

J.C. Broderick & Associates, Inc.

Environmental / Construction Consulting & Testing



March 6, 2024

Mr. Severino Fasulo
Syosset Central School District
99 Pell Lane
Syosset, New York 11791

Re: Perform Professional Consulting and Environmental Sampling and testing for Radon in Air at:

**Site: South Grove Annex
60 Colony Lane
Syosset, New York 11791
Site Visits: February 5 & 8, 2024**

JCB#: 23-55371

Dear Mr. Fasulo:

J.C. Broderick and Associates, Inc. (JCB) was retained by the Syosset Central School District (SCSD) to perform environmental sampling for indoor radon gas within the above referenced school building. The radon sampling was performed by experienced JCB representatives on the above referenced dates following the American National Standards Institute (ANSI)/American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings* MA-MFLB-2023, effective date December 1, 2023, guidance document. The site visits consisted of the following:

- Collection of radon in air samples from 15 locations within occupied rooms in contact with the ground at the above referenced school building.
- Submission of designated samples to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for radon in air analysis.
- Review and compare the laboratory results to the ANSI/AARST *Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings* MA-MFLB-2023, effective date December 1, 2023.

Summary of Sample Collection, Field Screening and Sample Submission

The following section summarizes the environmental sampling performed. Please refer to attachments located at the end of this report for additional details.

- On February 5, 2024, a total of 19 short-term radon test kits were deployed in 15 strategic occupied spaces located throughout the above referenced school building. The test kits remained within the given space for a period of three (3) days. A select number of samples served as a duplicate or remained closed as a field blank for QA/QC compliance.

March 6, 2024

Mr. Severino Fasulo of Syosset CSD

Perform Professional Consulting and Environmental Sampling and testing for

Radon in Air at:

Baylis Elementary School

580 Woodbury Rd., Plainview, NY 11803

JCB#: 23-55371

- The area around each test kit location was field screened for the presence of total volatile organic compounds utilizing a MiniRAE 3000 Portable photo-ionization detector (PID). Technical data pertaining to the MiniRAE 3000 Portable PID is available upon request.
- On February 8, 2024, a total of 19 short-term radon test kits were retrieve, sealed, and assigned unique identification numbers, logged into a chain of custody document, and delivered to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) accredited radon laboratory for analysis. Prior to sample retrieval, temperature and humidity were recorded utilizing a OXV Thermo-Hygrometer meter.

Quality Assurance and Quality Control (QA/QC) Procedures

To ensure that measurement results are reliable, JCB performed duplicate and laboratory blank sampling at four (4) sample locations. JCB representatives maintained a radon sampling chain of custody used to track samples from sampling point to analysis which summarized the following:

- Sample identification;
- Test Kit ID number;
- Device ID number;
- Sampling beginning date and time;
- Sampling ending date and time;
- Temperature, °F;
- Humidity, %.

Summary of Laboratory Analysis

Please refer to the Tables located in Attachment #1 for a summary of submitted samples and laboratory analysis results.

- The laboratory analytical results for the radon in air samples were reviewed and compared to the ANSI/AARST *Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings* MA-MFLB-2023, effective date December 1, 2023, which establishes a radon in air action concentration level of 4.0 pCi/L.
 - The laboratory analysis results from the radon in air samples submitted did **not** reveal any elevated concentrations of radon exceeding 4.0 pCi/L, the referenced action level. The highest recorded radon concentration was in space Room 8 at a concentration of 0.5 pCi/L, well below the 4.0 pCi/L action level.
- EMSL Analytical Inc. (EMSL) of Cinnaminson, New Jersey provided laboratory analytical services. Copies of EMSL's NYSDOH certifications are available upon request.

March 6, 2024
Mr. Severino Fasulo of Syosset CSD
Perform Professional Consulting and Environmental Sampling and testing for
Radon in Air at:
Baylis Elementary School
580 Woodbury Rd., Plainview, NY 11803
JCB#: 23-55371

Conclusions and Recommendations

Based upon the results of the laboratory analysis, the USEPA decision matrix does not recommend any additional investigation pertaining to radon in air associated with the above referenced school building.

The ANSI/AARST guidance document recommends that responsible care requires repeating initial testing procedures for all building(s) at least every 5 years and in conjunction with any sale of a building.

Radon testing should also be conducted when any of the following circumstances occur:

- a new addition is constructed or alterations for building reconfiguration or rehabilitation occur;
- a ground contact area not previously tested is occupied, or a building is newly occupied;
- heating or cooling systems are significantly altered, resulting in changes to air pressures or pressure relationships;
- ventilation is significantly altered by extensive weatherization, changes to mechanical systems or comparable procedures;
- significant openings to soil occur due to:
 - groundwater or slab surface water control systems that are altered or added (e.g., sumps, perimeter drain tile, shower/tub retrofits, etc.) or,
 - natural settlement causing major cracks to develop;
- earthquakes or construction blasting, fracking or formation of sink holes nearby; or
- a mitigation system is altered, modified, or repaired.

Should testing indicate concentrations that meet or exceed the action level, conduct evaluations, corrections and further testing until radon concentrations have been mitigated to below the action level.


However, to monitor for possible changes in indoor quality, JCB does recommend that the current annual testing schedule for radon in air within the school building continue.

Please refer to the attached laboratory reports to be included in the District's Radon Measurement Plan.

- Attachment #1 Tables
- Attachment #2 Figures
- Attachment #3 Field Photograph Logs
- Attachment #4 Laboratory Analysis Reports

If there are any questions or if more information is needed, please feel free to contact our office.

Sincerely,
J. C. Broderick & Associates, Inc.


Steven Muller, P.G.
Director, Subsurface Division

Attachment #1 Tables

Table 1. Summary of Radon Samples Submitted for Laboratory Analysis

Sample ID#	AHERA Space ID	Sample Start Date	Sample End Date	Description of Sample	Analysis Method
524540	2025	2/5/2024	2/8/2024	Bookshelf	Radon in Air
524669	2027	2/5/2024	2/8/2024	Bookshelf	Radon in Air
524561 (Dup)		2/5/2024	2/8/2024		Radon in Air
524691	2029	2/5/2024	2/8/2024	Bookshelf	Radon in Air
521712 (Blank)		2/5/2024	2/8/2024		Radon in Air
524382	2006A	2/5/2024	2/8/2024	Shelf	Radon in Air
524521	2009	2/5/2024	2/8/2024	Cabinet	Radon in Air
521639 (Dup)		2/5/2024	2/8/2024		Radon in Air
524385	2013	2/5/2024	2/8/2024	Cabinet	Radon in Air
524433	2015	2/5/2024	2/8/2024	Cabinet	Radon in Air
524607 (Blank)		2/5/2024	2/8/2024		Radon in Air
524488	2016	2/5/2024	2/8/2024	Cabinet	Radon in Air
524491	2018	2/5/2024	2/8/2024	Speaker	Radon in Air
524502	2020	2/5/2024	2/8/2024	Cabinet	Radon in Air
524601	2024	2/5/2024	2/8/2024	Cabinet	Radon in Air
524520	2022A	2/5/2024	2/8/2024	Fridge	Radon in Air
524543	2022	2/5/2024	2/8/2024	Cabinet	Radon in Air
521796	Room 8	2/5/2024	2/8/2024	Shelf	Radon in Air
524465	Room 9	2/5/2024	2/8/2024	Bookcase	Radon in Air

Notes:

B = Blank

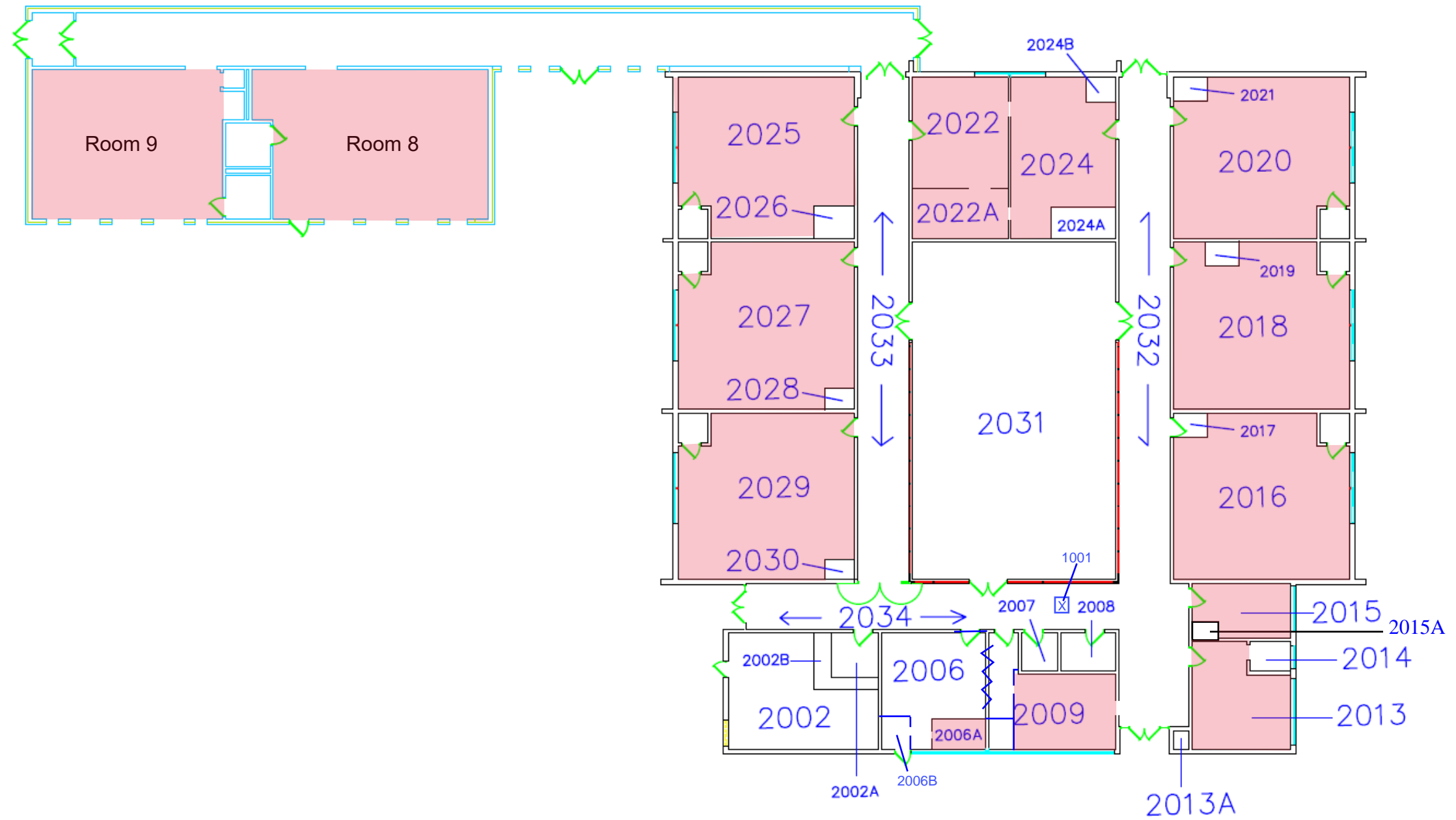
Dup = Duplicate

Table 2. Summary of Radon Laboratory Results		
AHERA Space ID	2/5/24-2/8/24 (pCi/L)	1/9/23 - 1/12/23 (pCi/L)
2025	0.20	0.30
2027	-0.10	0.40
2027 (Dup)	0.20	0.30
2029	0.10	0.40
2029 (Blank)	-0.10	0.20
2006A	0.10	0.30
2009	0.20	0.60
2009 (Dup)	0.30	0.50
2013	0.20	0.40
2015	0.20	0.20
2015 (Blank)	-0.10	0.30
2016	0.20	0.40
2018	0.20	0.40
2020	0.00	0.40
2024	0.00	0.20
2022A	0.20	0.50
2022	0.20	0.40
Room 8	0.50	-
Room 9	0.20	-
Notes: B = Blank Dup = Duplicate		

Attachment #2

Figures

NEW



ANNEX

Pipe tunnel 1001

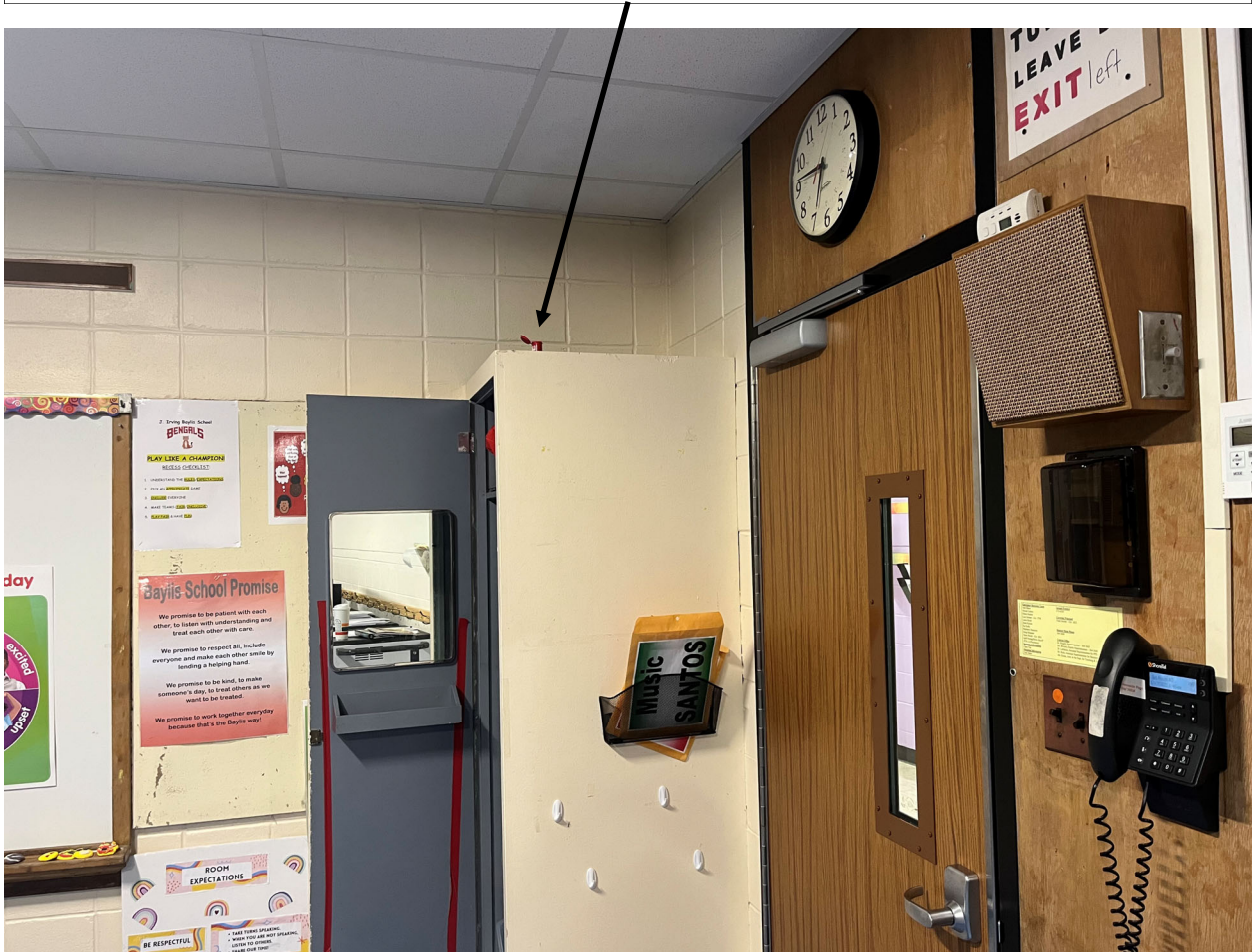


J.C. Broderick & Associates
Environmental Consulting & Testing
1775 Expressway Dr. North
Hauppauge, New York 11788
Phone: 631.584.5492 Fax: 631.584.5913

JCB #: 12-22347
SYOSSET CENTRAL SCHOOL DISTRICT
South Grove Annex
60 Colony Lane, Syosset, NY 11791

Attachment #3
Field Photograph Logs

Typical Radon Sample



Field Photograph Log

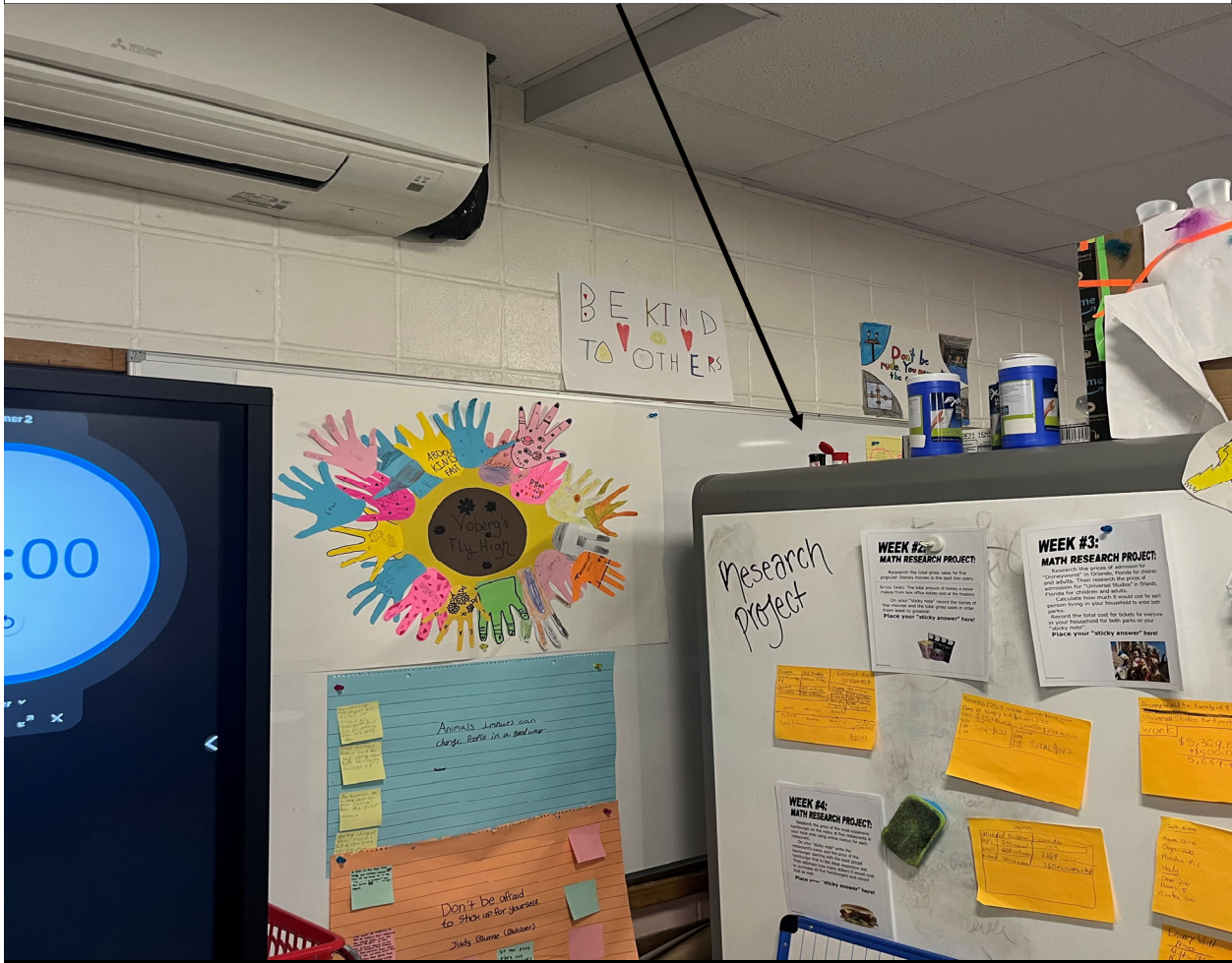
Indoor Radon Investigation at:

South Grove ES Annex
60 Colony Lane
Syosset, New York 11791

Photo No. 01

JCB#: 23-55371

Typical Radon Sample with Blank



Field Photograph Log

Indoor Radon Investigation at:

South Grove ES Annex
60 Colony Lane
Syosset, New York 11791

Photo No. 02

JCB#: 23-55371

Typical Radon Sample with Duplicate



Field Photograph Log

Indoor Radon Investigation at:

South Grove ES Annex
60 Colony Lane
Syosset, New York 11791

Photo No. 03

JCB#: 23-55371

Attachment #4
Laboratory Analysis Reports



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0327
<http://www.EMSL.com> cinnaminsonradonlab@emsl.com

EMSL Order: 382400748
CustomerID: JCBR50
CustomerPO:
ProjectID:

Attn: **Steven Muller**
J.C. Broderick & Associates
1775 Expressway Drive North, Suite 1
Hauppauge, NY 11788

Phone: (631) 584-5492
Fax:
Received: 2/13/2024 11:56 AM
Analysis Date: 2/14/2024
Collected: 2/5/2024

Project: **South Grove Annex / 23-55371**

Test **South Grove Annex**
Site: **60 Colony Ln**
Syosset, NY 11791

Test Report: Radon in Air Test Results

Liquid Scintillation ID	Location	Radon Activity (pCi/L)	Start	Stop	Temperature F	Humidity %	Sample Type
524540 382400748-0001	2025 - Bookshelf	0.2	2/5/2024 7:42:00 AM	2/8/2024 4:38:00 PM	70	18	Customer
Sample Notes:							
524669 382400748-0002	2027 - Bookshelf	-0.1	2/5/2024 7:44:00 AM	2/8/2024 4:40:00 PM	70	16	Customer
Sample Notes:							
524561 382400748-0003	2027 - Bookshelf	0.2	2/5/2024 7:44:00 AM	2/8/2024 4:40:00 PM	70	16	Duplicate
Sample Notes: Duplicate's Customer Sample:382400748-0002 Duplicate RPD >67%					Duplicate RPD = 200.0%		
524691 382400748-0004	2029 - Bookshelf	0.1	2/5/2024 7:44:00 AM	2/8/2024 4:41:00 PM	71	15	Customer
Sample Notes:							
521712 382400748-0005	2029 - Bookshelf	-0.1	2/5/2024 7:44:00 AM	2/8/2024 4:41:00 PM	71	15	Blank
Sample Notes:							
524382 382400748-0006	2006A - Shelf	0.1	2/5/2024 7:45:00 AM	2/8/2024 4:42:00 PM	70	16	Customer
Sample Notes:							
524521 382400748-0007	2009 - Cabinet	0.2	2/5/2024 7:46:00 AM	2/8/2024 4:44:00 PM	71	15	Customer
Sample Notes:							
521639 382400748-0008	2009 - Cabinet	0.3	2/5/2024 7:46:00 AM	2/8/2024 4:44:00 PM	71	15	Duplicate
Sample Notes: Duplicate's Customer Sample:382400748-0007					Duplicate RPD = 40.0%		
524385 382400748-0009	2013 - Cabinet	0.2	2/5/2024 7:47:00 AM	2/8/2024 4:45:00 PM	71	17	Customer
Sample Notes:							
524433 382400748-0010	2015 - Cabinet	0.2	2/5/2024 7:47:00 AM	2/8/2024 4:46:00 PM	71	17	Customer
Sample Notes:							



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-0327

<http://www.EMSL.com>

cinnaminsonradonlab@emsl.com

EMSL Order: 382400748

CustomerID: JCBR50

CustomerPO:

ProjectID:

Test Report: Radon in Air Test Results

Liquid Scintillation ID	Location	Radon Activity (pCi/L)	Start	Stop	Temperature F	Humidity %	Sample Type
524607 382400748-0011	2015 - Cabinet	-0.1	2/5/2024 7:47:00 AM	2/8/2024 4:46:00 PM	71	17	Blank
Sample Notes:							
524488 382400748-0012	2016 - Cabinet	0.2	2/5/2024 7:48:00 AM	2/8/2024 4:47:00 PM	71	15	Customer
Sample Notes:							
524491 382400748-0013	2018 - Speaker	0.2	2/5/2024 7:49:00 AM	2/8/2024 4:48:00 PM	72	16	Customer
Sample Notes:							
524502 382400748-0014	2020 - Cabinet	0	2/5/2024 7:49:00 AM	2/8/2024 4:49:00 PM	72	18	Customer
Sample Notes:							
524601 382400748-0015	2024 - Cabinet	0	2/5/2024 7:51:00 AM	2/8/2024 4:49:00 PM	73	14	Customer
Sample Notes:							
524520 382400748-0016	2022A - Fridge	0.2	2/5/2024 7:52:00 AM	2/8/2024 4:51:00 PM	73	15	Customer
Sample Notes:							
524543 382400748-0017	2022 - Cabinet	0.2	2/5/2024 7:52:00 AM	2/8/2024 4:51:00 PM	73	18	Customer
Sample Notes:							
521796 382400748-0018	8 - Shelf	0.5	2/5/2024 7:58:00 AM	2/8/2024 4:53:00 PM	71	20	Customer
Sample Notes:							
524465 382400748-0019	9 - Bookcase	0.2	2/5/2024 7:59:00 AM	2/8/2024 4:54:00 PM	71	20	Customer
Sample Notes:							

Report Notes

Please visit www.radontestinglab.com



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-0327

<http://www.EMSL.com>

cinnaminsonradonlab@emsl.com

EMSL Order: 382400748

CustomerID: JCBR50

CustomerPO:

ProjectID:

Test Report: Radon in Air Test Results

Liquid Scintillation ID	Location	Radon Activity (pCi/L)	Start	Stop	Temperature F	Humidity %	Sample Type
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The United States Environmental Protection Agency (EPA) has established a radon action level of 4.0pCi/L. EPA recommends mitigation of a structure if the confirmed radon level is equal to or greater than 4.0pCi/L.

The radon tests were performed using liquid scintillation radon detectors and counted on a liquid scintillation counter following EPA Method # 402-R-92-004 testing protocol for Radon in Air testing. EPA recommends retesting every two years.

Please contact EMSL Analytical, Inc. or your State Health Department for further information.

All procedures used for generating this report are in complete accordance with the current EPA protocols for the analysis of Radon in Air.

Analyst(s)

Jeanel Zoll (19)

Dominic Gehret, Radiochemistry Laboratory Manager, 10872

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ FL RB2034/R2687,IL RNL2008202,IN RTL00935,IA RNLAB10005,KS KS-LB-0005/KS-MS-0482,ME SPC202,MN RL-0005,NE 474/RMB-1083,NJ 03036/MEB92525/MES13910,NY 10872,OH RL39,OK D9952,PA 2573/3393/68-00367,RI RMB-108/RI00179,WV RL000220,NRSB-ARL6006,NRPP

Initial report from 02/15/2024 15:39:24



EMSL ANALYTICAL, INC.

**CHAIN OF CUSTODY
RADON LABORATORY SERVICES**
(COMMERCIAL USE)

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: 800-220-3675
www.emsl.com

EMSL Job #: 382400748

RECEIVED
EMSL
CINNAMINSON, N.J.
2024 FEB 13 AM 11:56

Company Information:

EMSL
Acct #:

Company Name: JC Brodevick & Assoc. Inc.
Contact: Steven Muller
Address: 1775 Express Dr. N.
City: Hempstead
State: NY Zip: 11788
Phone: (631) 584-5492 Fax: (631) 584-3395
Email: smuller@jcbrodevick.com

Technician Certification #:

Tech Name: Steven Muller

Tech Signature: [Signature]

Project/Site Information:

***Required**

Project Name: South Grove Annex
Project # / PO: 23-55371
*Address: 60 Colony Lane
*City: Syosset *State: NY *Zip: 11791
*Building type? Residential Non-Residential
 School Other: _____
*Building foundation type? Basement Crawlspace
 Slab on Grade Other: _____
Special Notes / Instructions:
19 samples

***Turnaround Time (TAT) Options**

1 Day 2 Day 3 Day 4 Day

Disclaimer: In no event shall EMSL be liable for indirect, special, consequential, or incidental damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages arising out of or in connection with EMSL's services there under or the delivery, use, reliance upon or interpretation of test results by client or third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereafter.

(S) Sample (B) Blank (D) Duplicate	Device Number	Location	Room #	Exposure Period Beginning Date		Exposure Period Ending Date		Temp, °F	Humidity, %
				Date	Time	Date	Time		
(S) Sample	524540	Bookshelf	2025	2/5/24	7:42	2/8/24	16:38	69.6	17.5
S	524669	Bookshelf	2027	2/5/24	7:44	2/8/24	16:40	69.6	16.3
D	524561								
S	524591	Bookshelf	2029	2/5/24	7:44	2/8/24	16:41	70.5	15.4
B	521712								
S	524382	Shelf	2006A	2/5/24	7:45	2/8/24	16:42	70.1	16.4
S	524521	Cabinet	2009	2/5/24	7:46	2/8/24	16:44	71.2	15.3
D	521639								
S	524385	Cabinet	2013	2/5/24	7:47	2/8/24	16:45	71.4	16.5
S	524433	Cabinet	2015	2/5/24	7:47	2/8/24	16:46	71.0	16.5
B	524607								

Relinquished by (Sign):

Date: 2/13/24 Time: _____

Received by EMSL (Sign): [Signature]

Date: 2/13/24 Time: 11:56 AM

jeanel & Roll
jeanel Roll

