



### AGENDA

THIS PRESENTATION IS NOT TO SELL OR PROMOTE MIRION PRODUCTS, BUT TO SHOW WHAT I HAVE FOUND AS SUCCESSFUL EQUIPMENT TO MEET MY NEEDS

ISSUES AND RESOLUTIONS

**NEW TECHNOLOGY** 

TYPES OF NEW TECHNOLOGY USED

WHY WE USED THEM

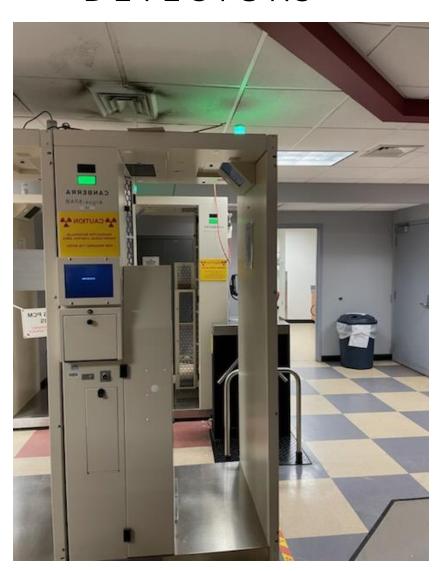
HOW WE HAVE INCREASE EFFICIENCY

FINAL TIPS & TAKEAWAYS

### EQUIPMENT USED AND WHY

- Currently we have replaced 13 whole body counters at RCA exit points with ARGOS 5 PABs with gamma Zeus detectors. Removing the need of P-10 gas bottles and risk of injury from dropped bottle. (We have had an individual injured from dropped P-10 bottle)
- ARGOS 3AB Compacts gives versatility and fast implementation at start of the outage by supporting plant Limiting Conditions of Operation (LCOs) such as seismic requirements.
- The ARGOS 4 AB with gamma Zeus detectors (Older Technology) give us the ability move to a remote area by disassembly and reassembly. Currently we have 13 of these units for parts. Which will allow us to continued use until replacement to new ARGOS 5PABs. We were currently using PCM1B and PM-7 (gamma detectors) to meet exit requirements.
- RWP Swing gates use newer technology to control entry points to various radiation and contamination areas by electronic verification.

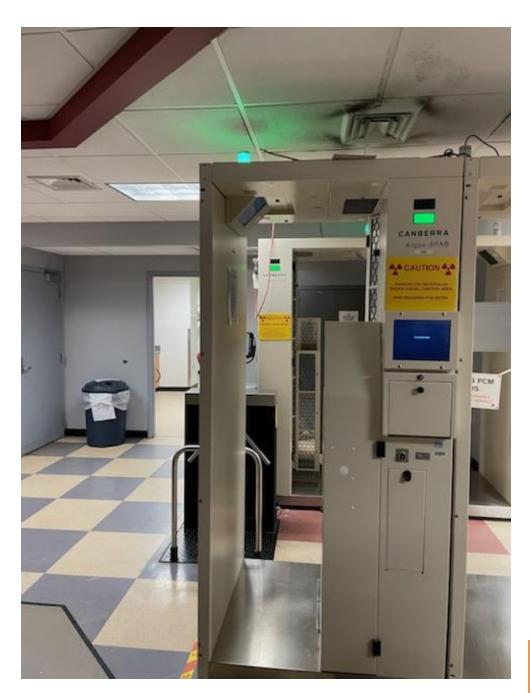
# THE ADVANTAGE OF PLASTIC SCINTILLATION DETECTORS



#### arce List PgDn, Pgl (PgDn, PgUp) F1=Add Sc F2=Delete AN-2224 F3 = Togg Source Shape Rectangular cm × 10 cm Ctrl+F6 evel 95.45 % kc 2 Unit dpm e Unit β/s Ctrl + F10= Source 1 Esc= nuclide Tc-99 Half Life 211100 year ± 1.1369 % cate Year 2019 Month 3 Day 6 ate Activity 109800 dpm ± 0 dpm 0 % ± 0 β/s ssion Rate 915 β/s Backscatter 0 % Self Absorption 0 % ource Activity 109800 dpm ± 0 % (Certificate Activity) Emission Rate 2 Source Activity 109798 dpm ± 1.1369 % ± 1.1369 % Emission Rate 914.984 β/s

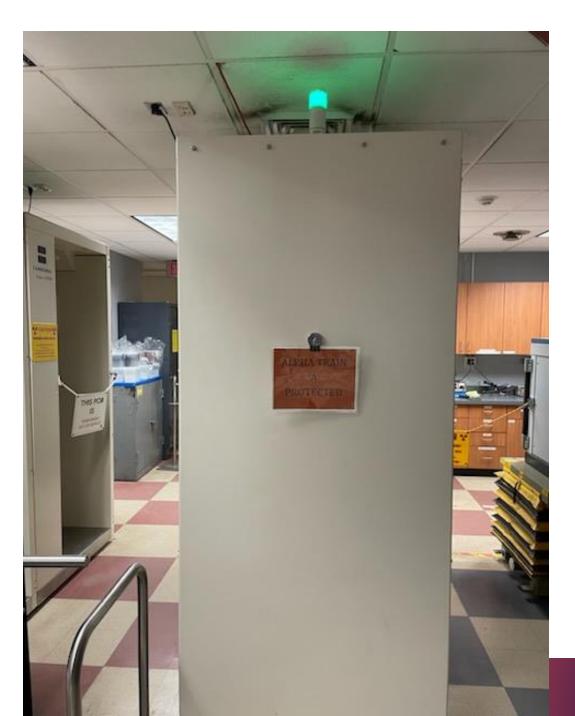
### DETECTOR TYPE

WE UTILIZED VARIOUS TYPES OF DETECTORS BASED ON LOCATION



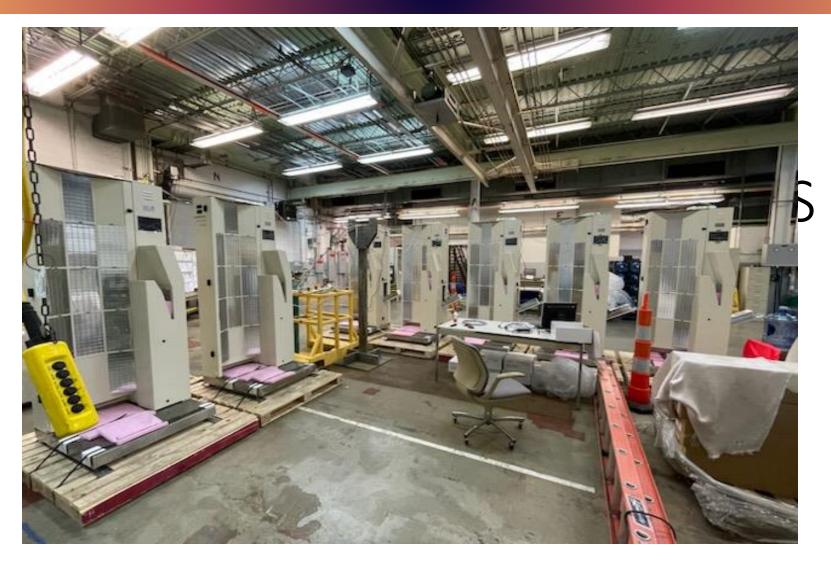
# ARGOS 5PAB WITH GAMMA ZEUS DETECTORS

This type of Whole-Body Exit Monitor give us approximately one hour turn around time for failed detectors.

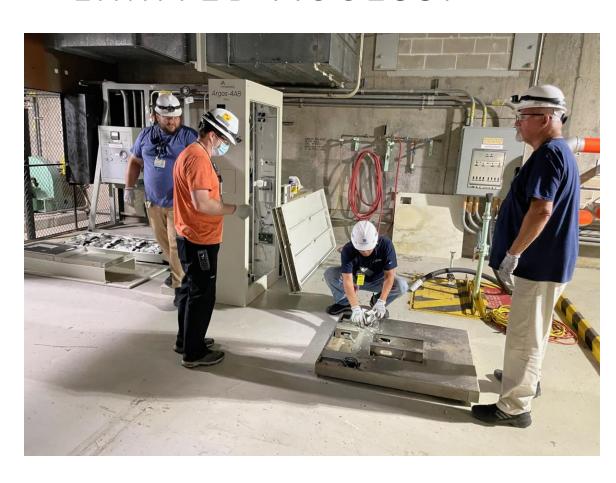


ARGOS 5PAB
GAMMA ZEUS
DETECTORS
WITH STATUS
LIGHT

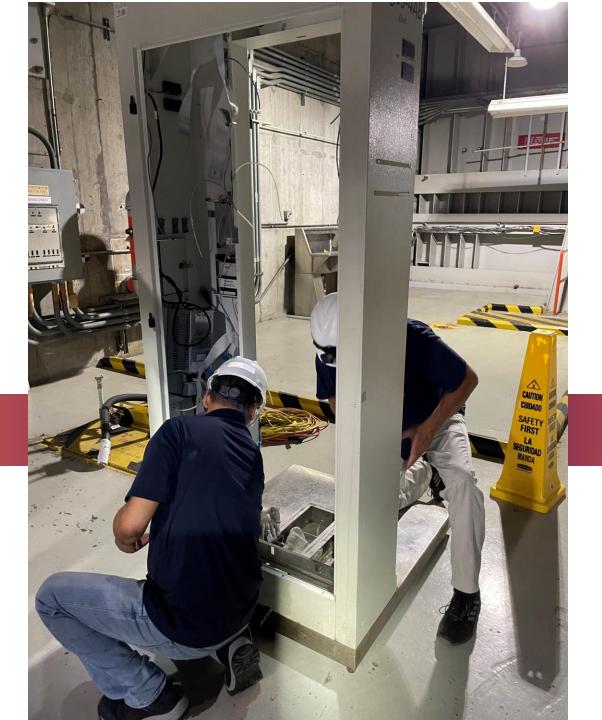
# ARGOS 3AB COMPACT WHOLE-BODY MONITOR TESTING AREA



# ARGOS 4AB DISSEMBLED TO ALLOW TRANSPORT TO AN AREA THAT HAD LIMITED ACCESS.



## QUESTIONING ATTITUDE



# REASSEMBLY



# REASSEMBLED AND WORKING

ARGOS 4AB GAMMA WITH GAMMA ZEUS DETECTORS

### EFFECTIVE DELIVERY TECHNIQUES

The new ARGOS 3ABs Compact will be used as containment exit monitors. This type of gas filled proportional detectors have a better performance for changing dose rates.

This new technology allows for reducing calibration time by updated software, keyboard and monitors attached to the equipment

THE TECHNOLOGY IN RWP SWING GATES WILL BE USED AS POSITIVE VERIFICATION OF INDIVIDUALS ENTERING A HIGH RADIATION OR ANY DESIGNATED AREA NEEDING ADDITIONAL CONTROLS.

ONCE THIS IS SETUP, WE CAN QUICKLY CHANGE OR ADD OTHER RADIATION WORK PERMITS FOR THE SELECTED AREA





## FINAL TIPS & TAKEAWAYS

- \* NEW TECHNOLOGY WILL DEPEND ON INDIVIDUAL NEEDS.
- ❖ I HAVE FOUND MANY FACETS TO EFFECTIVE USE OF TECHNOLOGY. DO NOT LIMIT HOW AND WHEN
- THE KEY IS TO OPTIMIZE EACH TYPE OF TECHNOLOGY IMPROVEMENT OR UPGRADE WITHIN YOUR ORGANIZATION.
- **❖ MULTI DISCIPLINED TEAMS AID IN FACILITATING IMPLEMENTATION**
- LISTEN TO INPUT FROM THE USERS BUT UNDERSTAND THAT THE FINAL DECISION AND FUNCTION IS BASED ON YOUR NEEDS. NOT EVERYBODY LIKES EVERYTHING.
- ❖ DON'T BE AFRAID TO MAKE IMPROVEMENTS AND UPGRADES.
  INDIVIDUALS DO NOT LIKE CHANGE.
- TRANSFORMATION IS NEEDED FOR CONTINUOUS IMPROVEMENT.
- **CONTINUOUS IMPROVEMENT IS WHAT'S NEEDED TO STAY ON TOP.**

### CONTACT INFORMATION

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