Environmental Resources Group

Assessment • Remediation • Compliance • Risk Management

REMAINING MOLD EVALUATION REPORT

KINAWA MIDDLE SCHOOL
1900 KINAWA DRIVE
OKEMOS, MICHIGAN 48864

PREPARED FOR:

OKEMOS PUBLIC SCHOOLS - OPERATIONS
4000 OKEMOS ROAD
OKEMOS, MICHIGAN 48864
ATTENTION: MR. BRIAN LIEBER

PREPARED BY:

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ERG PROJECT NO.: 250993

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1.0 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Environmental Resources Group, LLC (ERG) was retained by Okemos Public Schools to conduct a mold evaluation for remaining mold within Kinawa Middle School. The evaluation was conducted following extensive remediation last academic school year and this summer throughout the building by GFL Environmental. Areas of known remaining and reported mold were evaluated as part of this project. The specific tasks of the evaluation were as follows:

- Conduct visual and olfactory observations in select areas of the building where visible mold was known or had been reported and had not yet been remediated.

- Collect digital photographs of current conditions (see Appendix A).

Kristin L. and Phillip A. Peterson conducted the evaluation from August 4-8, 2025, to determine current conditions relative to visible mold.

1.2 BACKGROUND INFORMATION

The school is a single-story building of steel and masonry construction which was constructed slab on grade. No service tunnels exist below the structure. The air in the building is generally supplied by plenum supply and ducted return air handling systems. The air handling units serving the 100 and 200 wings are in the Basement Air Handling Room. Air handling systems serving other areas are distributed through the building. Select 400 Wing rooms have separate mezzanine or rooftop air handling units.

1.3 EVALUATION EQUIPMENT AND METHODS

Kristin L. and Phillip A. Peterson, trained investigators with over 26 and 37 years of environmental experience respectively, made visual and olfactory observations throughout the building.

Digital photographs were collected using a digital camera.

2.0 VISUAL AND OLFACTORY OBSERVATIONS

During the ERG evaluation, visual and olfactory observations were made by the inspectors. A summary of observations in the building follows:

ROOM 308 (INCLUDING FISH TANK ACCESS ROOM)

- No musty or earthy odors were detected upon entry to the classroom.
- No musty or earthy odor was detected upon entry to the Fish Tank Access Room.
- Visible mold was observed on the bottom of a pair of desks, on wood cabinets, on an overturned bin and other surfaces.
- Approximately 240 square feet of visible mold was observed on the walls and doors of the Fish Tank Access Room.
- No visible mold was observed on the contents of or within the wood or metal cabinets.
- 6 water stained drop ceiling tile were observed.
- The drop ceiling tile gridwork was rusted.
- The corner beads on the drywall were rusted.
- The return air grilles appeared clean and unobstructed.
- The supply air grilles appeared clean and unobstructed.
- The overall level of dust was low.

AUDITORIUM

- No musty or earthy odors were detected upon entry to the Auditorium.
- No visible mold was observed on seats or seat backs.
- No visible mold was observed on instruments, instrument cases or instrument racks in the Auditorium or on the Stage.
- The HVAC system servicing this area was shut down for maintenance or repair.
- 6 square feet of visible mold was observed on the bottom of a table at the ELECTRO CONTROLS cabinet on the Stage.
- The overall level of the dust was low.

ROOM 410

- No musty or earthy odors were detected upon entry into this room.
- Two non-district issued wooden chairs were observed in the room. They appeared to have had the paint “stressed” to artificially age the chairs.
- No air freshener was observed in the room.
- No visible mold was observed in the room.
- The overall level of dust was low.

ROOM 401

- No musty or earthy odors were detected upon entry.
- No visible mold was observed.
- Carpet was present in the room.
- The ceiling tile appeared to be original to the room.
- The overall level of dust was low to moderate.

MATH BOOK STORAGE ROOM

- No musty or earthy odors were detected upon entry to the room.
- Mold was observed on the walls and doors of the room.
- Several cardboard boxes were inspected and no mold was observed on the boxes.
- The overall level of dust was low.

ELECTRICAL ROOM

- No musty or earthy odors were detected upon entry to the room.
- Approximately 100 square feet of visible mold was observed on the walls and door.
- The overall level of dust was low.

OFFICES BEHIND ROOM 308 (3 OFFICES), STAFF WORK ROOM, COPY ROOM

- No musty or earthy odors were detected upon entry to this area.
- Approximately 40 square feet of mold was reported behind the wall covering in the offices.
- Approximately 6 square feet of visible mold was observed on book shelves in the Work and Copy Rooms.
- Approximately 8 square feet of visible mold was observed under tables in the Staff Work Room.
- The overall level of dust was low.

MAIN/GUIDANCE OFFICES/CLINIC/MAIL ROOM

- No musty or earthy odors were observed upon entry to these offices.
- Approximately 3 square feet of visible mold was observed on the bookshelf in Mrs. Maness' office.
- Damaged/delaminated cove molding was observed in the Guidance Office. Multiple colors of adhesive were observed on the wall at this location. No mold was observed, no water marks were observed and the drywall was firm (not soft as occurs over several periods of wetting and drying).
- Approximately 7 square feet of visible mold was observed on Mail Room cupboard doors.

- Visible mold was observed on surfaces, wheelchairs, and the sick bed in the clinic.

POOL AND POOL MECHANICAL ROOM

- No musty or earthy odors were detected upon entry to the Pool Room.
- Visible mold was observed on the bottom of a desk, on metal cabinets, on the bulletin board and on some cardboard boxes.
- Visible mold was observed on some objects in the Storage Room containing the yellow rubber ducks.
- 10 square feet of visible old was observed in the Tool Storage Room.
- A significantly damaged section of ceramic tile was observed.
- The Pool Mechanical Room smelled moldy upon entry.
- Approximately 60 linear feet of fiberglass pipe insulation in the Pool Mechanical Room was moldy.
- Water from an unknown source could be heard dripping at the far end of the room.
- The uninsulated pipe was rusted.
- Damaged drywall was observed above the stairs to the Pool Mechanical Room.
- The overall level of dust was moderate to high.

3.0 CONCLUSIONS

Based upon reports by others, the visual and olfactory observations made by the investigator and the results of sample analysis, the following conclusions were drawn:

Test results were indicative of conditions at the time of the investigation and may not represent conditions at other times. No conclusions can be drawn regarding areas of the building which were not inspected.

Visible mold was detected in the inspected areas as enumerated in this report. ERG believes the mold remediation conducted in the building to date should be allowed to continue and ERG believes the decontamination should occur in the following prioritized order:

Room 308 (as students will soon be returning to this room for the school year, ERG believes this room should get the highest priority).

Rooms behind 308 (including the Staff Work Room and Copy Room, these rooms are frequented by staff and should be the next priority).

Stage (the ease with which the mold table can be removed and discarded make it next on the priority list).

Clinic/Mail Room – ERG believes the visible mold in the Clinic and Mail Room make these rooms priorities over the Guidance Office and Main Office. Previous testing in this area revealed that drywall joint compound was asbestos containing material. GFL must exercise caution and follow applicable regulations when contacting and disturbing ACM. ERG recommends on-site third party air sampling during and after any work that disturbs ACM (i.e.- as may occur during cove molding repair).

Main and Guidance Offices – Staff frequent this area.

Math Book Storage Room-few staff and no students were reported to access this room allowing it to be lower on the priority list.

Electrical Room-Very few staff and no students enter this room, allowing it to be lower on the priority list.

Pool and Pool Mechanical Room- These rooms are isolated by a ventilation system that is operated in 100% exhaust mode. Very few staff and no students access this area allowing it to have the lowest priority.

The above conclusions are based on the inspection results, observations made at the time of the inspection and information provided by others. Should new or revised information become available, ERG

reserves the right to revise the report, modify or change the above conclusions and subsequent recommendations.

A detailed work plan has been prepared and accompanies this report in Appendix B.

4.0 RECOMMENDATIONS

Based on the observations made by the investigators, the findings of this evaluation and the conclusions above, the following recommendation is offered:

1. Continue remediation in the order presented in the Conclusions section of this report. Mold remediation should be performed in compliance with the specifications developed by ERG for the initial mold remediation designed for the 100 Wing of the building. This guidance has been updated and is attached in Appendix C.

2. Retain a mold remediation professional (GFL) to clean visibly moldy surfaces remaining in the school. Ensure the ERG protocol and those of other established guidelines (from OSHA or New York City or those from the Institute of Inspection, Cleaning and Restoration Certification, IICRC) are carefully followed by the contractor. Ensure the HVAC equipment serving each work area is turned off during remediation.

3. Once cleanup is complete, begin a program of periodic mold surveillance. Ensure that, if identified, mold is promptly removed from the building. The surveillance should focus on areas where students and staff are regular occupants. Depending on the quantity of mold (fewer than 10 square feet), mold trained Operations Department staff may conduct the remediation.

4. If mold persists, contact ERG to conduct additional evaluation which might include the collection of a more detailed building history, destructive testing, additional mold in air testing, and sampling for VOCs or microbiologically derived VOCs (MVOCs).

This evaluation was conducted consistent with sound investigative principles and current industry standards. Information in this report was provided by other than ERG. The accuracy or correctness of that information was not confirmed or verified by ERG. For additional information, please review the attached data or call ERG.

Kristin Peterson
Senior Industrial Hygienist

Phillip A. Peterson
Senior Project Manager

APPENDIX A

Digital Photograph Log

Photograph Date: August 4-8, 2025
Photo taken by: ERG
Site: Kinawa Middle School
ERG Project #: 250993

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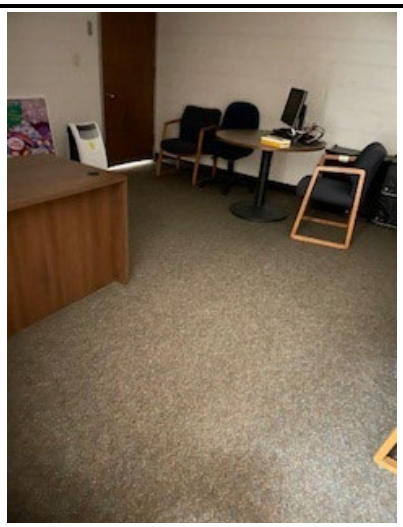
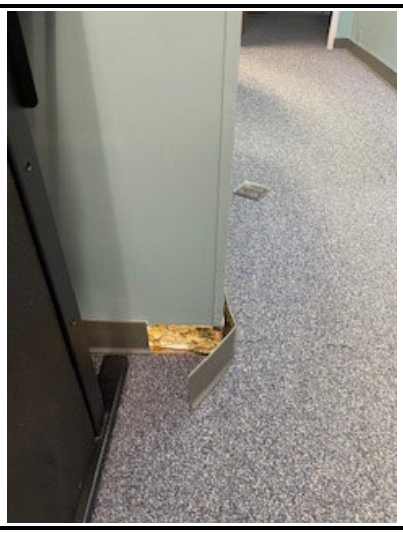
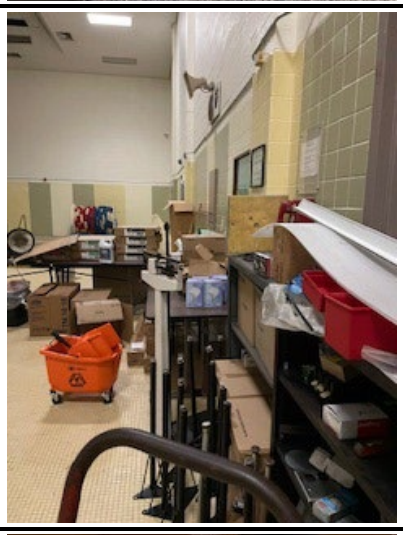
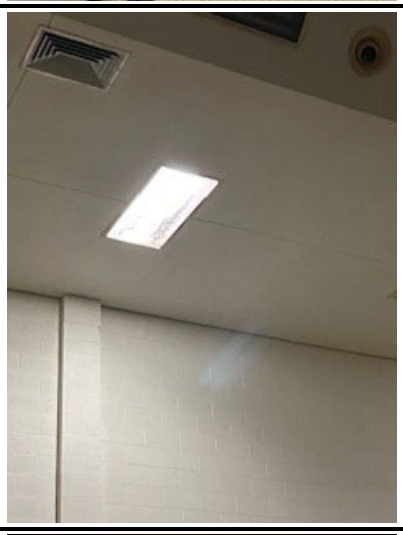
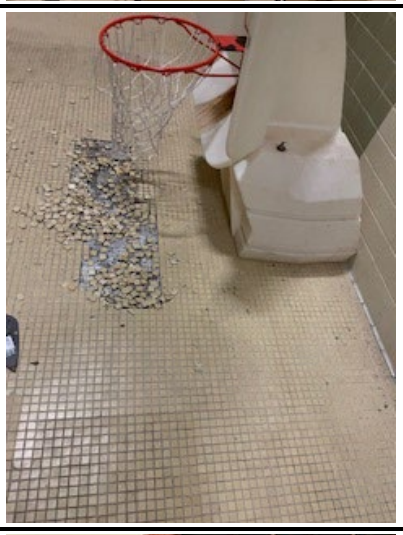
	1. Visible mold was observed under a table on the Auditorium Stage near the ELECTRO CONTROL panel.
	2. Room 401 has original carpet, but no visible mold or musty odors were detected in the room.
	3. A pair of wooden chairs were observed in Room 410. The paint appears to be “distressed”.

Photograph Date: August 4-8, 2025
Photo taken by: ERG
Site: Kinawa Middle School
ERG Project #: 250993

	4. Visible mold was observed under tables in Room 308.
	5. Visible mold was observed on the bottom of the top of the bookshelf in the Copy Room.
	6. Visible mold was observed on the wood door in the vicinity of the Staff Work Room (near Room 308)

	7. Damaged cove molding was observed in the Guidance Office. Multiple colors of adhesive were observed, but no odors, water marks of visible mold were observed.
	8. The Pool Room has a wide variety of stored materials.
	9. Among the stored items in the Pool Room are moldy wooden tables.

	10. Moldy tables, moldy metal file cabinets and moldy cardboard boxes were staged for disposal in the Pool Room.
	11. Fluorescent light fixture lenses trapped dirt and debris and some appear to have held water in the past.
	12. Moldy pipe insulation and rusted ducts were observed in the Pool Mechanical Room. This room also had a distinct musty odor.

	13. Damaged drywall joint compound was observed in the Pool Room immediately above the stairs to the Pool Mechanical Room.
	14. An area of damaged ceramic tile and grout was observed in the Pool Room.
	15. The Clinic, also referred to as the Sick Room had visible mold on surfaces, on wheelchairs and the sick bed.

	16. Visible mold was found under the table in Room 308.
	17. Visible mold and staining was found on the wheelchair in the Clinic.

APPENDIX B

Remaining Mold Decontamination Plan

Environmental Resources Group
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Remaining Mold Decontamination Plan
Okemos Public Schools
Kinawa Middle School
1900 Kinawa Drive
Okemos, Michigan 48864
ERG Project No.: 250993
August 13, 2025

In order to remove visible mold from classrooms, offices and other spaces in Kinawa Middle School, the following steps are recommended:

1. Retain a professional mold remediation contractor (GFL Environmental) who shall complete the following in Room 308 (including the fish tank access room) the three offices behind Room 308, the Electrical Room, Clinic and the Math Book Storage Room:

    a. Shut off or isolate the Heating, Ventilating and Air Conditioning System serving the rooms where the work will occur. Install critical barriers over all HVAC grilles, grates, diffusers, etc.
    b. Establish negative pressure in each classroom, room, office or area using a HEPA filter equipped negative air machine(s) exhausted to out-of-doors (where possible). This/these machine(s) shall run continuously throughout the remediation in a given space. Document negative pressure with a magnahelic gauge or equivalent.
    c. Ensure workers don appropriate PPE for mold remediation, including N-95 filtering facepieces, nitrile gloves, disposable coveralls and safety glasses (at a minimum).
    d. Clean and disinfect moldy tables, chairs, cabinets, bookcases, shelves and other furniture. Clean and disinfect visibly moldy walls. Discard (with prior notification to Okemos Public Schools-Operations Department) items that cannot be properly or thoroughly decontaminated (i.e.- the Clinic sick bed).
    e. In the case of moldy drywall removal in the rooms behind Room 308, construct a negative pressure work area and remove drywall 2-3 feet above the floor. Ensure compliance with the Michigan Silica in Construction Standard. Clean and disinfect work area surfaces. Allow ERG to conduct a visual inspection. Once the work area passes the visual inspection, rebuild the spaces.
    f. Clean visibly moldy contents and those in proximity to moldy surfaces. HEPA vacuum the top of books and other educational materials.
    g. Those items with no evidence of mold, within closed cabinets, those not in proximity to mold may remain without cleaning or disinfection.
    h. Remove fabric or paper bulletin board covers and discard.
    i. Do not remove white boards, bulletin boards with vinyl covers, clean those items in place.
    j. Remove and discard porous bulletin boards for others to replace.

In Room 401 or any location where carpet may require removal, conduct the following:

k. Remove cove molding and scrape the mastic flat to the wall surface in preparation of new cove molding installation (by others).
l. Where carpet removal is necessary, carefully inspect the area below the carpet for asbestos containing floor tile. Moisten and then remove the carpet within the confines of a critical barrier enclosure. Only when no tile (if present) adheres to the carpet, may the carpet be discarded as non-ACM waste. Ensure appropriate asbestos barrier tape and warning signs are in place if asbestos containing floor tile are present. Ensure a drop cloth decontamination station is constructed with a dedicated HEPA vacuum for the decontamination of waste, tools and personnel.
m. Remove asbestos containing floor tile using the dry ice method. Ensure a carbon dioxide meter is present to continually measure carbon dioxide concentrations in the work area. Ensure the MIOSHA carbon dioxide limit of 5,000 parts per million (ppm) is not exceeded. Ensure the non-asbestos mastic and asbestos containing floor leveling compound are also removed. Negative pressure (0.02 inches of water column drop) and building security shall be maintained at all times. Ensure workers wear appropriate Personal Protective Equipment (PPE) for asbestos removal operations.
n. Allow ERG to conduct third party air sampling during and after the removal of asbestos containing materials. A detailed visual inspection and, where floor leveling compound is present, final clearance air sampling is required as grinding will render this material friable. This task presumes that final clearance air sampling can be conducted by Phase Contrast Microscopy and that the quantity of ACM floor leveling compound in any room does not exceed 160 square feet. A greater quantity of floor leveling compound will require clearance air sampling and sample analysis by Transmission Electron Microscopy. ERG shall develop an asbestos abatement specification prior to floor tile and floor leveling removal.
o. Once successful final clearance air sampling has been achieved in each room, as reported by ERG, remove the drop ceiling tile and replace with new.
p. Conduct one last HEPA vacuum and wet wipe cleaning of the work area, remove the negative air machine(s) and release the work area to other tradespersons.

2. In the Main Office, Guidance Office, Mail Room, Staff Work Room and Copy Room, conduct the following:

a. Shut off or isolate the Heating, Ventilating and Air Conditioning System serving the rooms where the work will occur. Install critical barriers over all HVAC grilles, grates, diffusers, etc.
b. Establish negative pressure in each classroom, room, office or area using a HEPA filter equipped negative air machine(s) exhausted to out-of-doors (where possible). This/these machine(s) shall run continuously throughout the remediation in a given space.
c. Ensure workers don appropriate PPE for mold remediation, including N-95 filtering facepieces, nitrile gloves, disposable coveralls and safety glasses (at a minimum).

d. Clean and disinfect moldy tables, chairs, cabinets, bookcases, shelves and other furniture or surfaces. Clean and disinfect any visibly moldy walls.

3. In the Pool and Pool Mechanical Room, conduct the following:

    a. Ensure the ventilation system remains operational and in exhaust mode.
    b. Remove by the most direct route out of the building and discard low value moldy items (tables, file cabinets, boxes). Clean high value items (tools, equipment, parts).
    c. Remove moldy pipe insulation in the Pool Mechanical Room, clean and disinfect surfaces, apply a long acting biocidal agent.
    d. Remove the drywall debris and repair the damaged drywall above the stairs to the Pool Mechanical Room.

4. On the Auditorium Stage, conduct the following;

    a. By the most direct route possible, remove the moldy table on the Stage and discard it in the trash.

The contractor must comply with all applicable provisions of the Michigan Occupational Safety and Health Administration (MIOSHA) Asbestos Construction Standard, the Asbestos Hazard Emergency Response Act, MIOSHA Part 690, Silica in Construction and all other applicable rules and regulations.

All work must be conducted (outside normal business hours, if necessary) to minimize the disruption to building staff and students.

Provide Safety Data Sheets (SDS) for all products used for cleaning and disinfecting.

This document was developed by ERG.