A SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS

Environmental Remediation
Asbestos/Lead/Mold/PCBs/Heat & Moisture Detection/Dry Ice Blasting/Demolition/Radon
A COMMITMENT TO EXCELLENCE

23525 Hwy. 99 E. Harrisburg, OR 97446 (Mail to: PO Box 126) **CCB #64090**
PH 541-995-6008 FX 541-995-1015
Email david@atezinc.com Website www.atezinc.com

Radon Sampling for the Monroe High School and Elementary School, Monroe Oregon

For: Mr. Russ Pickett
Monroe School District
365 North 5th Street
Monroe, Oregon 97456

ATEZ Job No. 161021 October 2016

A VERIFIED SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS

Environmental Remediation
Asbestos/Lead/Mold/PCBs/Heat & Moisture Detection/CO2 Blasting/Demolition/Saw Cutting/Radon
A COMMITMENT TO EXCELLENCE

23525 Hwy. 99 E. Harrisburg, OR 97446 (Mail to: PO Box 126) **CCB #64090**
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October 25, 2016

RADON MEASURING REPORT

******MONROE SCHOOL DISTRICT – 365 NORTH 5th STREET, MONROE OREGON******

PROJECT: 161021
PROJECT REVIEW: David J. Proudfoot

CLIENT:
Mr. Russ Pickett
Monroe School District #1J
365 North 5th Street
Monroe, Oregon 97456
541.847.6292-T / 541.847.6290-F
russ.pickett@monroe.k12.or.us

PROJECT SITE:
Monroe High School
365 North 5th Street
Monroe Elementary School
600 Dragon Drive
Monroe, Oregon 97456

ANALYSIS RESULTS:

In all, **SEVEN (07)** areas were determined for Radon measuring. All samples measured below the 4.0 picocuries per liter EPA threshold for Radon. (See attached AccuStar Laboratory sample analysis).

LOG #	DEVICE#	STARTED	TIME	ENDED	TIME	AREA TESTED	RESULT (pCi/L)
1999449	2918024	10/18/2016	10:41 am	10/20/2016	1:03 pm	HS Basement Art Room	0.8
1999450	2918016	10/18/2016	10:46 am	10/20/2016	1:05 pm	HS Basement Boiler Room	0.5
1999451	2918022	10/18/2016	10:54 am	10/20/2016	1:11 pm	HS Gym Eq. Storage Room	0.8
1999452	2918003	10/18/2016	11:01 am	10/20/2016	1:14 pm	HS Shop Library Room	1.0
1999453	2918004	10/18/2016	11:22 am	10/20/2016	1:27 pm	ES Gym Stage Office	0.7
1999454	2918002	10/18/2016	11:27 am	10/20/2016	1:29 pm	ES Library	0.7
1999455	2918017	10/18/2016	11:38 am	10/20/2016	1:35 pm	ES Room #13	< 0.4

NARRATIVE SUMMARY RADON MEASURING-October 25, 2016
Monroe School District #1J / High School and Elementary School

EPA GUIDELINES & REGULATIONS
The EPA Personal Exposure Limit/Threshold (PEL) for Radon is 4 pCi/l (picocuries per liter) of radon.

SITE VISIT:
On Tuesday, October 18, 2016, David J. Proudfoot placed seven vials in the structures to measure for possible Radon. The vials were collected and sealed on Thursday, October 20, 2016 by Mr. Proudfoot and shipped under chain-of-custody to AccuStar Laboratories for analysis by EPA Method #402-R-004.

INFORMATIONAL:

RADON
Radon-222 is the decay product of radium-226. Radon-222 and its parent, radium-226, are part of the long decay chain for uranium-238. Since uranium is essentially ubiquitous in the earth's crust, radium-226 and radon-222 are present in almost all rock, soil, and water.

THE BASICS ON RADON GAS
Radon (chemical symbol Rn and atomic number 86) is a naturally occurring radioactive gas found in soils, rock, and water throughout the World. It has numerous different isotopes, but radon-220, and -222 are the most common. Radon is one of the heaviest gases, has a half-life of 3.823 days and emits alpha particles. Radon causes lung cancer, and is a threat to health because it tends to collect in homes, sometimes to very high concentrations. As a result, radon is the largest source of exposure to naturally occurring radiation.

WHO DISCOVERED RADON?
The German chemist Friedrich E. Dorn discovered radon-222 in 1900, and called it radium emanation. However, a scarcer isotope, radon-220, was actually observed first, in 1899, by British scientists R.B. Owens and Ernest Rutherford. The medical community nationwide became aware of radon in 1984. That year a nuclear plant worker in Pennsylvania discovered radioactivity on his clothing while exiting his place of work through the radiation detectors. The source of the radiation was determined to be radon decay products on his clothing originating from his home.

TESTING PROCEDURES & PATTERN:
Radon canisters are to be placed on the lowest habitable level of the structure, on an inside wall, not in bathrooms, laundry rooms or porches or where it will be exposed to high humidity or noticeable drafts from open doors or windows and are not to be disturbed for the term of exposure.

Short Term measuring may occur for a minimum term of 48-hours to a maximum term of 96-hours. Once the vial has been exposed for a minimum of 48-hours it can be re-capped at any time short of the maximum 96-hour period. This measuring was performed over a 69-hour term. One Radon Gas in Air (rn-LS) vial was employed for the sampling.

LONG TERM MEASURING
Long Term testing is available if client so desires. Long Term measuring is performed over a 3 to 9-month period utilizing Alpha Track filter tape.

HEALTH CONCERNS
Neither this report nor any laboratory report is intended to provide medical advice, nor shall it be interpreted as an indicator or cure-all of potential medical or safety problems. If you have concerns or questions relating to health issues, please contact your physician for advice.

RADON & RISK

Is Radon hazardous? This is a complicated question which is disputed by various groups of scientists. Elevated levels of radon (and thus the SLRDs) are unquestionably a significant health hazard, but how high is "elevated"? Additionally, is the total accumulative life-time dose or the dose rate more important? Many believe these questions remain unanswered. We do know that documentation exists supporting the evidence that radon is the second leading cause of lung cancer in the United States.

RADON OCCURRENCE

Throughout the entire Earth, the naturally occurring element uranium is found in at least trace amounts. This naturally occurring substance is naturally radioactive and with time, the uranium decays into several other elements (called "daughters"), one at a time. Each time a transformation into a new element takes place, the atom is said to undergo "decay". During each decay, energy is released from the atom. The released energy is collectively given the term "ionizing radiation" and the atom is said to exhibit "radioactivity".

Along this decay chain, one of the elements that is produced is radon. Radon is unique from the other uranium decay products because it is a gas and as a gas, it is capable of migrating from the location of the original uranium atom into the surrounding soil gas. Worldwide, an average of about two radon atoms are emitted from every square centimeter of soil everywhere on the Earth every second of every day.

When radon decays, it releases a "large" atomic alpha particle and the atom is transmuted into polonium. An alpha particle is essentially a helium atom stripped of its electrons. It is at this point that the real hazards associated with radon are encountered. For it is not the radon which is responsible for the health problems, but rather the short lived radon daughters (SLRDs) and their decay products, such as the alpha particles. The radon may be thought of as merely a source and a vehicle for the SLRDs.
There are several different kinds (isotopes) of naturally occurring radon. Typically, when we speak of radon, we are speaking of radon 222, which has a half-life of 3.8 days. This means that left on its own, in an enclosed container, half the radon will be gone in four days, and in eight days only 25% of the original will remain.

Once the radon atom decays, it subsequently undergoes four rapid decays starting with polonium 218, which decays into lead 214, which decays into bismuth 214, which decays into polonium 214. Each of these daughters has a half-life of less than 30 minutes (the polonium 214 has a half-life of only 0.00016 seconds). Furthermore, the daughters are electrically charged. The SLRDs are measured in units called Working Levels (WL).

During each decay, at least one of three types of ionizing radiation are emitted by the SLRDs: alpha, beta and gamma. The alpha particle is easily stopped by a single piece of paper or layer of clothing. The fact that it is easily stopped speaks to the issue of its "linear energy transfer" (or LET). Since the alpha particle is large and easily stopped, the alpha particle transfers virtually all of its energy to the material that stopped the particle. Beta has less probability of being stopped and imparts less energy into the stopping material. The gamma radiation is similar to X-rays and has an even lower probability of being stopped.

Since the radon is airborne, these daughters have a high probability of being airborne. If the daughters are inside the lung when they decay, the lining of the lung wall becomes the stopping material. Since the alveolar cells of the lung wall do not have a significant protective coating an alpha particle can collide with the live cell, imparting an enormous amount of energy to the cell, possibly disrupting the DNA within the cell. This is the interaction that is thought to initiate the cancers associated with the SLRDs.

NARRATIVE SUMMARY RADON MEASURING-October 25, 2016
Monroe School District #1J / High School and Elementary School

IS IT SAFE
We can't tell you when it's safe. We are not physicians, engineers or Industrial Hygienists. Our job is to measure Radon and provide our client with the results.

COMPANY COMPLIANCE
All measuring shall be performed by ATEZ, Inc. personnel following our Basic Standard Operating Procedures & Safety Program Guidelines.

INSURANCE CLAIM PROJECTS
Insurance companies cannot dictate who performs your service work. You can direct your insurance company to contract with ATEZ, Inc. to perform this work. We believe we are the most highly qualified firm performing the services we offer. As noted below we carry all the necessary bonding, insurance and certifications over and above current requirements.

POLICY
No reports or test results will be released to any third party without prior consent from our client.

COURT TESTIMONY
If court testimony is required for our knowledge of this property, the rates shall be $200.00/hour.

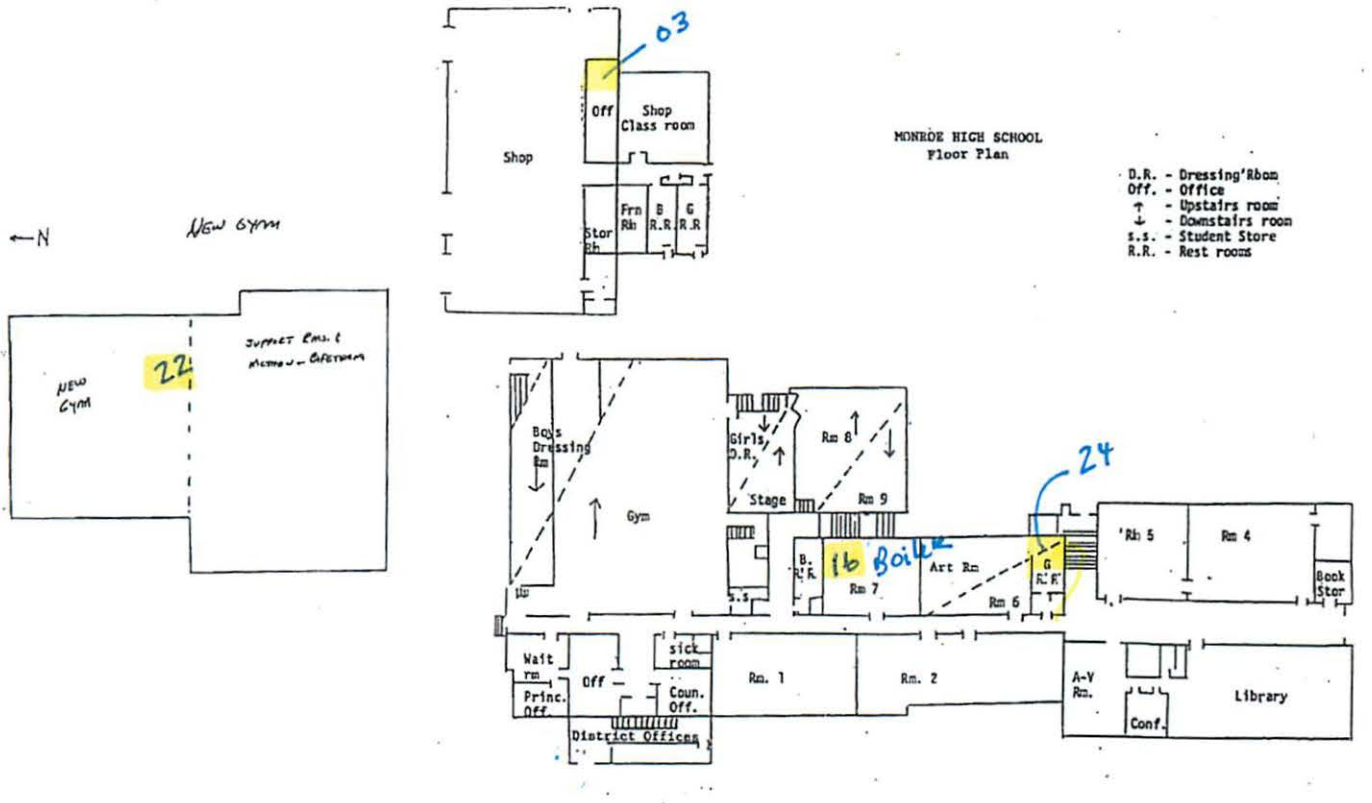
LIABILITY LIMIT
In the event of litigation against ATEZ, Inc. damages shall be limited to not exceed the value of this Report.

WARRANTY
No warranty, expressed or implied, is made.

Sincerely,

David J. Proudfoot
CHEROKEE, Inc. Consultants for ATEZ, Inc.
541.995.6008 / david@atezinc.com

Insurance: $5,000,000 / $5,000,000
Bonding: $500,000
Statutory PW Bond: $30,000
DUNS #: 610103442
Workman's Comp: #EBWCC00113-00
Asbestos, Pollution, LBP, Mold Coverage



Apx. Total Gross Sq. Feet: 63,795

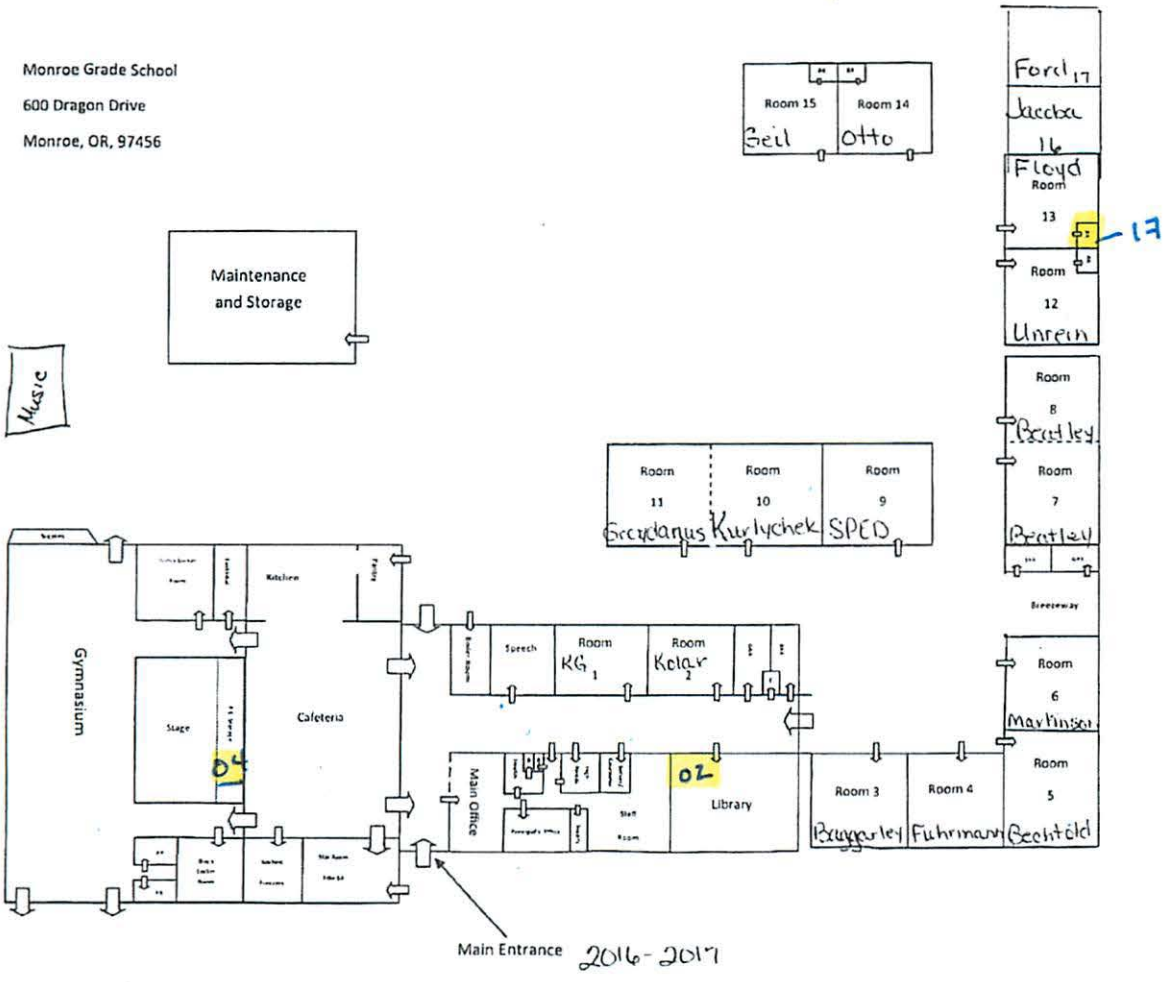
00 : Vial locations & Vial number

Main Bldg	31,527
Gym Bldg	24,248
Shop Bldg	8,020

Monroe Grade School

600 Dragon Drive

Monroe, OR, 97456



00: Vial locations & vial number

AccuStar
Professional Radon Laboratory Services Since 1984

Radon in Air

NELAC NY 11769
NRPP 101193 AL
NRSB ARL0017

EPA Method #402-R-92-004
Liquid Scintillation
NRPP Device Code 8088
NRSB Device Code 12193

Laboratory Report for:

Atez Inc.
PO Box 126
Harrisburg OR 97446

Property Tested: Project # 161021 MSD

High School and Elementary School
365 North 5th Street
600 Dragon Drive
Monroe OR 97456

Log Number	Device Number	Test Exposure Duration:		Area Tested	Result (pCi/L)
1999449	2918024	10/18/2016 10:41 am	10/20/2016 1:03 pm	High School Unit 1 Basement Art Room and Spani	0.8
1999450	2918016	10/18/2016 10:46 am	10/20/2016 1:05 pm	High School Unit 2 Basement Boiler Room	0.5
1999451	2918022	10/18/2016 10:54 am	10/20/2016 1:11 pm	High School Unit 3 New Gym Equipment Storage F	0.8
1999452	2918003	10/18/2016 11:01 am	10/20/2016 1:14 pm	High Shool Unit 4 Shop and Library	1.0
1999453	2918004	10/18/2016 11:22 am	10/20/2016 1:27 pm	Grade School Unit 5 Gym Storage Office	0.7
1999454	2918002	10/18/2016 11:27 am	10/20/2016 1:29 pm	Grade School Unit 6 Library	0.7
1999455	2918017	10/18/2016 11:38 am	10/20/2016 1:35 pm	Grade School Unit 7 Room 13	< 0.4

Comment: A copy of this report was emailed to david@atezinc.com

Distributed by: National Safety Products

Date Received: 10/24/2016 Date Logged: 10/24/2016 Date Analyzed: 10/25/2016 Date Reported: 10/25/2016

Report Reviewed By: Michele Cleveland Report Approved By: Carolyn D. Koke

Carolyn D. Koke, President, AccuStar Labs

Disclaimer:

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

11 Awl Street Medway MA 02053 888-480-8812 FAX 508-533-8831