The WELL Building Standard v1, for Air Quality Screening

The WELL Building Standard helps to promote human health and well-being in buildings along with green building and environmental consciousness. WELL holistically focuses on air, water, nourishment, light, fitness, comfort and mind in order to determine the health and well being of occupants. Each one of the focuses has set criteria that must be met.

Air monitoring is one of the provisions that has specific thresholds. The goal is to promote clean air by reducing exposure to sources of indoor air pollution. There are 29 different subsections addressed to ensure the optimal indoor air quality, ranging from pest control to toxic material reduction. The first subsection to be addressed is the Air Quality Standards[1], which states that air quality should be tested after occupancy by an assessor to ensure that requirements are being met for Total Volatile Organic Compounds (TVOCs), carbon monoxide (CO), particulates (PM2.5 and PM10), formaldehyde (HCHO), ozone (O_3) and radon.

Parameter		Target
Total Volatile Organic Compounds	TVOCs	<500 µg/m^3
Carbon Monoxide	CO	<9 ppm
Particulates	PM2.5	<15 µg/m^3
Particulates	PM10	<50 µg/m^3
Formaldehyde	HCHO	< 27 ppb
Ozone	O_3	<51 ppb
Radon[2]		<4 pCi/L in the lowest occupied level of the project

Thresholds for WELL Air Quality Standard

All of the parameters have specific guidelines for monitoring, as can be seen in the above table. While GrayWolf instrumentation does not specifically meet all of the WELL prescribed methodologies, several parameters do and it can be efficiently implemented as an accurate, low limit of detection (L.O.D.) screening tool for all of the parameters of concern (excepting radon). Refer to the GrayWolf Tech Note "**WELL Standard Methodology Compared to GrayWolf Sensors**" for technical details, and to the "**WELL Performance Verification Guidebook**" for more information.

GrayWolf's IAQ Plus kits are able to monitor TVOCs, CO, O_3 and are able to interface with the FM-801 formaldehyde meter and either the PC-3016A, PM-205, PC-4000 or PC-4005 for monitoring particulates. They can also, simultaneously, measure carbon dioxide (CO_2), temperature, relative humdity (%RH) and more.

[1] The WELL BUILDING STANDARD. V1. February 2016.

[2] GrayWolf does not offer instrumentation for radon testing.

All of the GrayWolf instruments have the ability to data-log and update readings within seconds in real-time, with the exception of formaldehyde which has a 30 minute real-time sampling rate. The ability to log over a prescribed time allows for verification that all parameters remain below the WELL Standard levels. This establishes confidence prior to sending out SUMMA canisters, sorbent tubes or passive samplers, for lab analysis. Ultimately this will lead to saving time and money by establishing, ahead of time, that air samples will likely pass the laboratory testing.

Tripod mounted AdvancedSense Pro Kit

GrayWolf instrumentation can also be utilized to test ventilation effectiveness with the high accuracy, fast response NDIR CO_2 sensor, to ensure CO_2 concentrations below 800 ppm as defined by the ventilation effectiveness subsection (and to confirm the increased ventilation portion) of the Air Quality provision of the WELL Building Standard. Due to the portability of the GrayWolf meters, all fixed CO_2 and O_3 sensors can be checked, documented and have their calibration accurately validated, in-situ. More information can be found on the GrayWolf Application Note; "**Ensure That Fixed CO_2 Sensors Utilized for Demand Control Ventilation (DCV) are Providing Accurate Front-end Data"**. The %RH sensor can verify compliance with the 30 %RH to 50 %RH range prescribed in the humidity control subsection. In addition, GrayWolf offers products for long-term, fixed monitoring, to meet the air quality monitoring and feedback portion of the WELL Standard. GrayWolf's fast response, low L.O.D. VOC sensor is also able to spot check VOCs to ensure that interior paints and coatings, interior adhesives and sealants, insulation, furniture, furnishings and flooring are not off-gassing. More information can be found on the GrayWolf Application Note; "**Utilizing PIDs, for VOCs, during IAQ Investigations"**.

U.S.A. (WORLDWIDE HEADQUARTERS)
GrayWolf Sensing Solutions, LLC
6 Research Drive, Shelton, CT 06484 USA

IRELAND
GrayWolf Sensing Solutions, LTD
Annacotty Industrial Park, Unit 1C
Annacotty, County Limerick
V94 PR2Y Ireland

For More Information Call:
Tel: 1-203-402-0477 or 800-218-7997
E-Mail: SalesTeam@GrayWolfSensing.com
Web: http://www.GrayWolfSensing.com