Advanced Mobile Leak Detection

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Dominion Energy

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ABB MobileGaurd Solution

Main Features

- The ability to cover a larger amount of leak survey area in a short amount of time
- The analyzer detects in PPB sensitivity
- The analyzer detects both methane and ethane which allows the technology to differentiate between natural gas and biogas
- The MobileGuard software has an easy-to-use interface with real-time mapping capabilities and reports are automatically generated at the end of each survey
- The equipment requires no warm-up time and is built for industrial deployment





AMLD Operational Process



Data Collection

MobileGaurd drives leak survey routes

		Mob	ileGuar	d Survey	Report
t ID 619279703	merged 0.2				
d By admin	admin			September 14,	2020 9:05:17 AM
ate October 12	October 12, 2020 1:54:54 PM EDT		Drive Stop	September 15, 2020 2:23:34 PM	
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Data Processing

MobileGaurd data is merged, emissions are prioritized , and work orders are deployed for field investigation



Field Investigation

Leak detectors perform a leak investigation at methane emission sources







Advantages of AMLD

Improving Route Efficiency

- Traditionally our leak survey routes were segmented and inefficient
- With AMLD, we can drive large distribution networks and create more efficient routes
- Finding methane emission quicker than traditional processes

Focus on investigating and identifying leaks

- Leak detectors can focus on only areas where methane emissions area present
- Reduce the time spent walking areas with no leak and focusing on areas with methane emissions

ABB MobileGuard Software

- User-friendly software for field deployment
- Improved traceability and documentation
- Automatic generations various file outputs
 - PDF, KMZ/KML, SHP, CSV files



Challenges & Learning Opportunities



Resource Management

- Leak survey team had to continue meeting compliance requirements as well as adding additional mileage in order to create efficient survey routes
- Leak repair team had an increase in leak backlog due to the additional miles and increased sensitivity

PPB vs PPM

• MobileGaurd measures in PPB and the traditional equipment used to investigate measures in PPM. The higher level of sensitivity required leak surveyors to spend additional time to find the source

Survey Coverage – Gaps

• Service lines and meters that are far from the road that were not covered by MobileGuard to be surveyed on foot



Conclusion

- With advanced mobile leak detection technology, Dominion has been able to cover more area than the traditional process.
- Dominion has seen and increase in leaks per mile with advanced mobile leak detection
- Weather conditions
- Culture change/ mindset change from traditional leak detection process to AMLD process
- Add more...

