



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Science and Research

Follow-Up Review: EPA Updated Information for Indoor Mold Research Tools

Report No. 16-P-0308

September 8, 2016



Report Contributors:

Benjamin Beeson
Hilda Canes-Garduno
Dwayne Crawford
Eric Lewis

Abbreviations

| | |
|--------|--|
| EPA | U.S. Environmental Protection Agency |
| ERMI | Environmental Relative Moldiness Index |
| MATS | Management Audit Tracking System |
| MSQPCR | Mold Specific Quantitative Polymerase Chain Reaction |
| OIG | Office of Inspector General |
| ORD | Office of Research and Development |

Cover photos: Mold growing on the backside of wallpaper (left), and on the surface of a unit ventilator (right). (EPA photos)

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At a Glance

Why We Did This Review

We assessed the U.S. Environmental Protection Agency's (EPA's) actions to address recommendations in Office of Inspector General (OIG) Report No. [13-P-0356](#), *Public May Be Making Indoor Mold Cleanup Decisions Based on EPA Tool Developed Only for Research Applications*, issued August 22, 2013.

The Assistant Administrator for the Office of Research and Development was the action official responsible for ensuring completion of the corrective actions we reviewed.

This report addresses the following EPA core value:

 Science, Transparency, and Rule of Law.

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Listing of [OIG reports](#).

Follow-Up Review: EPA Updated Information for Indoor Mold Research Tools

What We Found

In 2013, we reported that some licensees were inappropriately marketing the EPA-patented Mold Specific Quantitative Polymerase Chain Reaction technology and the agency-developed Environmental Relative Moldiness Index tool. The OIG noted that some licensee advertising could mislead the public into thinking that the EPA had endorsed these research tools for evaluating indoor mold for public use, even though the EPA readily acknowledged that these tools were for research applications only and had not been validated for public use.

Corrective actions taken by the EPA should help ensure that the public has correct information about EPA-approved technology and tools for evaluating indoor mold.

The OIG's 2013 report contained three recommendations to address these concerns. Recommendations 1 and 3 remained open with corrective actions pending, and Recommendation 2 was closed upon issuance of the final report. For the two open recommendations, the EPA completed agreed-upon corrective actions. The EPA reviewed websites of active licensees to look for language that suggests EPA endorsement, and finalized the agency's fact sheet on indoor mold to include discussion on the tools' limitations. These actions resulted in updated information, and agency reviews of licensee websites helped ensure that information about the agency's tools is correct. We make no further recommendations.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE INSPECTOR GENERAL

September 8, 2016

MEMORANDUM

SUBJECT: Follow-Up Review: EPA Updated Information for Indoor Mold Research Tools
Report No. 16-P-0308

FROM: Arthur A. Elkins Jr.

A handwritten signature in black ink, appearing to read "Arthur A. Elkins Jr.", is written over the printed name.

TO: Thomas Burke, Deputy Assistant Administrator and EPA Science Advisor
Office of Research and Development

This is our report on the subject review conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). The project number for this review was OPE-FY16-0020. EPA officials reviewed our draft findings and had no comments.

Because this report contains no recommendations, you are not required to respond to this report. However, if you submit a **response**, it will be posted on the **OIG's public website**, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal, along with corresponding justification.

We will post this report to our website at www.epa.gov/oig.

Table of Contents

| | |
|-----------------------------|---|
| Purpose..... | 1 |
| Background | 1 |
| Responsible Office..... | 1 |
| Scope and Methodology | 1 |
| Results of Review | 2 |
| Conclusion | 3 |

Appendix

| | |
|----------------------|---|
| A Distribution | 4 |
|----------------------|---|

Purpose

We conducted this review to follow up on the status of corrective actions taken by the Office of Research and Development (ORD) of the U.S. Environmental Protection Agency (EPA) in response to recommendations in Office of Inspector General (OIG) Report No. [13-P-0356](#), *Public May Be Making Indoor Mold Cleanup Decisions Based on EPA Tool Developed Only for Research Applications*, issued August 22, 2013.

Background

The 2013 OIG report found that some licensees' advertising had the potential to mislead the public into thinking that the mold specific quantitative polymerase chain reaction (MSQPCR) and Environmental Relative Moldiness Index (ERMI) research tools were EPA-approved methods for evaluating indoor mold. The prior report was conducted as a result of a hotline complaint that alleged that firms were using the EPA-developed tool even though the EPA had not validated it for public use. The EPA readily acknowledged that it had not validated the MSQPCR or the ERMI, since those research tools were not intended for public use.

That 2013 OIG report contained three recommendations to the Assistant Administrator for ORD:

| 2013 OIG Recommendations |
|--|
| <ol style="list-style-type: none">1. Periodically review licensee advertising to determine whether licensees have violated the terms of their agreements by implying the EPA's endorsement of MSQPCR and take appropriate action based on the results of this review.2. Remove or clarify statements on the EPA's website that imply or suggest the EPA validated or endorsed MSQPCR for public use.3. Finalize the fact sheet on indoor mold, MSQPCR and ERMI to include discussion on the limitations of these tools and make it available to the public, including posting the fact sheet on the EPA's website. |

Source: OIG Report No. [13-P-0356](#).

Responsible Office

ORD was responsible for completing the recommendations in the OIG's 2013 report.

Scope and Methodology

We performed our follow-up review from April through July 2016. We did not follow up on Recommendation 2 because it was closed when the OIG issued the 2013 report. For Recommendations 1 and 3, we verified whether information

from the EPA's Management Audit Tracking System (MATS) matched documentation provided by ORD as corrective actions taken.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Results of Review

The EPA reported completed corrective actions for Recommendations 1 and 3 from the 2013 OIG report. Our review verified that information entered into MATS matched the documentation provided by ORD for the completed corrective actions taken, as shown in Table 1.

Table 1: OIG review of EPA corrective actions

| 2013 OIG recommendations | EPA corrective action |
|---|---|
| 1. Periodically review licensee advertising to determine whether licensees have violated the terms of their agreements by implying the EPA's endorsement of MSQPCR and take appropriate action based on the results of this review. | ORD completed two annual reviews of websites for all active MSQPCR licensees to look for language implying EPA endorsement or validation, and found no problems. |
| | OIG review |
| | Reviews for 2014 and 2015 addressed the recommendation to ensure there was no EPA-implied endorsement or validation of MSQPCR technology. We verified that MATS data correctly reflects the status of corrective actions taken. |
| 3. Finalize the fact sheet on indoor mold, MSQPCR and ERMI to include discussion on the limitations of these tools and make it available to the public, including posting the fact sheet on the EPA's website. | EPA corrective action |
| | ORD finalized the fact sheet on indoor mold, MSQPCR and ERMI, to include discussion on the limitations of these tools, and posted that information to the public on the EPA's website. |
| | OIG review |
| The finalized fact sheets and index on the EPA website addressed the recommendation because they include discussion on the limitations of the tools and are available to the public. We verified that MATS data correctly reflect the status of corrective actions taken. | |

Sources: The EPA's MATS, OIG Report No. [13-P-0356](#), discussions with agency personnel, and OIG analysis.

During our review, ORD officials inquired about the frequency for conducting periodic reviews of licensee websites. While we believe that these reviews are instrumental to ensuring the validity of licensee advertising, we also believe the frequency of these reviews should be left to the discretion of the agency.

Conclusion

The corrective actions taken by the EPA should help prevent the public from being misled into thinking that licensee marketing of EPA-approved technology and tools for evaluating indoor mold suggests endorsement or validation by the EPA. The corrective actions satisfy Recommendations 1 and 3 of the OIG's 2013 report. Consequently, we make no additional recommendations.

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