I&E INDUSTRIES & ENVIRONMENT

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Analysis for WELL Compliance

OFFERING WORLD-CLASS ANALYSIS TO MEET THE INTERNATIONAL WELL BUILDING INSTITUTE STANDARDS

SAFER
GREENER
SMARTER

SGS

World-class analysis supporting WELL Certification and Performance Rating.

Maybe even more today because of the COVID-19 pandemic, businesses and organizations want to make sure their buildings or other spaces provide an environment that is conducive to both mental and physical health. For decades, SGS has developed solutions contributing to healthy indoor spaces and that is why we have joined a global movement to transform health and well-being inside buildings, organizations, and communities.

The International WELL Building Institute's (IWBI) WELL Building Standard is "a roadmap for creating and certifying spaces that advance human health and well-being." Projects pursuing WELL Certification can earn points based on performance outcomes for various policy, design, and operational strategies. Now building owners can also achieve a Performance Rating at a much lower cost than Certification and the rating parameters can be applied to obtaining a WELL Certification in the future. WELL's new Performance Rating System measures building performance strategies that are verified through onsite testing and sensor technology.

SGS is highly qualified to perform a variety of analyses that are staples of WELL certification. Additionally, SGS was recently designated a global WELL Enterprise Provider (EP). The EP designation for SGS is very significant as it will give those navigating WELL's Performance Rating system a dependable, high quality and expeditious way to move through the process.WELL is the leading tool for advancing health and well-being in buildings throughout North America and the world. At SGS, our long-standing AIHA ISO 17025 accreditation for air and Standard Methods for the Examination of Water and Wastewater (APHA, AWWA. WEF) qualifies us to perform a variety of analyses that are staples of WELL certification. What better assurance to your clients is there, than to partner with SGS, the world's leading testing, inspection and certification company, for their pursuit of WELL certification?

TESTING FOR WELL BUILDING STANDARD (WELL) V2

SGS can support the following concepts to meet the WELL v2 Standard:

AIR

- A01 – Air Quality
- A05 – Enhanced Air Quality
- A08 – Air Quality Monitoring & Awareness

WATER

- W01 – Water Quality Indicators
- W02 – Drinking Water Quality
- W03 – Basic Water Management (analysis only)
- W04 – Enhanced Water Quality
- W05 – Drinking Water Quality Management (analysis only)

THERMAL COMFORT

- T01 – Thermal Performance
- T06 – Thermal Comfort Monitoring
- T07 – Humidity Control

SOUND

- S02 – Maximum Noise Levels

Details of each are outlined in the following tables.

TESTING FOR WELL PERFORMANCE RATING

SGS supports the following WELL Performance Rating themes and features:

INDOOR AIR QUALITY

- PA1 – Particulate Matter
- PA2 – Enhanced Particulate Matter
- PA3 – Organic Gases
- PA4 – Enhanced Organic Gases
- PA5 – Inorganic Gases
- PA6 – Enhanced Inorganic Gases
- PA7 – Adequate Ventilation
- PA8 – Outdoor Air Supply

WATER QUALITY MANAGEMENT

- PW1 – Water Quality Indicators
- PW2 – Chemical Thresholds
- PW3 – Organics and Pesticides
- PW4 – Drinking Water Taste

THERMAL CONDITIONS

- PT1 – Thermal Environment
- PT2 – Relative Humidity

ACOUSTIC PERFORMANCE

- PS1 – Background Noise Levels

Details of each are outlined in the following tables.

CONTACT

For more information on how we can help you, including the details on our WELL testing options, or to order, contact our award-winning service representatives in any of these ways:

- Call toll free to +1 888 432 5227
- Email ehs.clientcare@sgs.com
- Visit www.sgsgalson.com/well
- Text in real-time to +1 888 432 5227

We are SGS – the world's leading testing, inspection and certification company. We are recognized as the global benchmark for quality and integrity. Our 89,000 employees operate a network of 2,600 offices and laboratories, working together to enable a better, safer and more interconnected world.

WELL V2 - Air (A)

A01 AIR QUALITY

PART 1 - PARTICULATE MATTER		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
$PM_{2.5}$	≤ 15 µg/m³	Sensor
PM_{10}	≤ 50 µg/m³	

PART 2 - ORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Total VOC	≤ 500 µg/m³	Sensor PID

PART 3 - INORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon monoxide	≤ 10 mg/m³ [9 ppm]	Sensor
Ozone	≤ 100 µg/m³ [51 ppb]	OSHA ID 214

PART 4 - RADON		
ANALYSES	WELL ALLOWABLE LIMIT	LINK
Radon (not offered by SGS- use link to find a certified lab in your region)	≤ 0.15 Bq/L [4 pCi/L]	*https://www.epa.gov/radon/epa-map-radon-zones-and-supplemental-information*

RENTAL EQUIPMENT	
NAME	DURATION
Sensor: SmartSense Base Unit	Weekly

A05 ENHANCED AIR QUALITY

PART 1 - ENHANCED PARTICULATE MATTER		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
$PM_{2.5}$	≤ 15 µg/m³	Sensor
PM_{10}	≤ 50 µg/m³	Sensor

PART 2 - ENHANCED ORGANIC GASES				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	FLOW RATE/TIME	AIR VOL (L)
Acetaldehyde	≤ 140 µg/m³	NIOSH 2016	1.5 LPM, 60 min	90 L
Formaldehyde	≤ 9 µg/m³	NIOSH 2016	0.200 LPM, 60 min	12 L
Benzene	≤ 3 µg/m³	TO-15	1 hr	0.44 L
Napthalene	≤ 9 µg/m³	TO-15	1 hr	0.44 L
Toluene	≤ 300 µg/m³	TO-15	1 hr	0.44 L
Acrylonitrile	≤ 5 µg/m³	TO-15	1 hr	0.44 L

PART 3 - ENHANCED INORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon monoxide	≤ 10 mg/m³ [9 ppm]	Sensor
Ozone	≤ 100 µg/m³ [51 ppb]	OSHA ID 214

RENTAL EQUIPMENT	
NAME	DURATION
Sensor: SmartSense Base Unit	Weekly

A08 AIR QUALITY MONITORING & AWARENESS

PART 1 - SENSOR REQUIREMENTS *(MEASURE AT LEAST THREE OF THE FOLLOWING PARAMETERS)*		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
$PM_{2.5}$	≤ 12 µg/m³	Sensor
PM_{10}	≤ 30 µg/m³	Sensor
Carbon dioxide	≤ 900 ppm; ≤ 500 ppm from outside air	Sensor
Carbon monoxide	≤ 7 mg/m³	Sensor
Ozone	≤ 100 µg/m³	Sensor*
Nitrogen dioxide	≤ 40 µg/m³	Sensor
Total VOC	≤ 500 µg/m³	Sensor
Formaldehyde	≤ 9 µg/m³	Sensor*

PART 2 - REPORTING & MAINTENANCE
ANALYSES
Data provided in format to upload to the WELL digital platform
Proof of calibration in accordance with WPVG requirements

PART 3 - AWARENESS
ANALYSES
Real-time data presented on hosted accessible website
Real-time data presented with color-coded concentrations

Performance Rating - Indoor Air Quality (PA)

PA1 - PARTICULATE MATTER		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
$PM_{2.5}$	≤ 15 µg/m³	Sensor
PM_{10}	≤ 50 µg/m³	Sensor

PA2 - ENHANCED PARTICULATE MATTER		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
$PM_{2.5}$	≤ 12 µg/m³	Sensor
PM_{10}	≤ 30 µg/m³	Sensor

PA3 - ORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Total VOC	≤ 500 µg/m³	Sensor PID

PA4 - ENHANCED ORGANIC GASES				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	FLOW RATE/TIME	AIR VOL (L)
Acetaldehyde	≤ 140 µg/m³	NIOSH 2016	1.5 LPM, 60 min	90 L
Formaldehyde	≤ 9 µg/m³	NIOSH 2016	0.200 LPM, 60 min	12 L
Benzene	≤ 3 µg/m³	TO-15	1 hr	0.44 L
Napthalene	≤ 9 µg/m³	TO-15	1 hr	0.44 L
Toluene	≤ 300 µg/m³	TO-15	1 hr	0.44 L
Acrylonitrile	≤ 5 µg/m³	TO-15	1 hr	0.44 L

PA5 - INORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon monoxide	≤ 10 mg/m³ [9 ppm]	Sensor
Ozone	≤ 100 µg/m³ [51 ppb]	OSHA ID 214

PA6 - ENHANCED INORGANIC GASES		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon monoxide	≤ 7 mg/m³ [6 ppm]	Sensor
Ozone	≤ 40 µg/m³ [21 ppb]	Sensor

PA7 - ADEQUATE VENTILATION		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon dioxide	≤ 900 ppm; ≤ 500 ppm from outside air	Sensor

PA8 - INCREASED OUTDOOR AIR SUPPLY		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Carbon dioxide	≤ 750 ppm; ≤ 350 ppm above outdoor levels	Sensor

WELL v2 - Water (W) / Performance Rating - Water Quality Management (PW)

W01 & PW1 - WATER QUALITY INDICATORS				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Turbidity	≤ 1.0 NTU, FTU or FNU	SM2130 B	1-250 ml poly	none
Coliforms[1]	ND in any 100 ml sample	SM18 9222B	1-110 ml sterile	none

W02 & PW2 - CHEMICAL THRESHOLDS				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Arsenic	≤ 0.01 mg/L	EPA 200.8	1-250 ml poly	HNO_3
Cadmium	≤ 0.003 mg/L			
Chromium (total)	≤ 0.05 mg/L			
Copper	≤ 2 mg/L			
Lead	≤ 0.01 mg/L			
Nickel	≤ 0.07 mg/L			
Mercury (total)	≤ 0.006 mg/L	EPA 245.1		
Fluoride	≤ 1.5 mg/L			
Nitrate as Nitrate (11 mg/L as Nitrogen)	≤ 50 mg/L	EPA 300.0	1-125 ml poly	none
Nitrite as Nitrite (0.9 mg/L as Nitrogen)	≤ 3 mg/L			
Total Chlorine (TCHL)	≤ 5 mg/L	SM 4500CL G-2011	1-250 ml amber	none
Residual (free) Chlorine (FRC)	≤ 4 mg/L	SM 4500CL	1-250 ml amber	none
Total trihalomethanes (TTHM) *(sum of dibromochloromethane, bromodichloromethane, chloroform and bromoform)*	≤ 0.08 mg/L	EPA 524.2	3-40 ml vials	HCl added in field
Total haloacetic acids (HAA) *(sum of chloroacetic, dichloracetic, trichloracetic, bromoacetic and dibromoacetic acids)*	≤ 0.06 mg/L	EPA 552.2	1-125 ml amber	NH_4Cl

W02 & PW3 - PESTICIDES *(PICK 2 OF THE FOLLOWING)*				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Aldrine and Dieldrin (combined)	≤ 0.00003 mg/L	EPA 505	3-40 ml amber vials	$Na_2S_2O_3$
Chlorodane	≤ 0.0002 mg/L			
Lindane	≤ 0.002 mg/L			
Atrazine	≤ 0.1 mg/L	EPA 524.2	3-40 ml vials	HCl added in field
Carbofuran	≤ 0.007 mg/L	EPA 531	1-40 ml amber vial	$Na_2S_2O_3$ + 0.5ml MCAA
Pentachlorophenol (PCP)	≤ 0.009 mg/L	EPA 515	1- 250 ml amber	12 mg NA_2SO_3
2,4-Dichlorophenoxyacetic acid (2,4-D)[2]	≤ 0.03 mg/L			
Dichlorodiphenyltrichloroethane (DDT) and metabolites	≤ 0.001 mg/L	SW846 8081B	2- 1 liter amber	none

[1]Subcontracted analysis - Due to short holding times for microbiology, please give advanced notice of sample submission.

[2]Subcontracted analysis

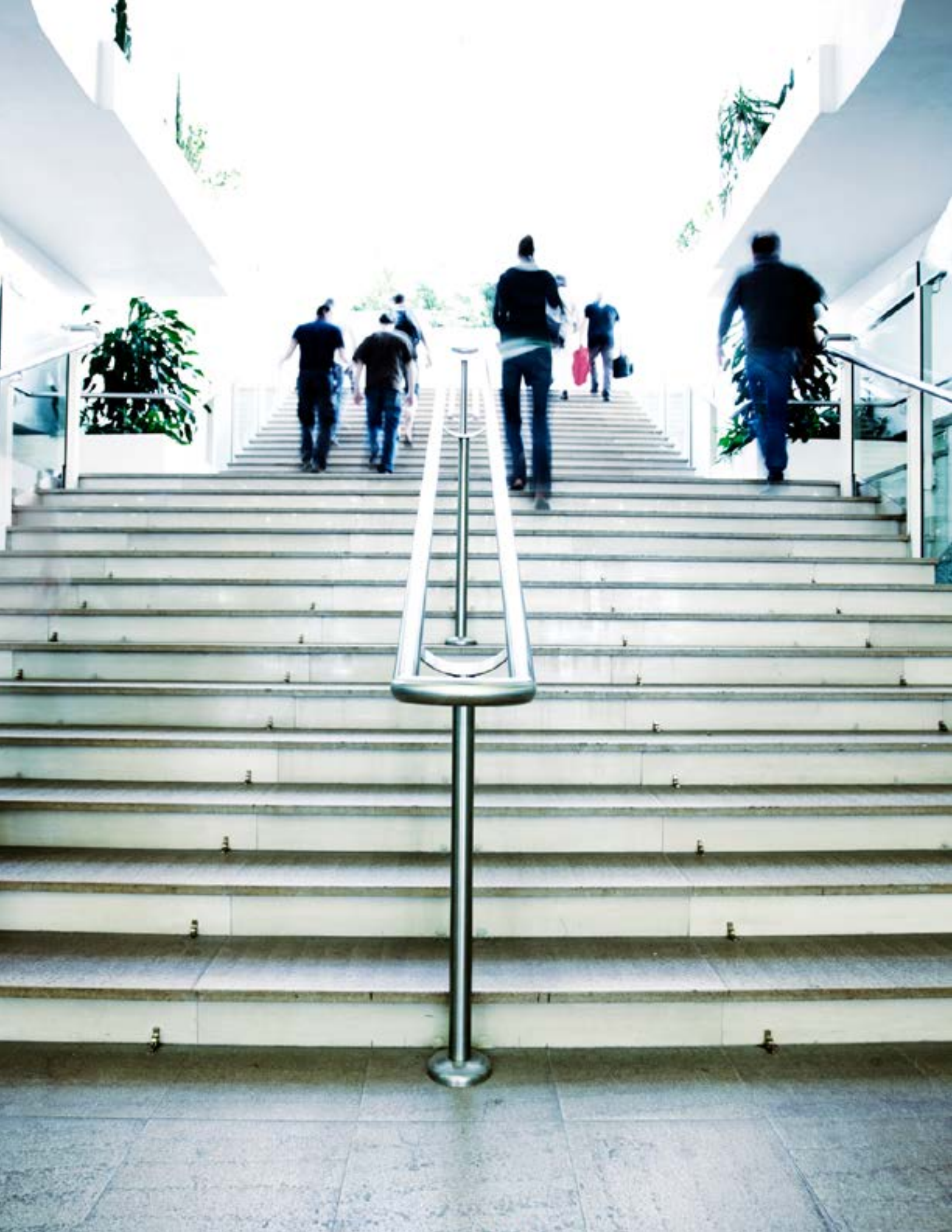
[3]Results provided here are for building monitoring purposes only and are not intended for regulatory drinking water compliance.

W02 & PW3 - ORGANICS *(PICK 3 OF THE FOLLOWING)*				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Benzene	0.01 mg/L			
Benzo[a]pyrene	0.0007 mg/L			
Carbon Tetrachloride	0.004 mg/L			
1,2, Dichloroethane	0.03 mg/L			
Tetrachloroethene (Tetrachloroethylene)	0.04 mg/L	EPA 524.2	3-40 ml vials w/ ascorbic	HCl added in field
Toluene	0.7 mg/L			
Trichloroethene (Trichloroethylene)	0.02 mg/L			
2,4,6-Trichlorophenol	0.2 mg/L			
Vinyl Chloride	0.0003 mg/L			
Xylenes (o-, m- and p-)	0.5 mg/L			

W03 - BASIC WATER MANAGEMENT *(ANALYSIS ONLY)*				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Turbidity	≤ 1.0 NTU, FTU or FNU	SM2130 B	1- 250 ml poly	none
pH			1- 125 ml poly	none
Residual (free) Chlorine (FRC)	≤ 4 mg/L	SM 4500CL	1-250 ml amber	none
Total coliforms[1]			1-110 ml sterile	none
Any other water parameter found at 80% or above its threshold listed in W02 Part 1				
Legionella[1]			110 ml sterile	none

W04 & PW4 - DRINKING WATER TASTE[3]				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Aluminum	≤ 0.2 mg/L			
Copper	≤ 1 mg/L			
Iron	≤ 0.3 mg/L			
Manganese	≤ 0.05 mg/L	EPA 200.8	1-250 ml poly	HNO_3
Silver	≤ 0.1 mg/L			
Sodium	≤ 270 mg/L			
Zinc	≤5 mg/L			
Chloride	≤ 250 mg/L	EPA 300.0	1-125 ml poly	none
Sulfate	≤ 250 mg/L			
Free Chlorine	≤ 1.25 mg/L	SM4500-Cl G	1-250 ml amber	none
Total Dissolved Solids (TDS)	≤ 500 mg/L	SM 2540C-2011	1-500 ml poly	none

W05 - DRINKING WATER TASTE[3] *(ANALYSIS ONLY)*				
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE	BOTTLE	PRESERVATIVE
Turbidity	≤ 1.0 NTU, FTU or FNU	SM2130 B	1- 250 ml poly	none
Coliforms[1]	ND in 100 ml sample	SM18 9222B	1-110 ml sterile	none
pH			1- 125 ml poly	none
Total Dissolved Solids (TDS)	≤ 500 mg/L	SM 2540C-2011	1-500 ml poly	none
Total Chlorine (TCHL)	≤ 5 mg/L	SM 4500CL G-2011	1-250 ml amber	none
Residual (free) Chlorine (FRC)	≤ 4 mg/L	SM 4500CL	1-250 ml amber	none
Arsenic	≤ 0.01 mg/L			
Lead	≤ 0.01 mg/L	EPA 200.8	1-250 ml poly	HNO_3
Copper	≤ 2 mg/L			
Nitrate as Nitrate (11 mg/L as Nitrogen)	≤ 50 mg/L	EPA 300.0	1-125 ml poly	none
Benzene	0.01 mg/L	EPA 524.2	3-40 ml vials	HCl added in field



WELL v2 - Thermal Comfort (T) / Performance Rating - Thermal Conditions (PT)

T01, T06 PART 1A, & PT1 - THERMAL ENVIRONMENT		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Temperature	varies	Sensor

T06 PART 1B - REAL-TIME DISPLAY	
NAME	FREQUENCY
Data presented on hosted accessible website	real-time
Data presented with color-coded concentrations	real-time

T06 PART 2 - REPORTING & MAINTENANCE	
Name	Frequency
Data provided in format to upload to the WELL digital platform	TBD
Proof of calibration in accordance with WPVG requirements	TBD

T07 & PT2 - RELATIVE HUMIDITY		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Humidity	varies	Sensor

RENTAL EQUIPMENT	
NAME	DURATION
Sensor: SmartSense Base Unit	Weekly

WELL v2 - Sound (S) / Performance Rating - Acoustic Performance (PS)

S02 & PS1 - BACKGROUND NOISE LEVELS		
ANALYSES	WELL ALLOWABLE LIMIT	METHOD/TECHNIQUE
Maximum Noise Levels / Background Noise Levels	varies	Wireless Dosimeter

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WHEN YOU NEED TO BE SURE

SGS