2021 IIS Benchmark Plant/Site Remote Technology Updates

LaSalle Station

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- **<u>Identify how many Area Radiation Monitoring devices used during Non-Outage and Outage i.e. (WAM, DRM 1or 2, RDS-31, and or the Electronic Dosimeter in a battery box to extend field use. Identify how many of these are remotely monitored at a central station and identify if you use any for survey results by printing the online Telemetry results on a map of the area.</u>**

<u>Online</u>
- 2 x DRM-2E
- 2 x WAM
- 5-6 x DRM-1/2

<u>Outage</u>
- 50 x DMC 3000 TX

All portable ARMs in use are used for trending information only.

We do not use portable ARMs to document field surveys.

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- **<u>List how many routine Radiation surveys your site has eliminated based on your use of fixed long term or outage Area radiation Monitors.</u>**

No routine surveys have been eliminated.

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- **What type of communication systems are in use for Outage and Non-outage for all work groups doing work in the RCA?**

Vocera and WIFI phones are used for personal communication. Vocera is pretty much limited to RP during online but usage expands to Chemistry, GE, RXS, Projects, and others during the outage.

Exelon recently switched to the Radio Active Designs belt pack radio system supplied by BHI after the FCC changed frequencies for Telex.

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- **<u>Type of telemetry software in use?</u>**

AlaraCast

- **<u>What type and how many wireless sensors are in use to monitor Temp, vibration, etc..?</u>**

8 x IIS Temperature Sensors in each heater bay year-round.

10 x IIS Temperature Sensors in Drywell during outage

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- **Survey map use in electronic format, how is it being used?**

Surveys are performed using Exelon's RadSurv program. We don't utilize Alaracast maps.

- **Drone use for inspection of hazardous areas flown and driven?**

Drone has been regularly flown in the heater bay to identify/monitor steam leaks.

Will soon be conducting testing of submersible in the Spent Fuel Pool and Suppression Pool.

Would like to get a Spot but have yet been able to come up with a use case to justify the cost.

- **Any significant dose reduction projects?**

Implementing internal/external ultrasonic cleaning for pipes.

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- **Specialized shielding applications?**

Water walls used to shield reusable filter skid allowing us to clean DSP, Under vessel Sump and other locations. Then transfer the skid and deposit the contents into the AMFM filtration system. Allows for consolidation of radwaste and saving significant cost on extra filters.

In 2020 outage setup alternate egress point on Turbine Deck. Acquired 20,000 lb. lead shield which could house two Zeus ARGOS contamination monitors. Shielding was oriented on one side and on the roof. The side was positioned towards the turbine to account for radiation coming from the turbine once it was opened. Lesson learned: what was not accounted for was radiation coming from components removed from the turbine and relocated parallel to shield wall. This caused an impact on the stability of background such that the monitors were frequently taking themselves out of service due to changing background conditions. Optimizing monitor settings and enforcing personnel positioning requirements (not shielding the monitors as they wait their turn) allowed the monitors to remain in service.

Use of Clear View shielding during internal work of RR FCVs during 2021 Outage. This application helped welders/machinists maintain visual control while minimizing exposure.

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