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Discover Advanced Mobile Leak Detection (AMLD) - Natural Gas Leak Surveys Utilizing Mid-IR Open Path TDLAS

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The Heath Discover – Advanced Mobile Leak Detection (AMLD) is an ultra-sensitive advanced technology capable of detecting natural gas leaks or emissions from a remote distance while driving on a street or right of way. It allows the user to cover large areas for compliance or emission surveys and provides reports and GIS data with breadcrumb trail on a Windows-based tablet app.

The Discover AMLD employs a mid-IR open path version of the proven TDLAS technology which has been used in other Heath Products such as RMLD-CS. It uses two Mid-Infrared Lasers, one each for Methane and Ethane, that pass through the air in front of the vehicle. As the lasers pass through a gas plume, the methane and ethane absorb a portion of the light, which the instrument detects. Based on the local meteorological conditions, a given amount of gas escaping from the ground will produce a plume that varies in size and uniformity of concentration levels. The plume, by nature is variable and dependent on the soil type, moisture, temperature, wind, venting and leak rate.

The Discover AMLD technology is already employed at 4 major gas utilities 2 domestic and 2 international and is being used to find real world leaks and disaster-based surveys. It is helping to distinguish between sewer/Biogas leak and pipeline leaks and is able to localize and quantify the methane emissions. The technology was demonstrated in real world conditions at more than 50 domestic and international gas utilities with excellent results. METEC facility at Colorado State University has done extensive testing and confirmed the efficacy and accuracy of the technology in its ability to find, localize & quantify emissions. This is helping utilities rapidly find leaks and reduce methane emissions to keep communities safe and reduce greenhouse gas emissions.

The technology was developed and commercialized by Heath Products division by connecting with research scientists at Physical Sciences Incorporation a premier research organization based in Massachusetts and utilizing their most innovative ideas and bring them to life. By using their TDLAS technology and adopting it to an open path vehicle mountable system that can be very versatile and completely wireless without the need to modify the vehicle, Heath engineers and technicians were able make it into a manufacturable product and make it available commercially in the last quarter of 2022. Since then, the product has been demonstrated and has impressed the technology evaluation laboratories of gas utilities and academia with its real-world prowess in rapidly discovering methane emissions and improving productivity of surveys by a multiplier of 4

or more. We believe that this will be a game changing technology that will help utilities in making their operations safer, build trust with communities and make environmentally friendly energy available to hundreds of millions of people.