrative dose limits



- Integrates qualification tracking to verify training and improve staffing decisions
- Evaluates fatigue and qualifications requirements in one centralized scheduling hub
- Ensures only eligible personnel are assigned to stand shift

NEW FEATURE OVERVIEW



SYSTEM DEVELOPMENT



COMING SOON

- Smart Compliance Automation (AI)
- FRMS Mobile Application Upgrade
- Resource Management System
- FRMS Version Upgrade (tentative)

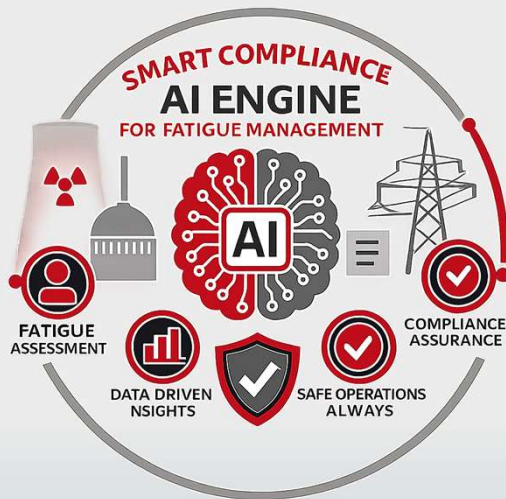
GENERAL FORUM

How Certrec uses Artificial Intelligence

- FRMS was purposely designed to predict and prevent fatigue rule issues
- evaluates actual, scheduled and hypothetical work hour scenarios
- looks ahead to see how future schedule changes impact fatigue risk
- actively uses AI to write code, test rules and to continuously improve system configuration
- helps find edge cases and gaps humans might miss
- supports prioritization of shift callouts based on fatigue risk, availability and compliance impact

SMART COMPLIANCE AUTOMATION

Conceptual Design Overview



- A proactive smart engine that makes compliance easier without taking decision making away from supervisors
 - Understand regulatory requirements
 - Interpret what regulations apply
 - Assist users with intelligent recommendations
 - Staffing optimization
 - Automate administrative tasks
 - AI clearly explains decisions

GENERAL FORUM



What tasks would you want AI to assist you with?

- AI feature log
- Conceptual architecture
- Integration requirements
- Regulatory data requirements
- Explainable AI output
- Governance considerations

GENERAL FORUM

API Workshop



What regulations
are difficult to
interpret?

1



Where do users
rely heavily on
tribal knowledge?

2



What compliance
tasks consume
the most time?

3



What scheduling
decisions are
difficult?

4

GENERAL FORUM

AI Workshop



1

Where do supervisors or admins spend the most time?



2

What staffing risks are hard to identify early?



3

What information is hardest to find?



4

What decisions require searching multiple systems?

GENERAL FORUM

AI Workshop



1 | Where would contextual AI guidance help?



2 | What problems are usually identified too late?



3 | What operational indicators should AI monitor?



4 | Where would predictive analytics improve outcomes?

GENERAL FORUM

AI Workshop



1

What tasks are repetitive and manual?



2

What approvals cause delays?



3

What compliance items would assist in audits?



4

Any other things to consider.

Daily Check-In:

Thursday



Please take a moment
to check in for today's
session.

Regulatory

FRMS for Advanced Nuclear Reactors

- NRC has expanded Part 26 applicability to support advanced reactors
- Regulatory Guide 5.99 was developed to provide acceptable methods for implementing fatigue
- The NRC is moving toward a more risk-informed, performance-based regulatory framework
- §26.202 introduces concepts centered on fatigue risk instead of traditional compliance
- Emphasis shifts from demonstrating effective fatigue management rather than merely tracking hours
- Certrec is evaluating methods to support additional features for fatigue risk analysis

CLOSING FORUM

Wrap Up & Key Takeaways

- Share key takeaways & final thoughts
- Prioritize one enhancement
- Peer to Peer Benchmarking
- Certrec closing comments



Survey for:

Certrec Fatigue Rule Management Systems (FRMS) Users' Group



Please take a moment
to fill out a short survey
on this session.

THANK YOU!

Certrec®

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FRMS Breakout Session

WELCOME TO FRMS

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WELCOME TO FRMS

Getting Started

- What FRMS is and how it supports fatigue management
- High-level implementation timeline (~16 weeks per station)
- Overview of major project deliverables:
 - Project planning
 - Change management implementation
 - Waiver configuration
 - User onboarding
 - Training
 - Schedule development
 - User acceptance testing (optional)
 - SSO/API configuration (optional)
 - Implementation & Go-Live



WELCOME TO FRMS

What to expect Certrec

- Dedicated Certrec Project Manager
- Structured project management
- Configuration and technical support
- Guidance through onboarding and system setup
- Training delivery and training resources
- Post-go live monitoring and support



WELCOME TO FRMS

Client roles & responsibilities

- Identify project lead and implementation team
- Provide subject matter experts (SMEs)
- Support change management activities
- Coordinate testing, validation and sign-offs
- Provide onboarding data for users
- Develop schedules within the system
- Complete training requirements
- Support communication to internal stakeholders
- Other activities based on project scope



WELCOME TO FRMS

Getting help and support

- Available support channels
 - Certrec Project Manager
 - Technical support help desk
 - Training support
- Use of FRMS Q&A sessions during rollout
- Post go-live support period



WELCOME TO FRMS

Best practices for successful implementation

- Assign a strong internal project lead
- Engage SMEs early
- Maintain regular status meetings
- Communicate change early and often to station
- Report issues early and follow up for resolution
- Complete training before go-live
- Use testing periods effectively
- Encourage user feedback during rollout



WELCOME TO FRMS

Common pitfalls to avoid

- Underestimating change management needs
- Delayed stakeholder engagement
- Insufficient testing before go-live
- Waiting too long to begin schedule development
- Incomplete onboarding data
- Lack of internal communication



WELCOME TO FRMS

Next steps

- Confirm contract scope
- Confirm project team members
- Finalize project schedule
- Schedule kickoff and planning meetings
- Begin change management activities
- Plan upcoming technical meetings





FRMS Breakout Session

ADVANCED INSIGHTS

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ADVANCED INSIGHTS

Best practices for program oversight

- Establish a program owner playbook
 - Governance and oversight
 - Program metrics and reporting
 - Work hour rule applicability
 - Fatigue assessment framework
 - Interface opportunities
 - Industry peer groups
 - Peer utility insights and benchmarking
 - Periodic program effectiveness reviews
 - Auditing program elements
 - Identification of emerging trends
 - Training opportunities
 - Incorporate fatigue risk and human error probability in pre-job briefs
 - Incorporate user management into in processing process
 - Integration with site processes



ADVANCED INSIGHTS

Audit Considerations

- What type of audits does your station require for work hour controls?
 - Appendix B (§50)
 - Augmented Quality
 - Fatigue Management (§26.4)
- Certrec supported audit results
 - 2023 & 2026
 - Augmented Quality & Fatigue Management
 - No Findings



ADVANCED INSIGHTS

Enhancing Mobile FRMS

- What type of features would you like to see in an enhanced mobile capability?
 - FRMS
 - Shift Callout
 - Timekeeping
 - Shift Qualifications
 - Passive Dosimetry
 - Fatigue Assessment



ADVANCED INSIGHTS

SME Reflection & Benchmarking

- SME Reflection
- Benchmark FRMS & industry peers



