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The Puerto Rico Public Housing Administration Has Not Adequately Managed Lead-Based Paint in Its Public Housing

Audit Report Number: 2026-FW-1001

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Office of Audit and Evaluation | Office of Inspector General
U.S. Department of Housing and Urban Development

Highlights

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What We Audited and Why

We audited the Puerto Rico Public Housing Administration's management of lead-based paint in its public housing program based on our assessment of the risks of lead-based paint in public housing. The risk factors assessed included the age of buildings, the number of units, and reported cases of childhood lead poisoning. The Puerto Rico Public Housing Administration (Authority) is the second largest public housing agency (PHA) in the country with about 53,700 public housing units, the majority of which were constructed before 1978, the oldest having been constructed in 1941.

The U.S. Department of Housing and Urban Development's (HUD) Lead Safe Housing Rule (LSHR) established specific actions or procedures that PHAs are required to perform in relation to hazard reduction[1] for lead-based paint and lead-based paint hazards. The LSHR applies to target housing, which is defined as any housing constructed before 1978, except housing for the elderly or persons with disabilities (unless a child under 6 years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling.[2] PHAs are required to conduct inspections to identify the presence of lead-based paint in their public housing developments.[3] If lead-based paint is identified in an inspection, a lead-based paint risk assessment is required[4] to determine whether it presents a hazard.

In a 2022 audit,[5] we found that HUD generally did not monitor whether PHAs had implemented lead-based paint hazard reduction nor did it monitor whether PHAs maintained the required documentation. This creates a heightened risk that PHAs will not identify or address lead-based paint hazards in a timely manner, placing individuals and families at increased risk of exposure to the invisible dangers of lead-based paint.

Our audit objective was to determine whether the Authority adequately managed lead-based paint and lead-based paint hazards in its public housing units.

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1 Measures designed to reduce or eliminate human exposure to lead-based paint hazards include interim controls, abatement, or a combination of these methods. Interim controls are designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including but not limited to specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring, etc. Lead abatement is designed to permanently eliminate or remove lead-based paint and lead-based paint hazards.

2 24 CFR (Code of Federal Regulations) § 35.110

3 24 CFR § 35.1115(a)

4 24 CFR § 35.1115(b)

5 HUD Lacked Adequate Oversight of Lead-Based Paint Hazard Remediation in Public Housing, 2023-CH-0001, October 11, 2022.

What We Found

The Authority has not adequately managed lead-based paint in its public housing. It did not (1) conduct lead-based paint inspections or risk assessments, (2) maintain adequate records, (3) integrate interim controls, including ongoing maintenance and visual assessments, in its normal operations, or (4) properly disclose the presence of lead-based paint to its public housing residents. These deficiencies are the result of weak governance and inadequate oversight by the Authority. Leadership failed to allocate the necessary resources, implement effective risk management practices, and maintain up-to-date policies consistent with Federal regulations. Poor information management and communication further contributed to gaps in tracking lead-based paint hazards and informing affected families. Additionally, the lack of monitoring prevented the timely identification and correction of deficiencies, ultimately compromising the safety of public housing residents, particularly young children. As a result, individuals and families living in the Authority's public housing units, including those with children under 6 years of age, are at an increased risk of exposure to lead-based paint hazards shown to result in adverse health effects, a risk compounded by the absence of complete and reliable information necessary for the Authority and HUD to implement adequate mitigation measures.

While the Authority implemented procedures in HUD's LSHR to manage elevated blood lead levels (EBLL) cases for children under 6 years of age, improvements are needed. Specifically, the Authority (1) did not notify families of the results of its environmental investigations, (2) did not notify HUD in a timely manner of the results of environmental investigations, and (3) did not perform hazard reduction in one case. The Authority's policies for managing EBLL cases were outdated and contained operational and communication deficiencies, indicating the need for continued efforts to strengthen monitoring and ensure the protection of residents, particularly young children. While the Authority took steps to complete environmental investigations for EBLL cases, individuals and families, especially those with children under 6 years old, were not adequately informed of lead-based paint hazards, increasing the risk of prolonged exposure and delayed medical intervention.

What We Recommend

We recommend that the Director of the Caribbean Office of Public Housing require the Authority to (1) conduct risk assessments in public housing without adequate lead-based paint inspection documentation to ascertain the existence of lead-based paint hazards, (2) conduct lead-based paint inspections at public housing where removal methods had been applied but an abatement report is unavailable, (3) abate or implement interim control measures to reduce the risk of exposure to lead-based paint hazards identified through risk assessments, (4) implement an ongoing maintenance program for lead-based paint to ensure units remain hazard free, (5) develop and implement adequate policies and procedures regarding the management of lead-based paint in public housing, including adequate record-keeping practices, completing interim controls, and conducting ongoing maintenance for lead-based paint and (6) ensuring appropriate and accurate disclosures to prospective and current tenants.

We also recommend that the Director of the Caribbean Office of Public Housing require the Authority to (1) revise and update the Authority's policies to ensure that environmental investigations are completed for all EBLL cases, and ensure that HUD and residents are notified of the results of environmental investigations in a timely manner, (2) coordinate with HUD to train the Authority's staff on managing EBLL cases, and to provide technical assistance such as developing written procedures, improving internal controls, or contracting with subject matter experts on procedures and controls to address the issues cited in this report, and (3) provide evidence that it abated lead-based paint hazards in one EBLL case where the Authority did not abate the hazards identified in an environmental investigation.

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Background and Objectives

In the United States, there are approximately one half million children ages 1 to 5 with blood lead levels above the reference level at which the Centers for Disease Control and Prevention (CDC) recommends that public health actions be initiated. According to the CDC, protecting children from lead exposure is important to lifelong good health. Lead-based paint and lead-contaminated dust are some of the most hazardous sources of lead children are exposed to and a safe blood lead level has not been identified. Lead exposure can cause adverse effects, such as damage to the brain and nervous system, slowed growth and development, and learning and behavioral problems. Even low levels of lead in the blood have been shown to affect intelligence, the ability to pay attention, and academic achievement. Moreover, the effects of lead exposure cannot be corrected or reversed.

The U.S. Consumer Product Safety Commission issued a ban on lead-containing paint to reduce the risk of lead poisoning in children who may ingest paint chips or peelings. The ban took effect in 1978 and applied to products manufactured on and after February 27, 1978. The U.S. Congress found that pre-1980 housing stock contained more than 3 million tons of lead in the form of lead-based paint and passed legislation to evaluate lead-based paint hazards in the Nation's housing stock and reduce the threat of childhood lead poisoning in housing owned, assisted, or transferred by the Federal Government.

Public housing was established to provide decent and safe rental housing for eligible low-income families, the elderly, and people with disabilities. Public housing comes in all sizes and types, from scattered single-family houses to high-rise apartments. Nationwide, there are approximately 1.2 million households residing in public housing developments that are managed by about 3,300 public housing agencies (PHA). PHAs own and operate the public housing developments[6] in which such residents reside. The PHAs are responsible for managing and operating their housing developments in compliance with all applicable HUD and other Federal regulations.

Lead-Based Paint Laws and Regulations

The Residential Lead-Based Paint Hazard Reduction Act of 1992 established the national goal to eliminate lead-based paint hazards in housing as quickly as possible and required HUD to establish or update procedures to eliminate, as far as practicable, the hazards of lead-based paint. Section 1018 of the Act, also known as the Lead Disclosure Rule, directed HUD and the Environmental Protection Agency (EPA) to require the disclosure of known information on lead-based paint and lead-based paint hazards before the sale or lease of most housing built before 1978.[7] In 1999, HUD published the LSHR[8] to implement the requirements of the Lead-Based Paint Poisoning Prevention Act, as amended, and the Lead-Based Paint

[6] A public housing development, also known as an asset management project or a project, is a property or collection of properties assisted under Section 9 of the United States Housing Act of 1937. A public housing development may consist of several buildings or properties containing multiple units. These buildings or properties may be in different physical locations.

[7] Under the Lead Disclosure Rule, PHAs must provide to prospective tenants any known information concerning lead-based paint and lead-based paint hazards, including any supporting records or reports. Additionally, an EPA-approved information pamphlet on identifying and controlling lead-based paint hazards must be provided.

[8] Lead Disclosure Rule at 24 CFR (Code of Federal Regulations) part 35, subpart A, and LSHR at 24 CFR part 35, subparts B through R, as cited in appendix C.

Hazard Reduction Act of 1992 to eliminate lead-based paint hazards, as far as practicable, in certain HUD-assisted properties.

The LSHR established specific actions or procedures that PHAs are required to perform to reduce lead-based paint hazards. The LSHR applies to "target housing," which is defined as any housing constructed before 1978, except housing for the elderly or persons with disabilities (unless a child under 6 years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling. PHAs are required to have lead-based paint inspections to identify the presence of lead-based paint in their public housing developments. If lead-based paint is identified, a risk assessment is required to determine whether it presents a hazard.

PHAs are required to abate lead-based paint hazards or enact interim controls and ongoing maintenance within 90 days for units with a child under 6 years of age or 1 year for other units.[9] Interim controls are measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including but not limited to specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring, etc. Public housing units with lead-based paint are required to have visual assessments conducted to identify deteriorated lead-based paint every 12 months and when the unit has been vacated and a new tenant has moved in.[10] If deteriorated paint is discovered during the visual assessment, the PHA is required to conduct a lead-based paint risk assessment to determine whether a lead hazard is present and the appropriate remediation methods to address the hazard.[11] The PHA is required to remediate any hazards that were identified in the risk assessment. Further, after lead hazard remediation, PHAs are required to conduct reevaluations[12] at specific intervals[13] to ensure that the remediation is not failing and to ensure that no further hazards have occurred.

The LSHR also established requirements for instances of a child under 6 years of age with an EBLL.[14] These requirements[15] include (1) reporting confirmed EBLL cases to the local HUD public housing field office and the HUD Office of Lead Hazard Control and Healthy Homes within 5 business days of being notified by a public health department or medical health care provider, (2) completing an environmental investigation[16] of the unit within 15 calendar days of notification to identify the source of lead exposure and lead-based paint hazards, and (3) addressing any lead-based paint hazards identified in the unit by

9 24 CFR § 35.1120(a) and 24 CFR § 35.1120(b)

10 24 CFR § 35.1355(a)(2)

11 24 CFR § 35.1330(a)(1) and 24 CFR § 35.1120(b)

12 24 CFR § 35.1355(b)(1)

13 24 CFR §35.1355(b)(4)

14 HUD defines an elevated blood lead level (EBLL) as a blood lead concentration in a child under 6 years of age that meets or exceeds a specified threshold. During our review period, which covered January 1, 2022, through December 31, 2023, the applicable EBLL threshold was 5 micrograms per deciliter of blood. HUD subsequently lowered the threshold to 3.5 micrograms per deciliter, effective January 17, 2025. (See 90 Fed. Reg. 5975–78.) Accordingly, our review was based on the threshold in effect at the time.

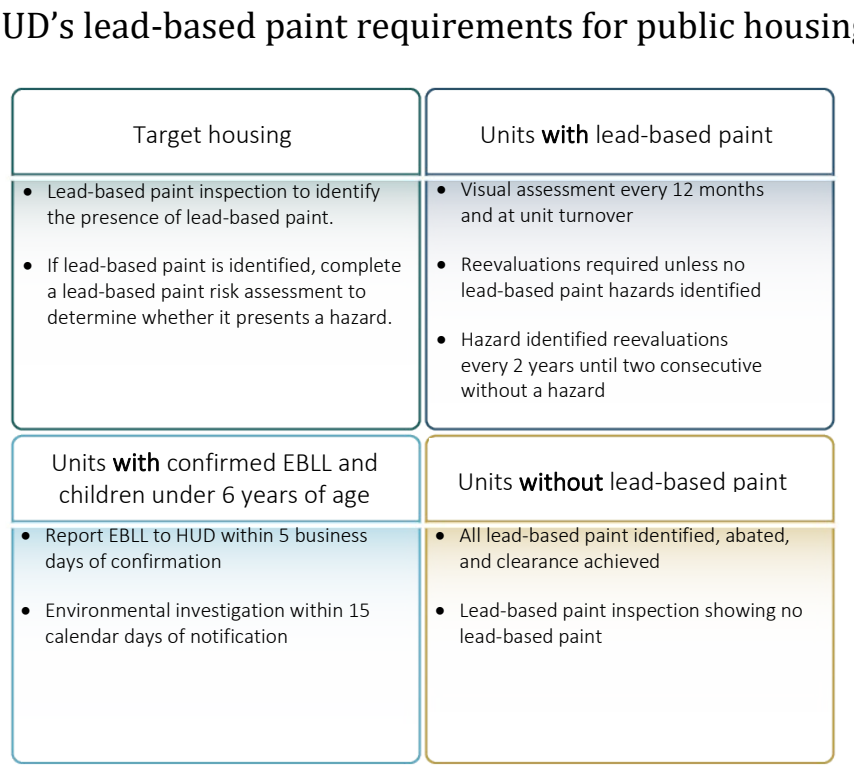
15 24 CFR § 35.1130

16 An environmental investigation is the process of determining the source of lead exposure for a child under age 6 with an EBLL. The environmental investigation is required within 15 calendar days after notification by a public health department or other medical health care provider that a child of less than 6 years of age living in a dwelling unit has been identified as having an EBLL.

the environmental investigation within 30 calendar days after receiving the environmental investigation report.

The figure below summarizes some of the lead-based paint requirements from the LSHR that are relevant to this report.

Figure 1. HUD's lead-based paint requirements for public housing.



According to HUD's Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, units that have had a lead-based paint inspection that did not identify the presence of lead-based paint are identified as "lead free," and further action is not required. Units that have had a lead-based paint inspection that identified lead-based paint that does not present a hazard and is currently being treated with interim controls and ongoing maintenance are identified as "lead safe."

Prior HUD OIG Audit Work on Lead-Based Paint in Public Housing

In October 2022, the Office of Inspector General issued an audit report regarding HUD's oversight of lead-based paint hazard remediation in public housing.[17] The audit found that HUD did not have a plan to manage lead-based paint and lead-based paint hazards in public housing. In addition, HUD generally did not monitor whether PHAs had implemented lead-based paint hazard reduction and documented these

[17] HUD Lacked Adequate Oversight of Lead-Based Paint Hazard Remediation in Public Housing, 2023-CH-0001, October 11, 2022

activities at their public housing developments. These weaknesses occurred because HUD relied on PHAs to implement their own methods to achieve lead-safe housing, which should have included implementing lead-based paint hazard reduction. Further, instead of monitoring PHAs for compliance with the lead-based paint hazard reduction procedures in the LSHR, HUD relied on PHAs' annual compliance certifications. One of the report's recommendations was for HUD to implement adequate procedures and controls to ensure that PHAs appropriately identify and control lead-based paint and eliminate lead-based paint hazards in public housing. HUD closed the recommendation in September 2023 by implementing guidance that defined the roles and responsibilities of HUD headquarters and field office staff, provided examples of PHA noncompliance with the LSHR, and established a protocol for addressing PHA noncompliance and corresponding follow-up procedures. We did not evaluate the effectiveness of HUD's corrective actions, as such an assessment would involve a review of HUD's oversight of lead-based paint compliance by PHAs beyond the scope of this audit.

Puerto Rico Public Housing Administration (Authority)

The Authority was created by Commonwealth of Puerto Rico Law No. 66, dated August 17, 1989. The Authority administers public housing developments in Puerto Rico. It is the Nation's second largest housing authority, consists of about 53,700 units, with more than 5,800 buildings in more than 270 developments. The Authority maintains a record of public housing developments constructed prior to 1978 indicating whether developments were abated or remained unmitigated for lead-based paint. For abated developments, the log specifies whether the abatement method used was removal or encapsulation of lead-based paint.

Our audit objective was to determine whether the Authority has adequately managed lead-based paint and lead-based paint hazards in its public housing units.

To assess the Authority's management of lead-based paint and lead hazards in public housing units, we focused on six areas:

1. reporting and management of potential EBLL cases;
2. lead-free determinations;
3. lead inspection and risk assessment reports;
4. abatement or interim controls, which includes visual assessments and hazard reduction;
5. risk assessments and reevaluations; and
6. lead disclosures.

Results of Audit

Overall Assessment of the Authority's Management of Lead-Based Paint

We assessed the Authority's management of lead-based paint in the following six areas and identified instances of noncompliance in all areas noted in the table.

Review areas	Instances of noncompliance identified?	Details of assessment
Lead inspection and risk assessment reports	Yes	The Authority did not have or provide lead-based paint inspections for 37 of 52 sampled developments.
Risk assessments and reevaluations	Yes	The Authority did not have lead-based paint risk assessments for any of 52 developments sampled. It only performed risk assessments for EBLL cases that had been reported in children.
Lead-free determinations	Yes	The Authority did not classify its public housing units as lead-free or lead-safe. This is the result of not having adequate records to properly classify its units.
Abatement or interim controls, which include visual assessments and hazard reduction	Yes	The Authority did not have abatement reports for 37 of 38 developments where, according to the Authority's records, abatement had taken place.
Lead disclosures	Yes	The Authority did not consistently disclose the presence of lead-based paint or provide accurate records to tenants.
Reporting and management of potential EBLL cases	Yes	The Authority did not comply with HUD's EBLL requirements. Specifically, it did not notify families of the results of environmental investigations, did not notify HUD in a timely manner of the results of environmental investigations, and did not perform hazard reduction in one case.

Additional details of the issues identified in each of the six areas are discussed in the following sections.

The Authority Has Not Adequately Managed Lead-Based Paint Hazards in Its Public Housing

The Authority has not adequately managed lead-based paint hazards in its public housing. It did not (1) conduct lead-based paint inspections and risk assessments, (2) maintain adequate records, (3) integrate interim controls, including ongoing maintenance and visual assessments, in its normal operations, or (4) properly disclose the presence of lead-based paint to its public housing residents.

These deficiencies are the result of weak governance and inadequate oversight by the Authority. Leadership failed to allocate the necessary resources, implement effective risk management practices, and maintain up-to-date policies aligned with regulations. Poor information management and communication further contributed to gaps in tracking lead-based paint hazards and informing affected families. Additionally, the lack of monitoring prevented the timely identification and correction of deficiencies, ultimately compromising the safety of public housing residents, particularly young children. As a result, individuals and families living in the Authority's public housing units, including those with children under 6 years of age, are at an increased risk of exposure to lead-based paint hazards and resulting adverse health effects, a risk compounded by the absence of complete and reliable information necessary for the Authority and HUD to implement adequate mitigation measures.

Lead-Based Paint Inspections and Risk Assessments Were Not Always Conducted

The Authority did not adequately conduct required inspections for lead-based paint in its public housing, as required. We selected a statistical sample of 52 developments out of a universe of 207 developments constructed prior to 1978 for review. The Authority only provided evidence that it completed compliant lead-based paint inspections[18] for 15 out of 52 developments (29 percent). Of the 37 remaining developments, the Authority provided evidence that it had conducted limited scope inspections for 19 developments and did not conduct inspections for 18 developments. Limited scope inspections included only certain units or areas that were to undergo improvements, instead of all units and areas of a development. When projected to the universe, we estimate that at least 52 developments, out of a universe of 207 developments, have had limited scope inspections and that at least 53 of the 207 developments have not had a lead-based paint inspection at all. This means that over half (105 of 207) of the Authority's developments constructed prior to 1978 have not had a sufficient lead-based paint inspection, and that all units and areas in these developments have not been thoroughly inspected to identify lead-based paint hazards. The Authority should have maintained lead-based paint inspection records[19] as this information is necessary to properly document the locations where lead-based paint is present in order to perform ongoing maintenance, perform control measures to address possible health hazards, and assist with classifying public housing units as either "lead-free" or "lead-safe."

[18] Regulations in 24 CFR § 35.110 define lead-based paint inspections as a "a surface-by-surface investigation to determine the presence of lead-based paint and the provision of a report explaining the results of the investigation."

[19] 24 CFR § 35.175 requires that the records applicable to a portion of a residential property for which ongoing lead-based paint maintenance and/or reevaluation activities are required shall be kept and made available for the Department's review, until at least three years after such activities are no longer required.

Further, the Authority did not conduct risk assessments[20] for any of the 52 developments in our sample. Based on the lead-based paint inspection reports that were provided and reviewed, at least 29 of the 52 developments had reported lead-based paint hazards[21] and therefore should have had a risk assessment completed to identify interim control measures. However, since the Authority's lead-based paint inspections did not identify the existence, nature, severity, and location of lead-based paint hazards and risk assessments were not conducted for all the 52 developments, it is unknown how many more developments contain lead-based paint hazards. As a result, the Authority could not implement interim control measures [22] to reduce exposure to lead-based paint hazards. Authority officials confirmed that risk assessments are only performed for reported EBLL cases. Further, these officials indicated they had requested that Authority management request proposals to obtain the necessary risk assessment services but did not know why the services have not been obtained.

The Authority Did Not Maintain Adequate Records

We found that the Authority did not have sufficient records supporting classification of its units as "lead-free" or "lead-safe" or that its lead-based paint hazards were appropriately abated.

Lead-free and Lead-safe Designations

The Authority does not currently classify any of its public housing units as either "lead-free" or "lead-safe." According to HUD's Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, units at abated developments would generally be considered either "lead-free" or "lead-safe" depending on the abatement method used.

- Units that have had a lead-based paint inspection that did not identify the presence of lead-based paint are identified as "lead-free" and further action is not required. Units that achieved clearance through the removal of lead-based paint would generally be considered "lead-free."

- Units that have had a lead-based paint inspection that identified lead-based paint that does not present a hazard and are currently being treated with interim controls and ongoing maintenance, are identified as "lead-safe." Units treated through encapsulation methods would generally be considered as "lead-safe" as ongoing lead-based paint maintenance is required for these units.

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[20] 24 CFR § 35.1115(b) requires that "If a lead-based paint inspection has found the presence of lead-based paint, or if no lead-based paint inspection has been conducted, the PHA shall conduct a risk assessment…" and such risk assessments shall be completed "on or before March 15, 2001, in a multifamily residential property constructed before 1960" or "on or before March 15, 2002, in a multifamily residential property constructed after 1959 and before 1978." Regulations in 24 CFR § 35.110 define a risk assessment as "(1) an on-site investigation to determine the existence, nature, severity, and location of lead-based paint hazards; and (2) The provision of a report by the individual or firm conducting the risk assessment explaining the results of the investigation and options for reducing lead-based paint hazards."

[21] 24 CFR § 35.110 provides that a lead-based paint hazard means "any condition that causes exposure to lead from dust-lead hazards, soil-lead hazards, or lead-based paint that is deteriorated or present in chewable surfaces, friction surfaces, or impact surfaces, and that would result in adverse human health effects."

[22] 24 CFR § 35.110 provides that interim controls mean "measures designed to reduce temporarily human exposure or likely exposure to lead-based paint hazards. Interim controls include, but are not limited to, repairs, painting, temporary containment, specialized cleaning, clearance, ongoing lead-based paint maintenance activities, and the establishment and operation of management and resident education programs."

Documentation of Abatement Activities

The Authority provided a log spreadsheet used to track the status of lead-based paint in its public housing developments. This spreadsheet indicated that 38 of the 52 sampled developments were abated.[23] However, the Authority only provided one abatement report showing that the abatements had taken place and two clearance reports for the sampled development. Only one of the clearance reports provided contained "lead-free" certificates for four buildings. The Authority also provided permit closure letters from the Puerto Rico Environmental Quality Board for nine developments. While these letters provide indirect evidence that abatement activities were carried out at nine developments, they are not sufficient to conclude that mitigation activities were successful, or that the developments are "lead-free" or "lead safe" because only abatement and clearance reports provide documented evidence that lead hazards were properly mitigated.

Insufficient records of abatement activities and "lead-safe" or "lead-free" designations, coupled with the lack of inspection reports and risk assessments, prevented the Authority from being informed of the known locations of lead-based paint, and performing ongoing maintenance at units that achieved clearance through encapsulation, as well as in units being treated with interim controls prior to abatement. Therefore, the Authority was not aware of the prevalence of lead-based paint hazards in its public housing stock and cannot ensure that sufficient monitoring and interim control measures have been regularly conducted to mitigate existing lead-based paint risks.

Further, because the Authority lacked adequate supporting documentation, it could not provide HUD or its tenants assurance that the abatement activities were successful.

Interim Control Measures and Visual Assessments Not Completed

In addition to the sample of 52 Authority developments, we also obtained a statistical sample of 68 individual public housing units from a universe of 21,339 public housing units that were either unabated or abated through encapsulation methods. The Authority did not provide evidence of interim control measures taken for any of the 68 units in our sample. Documentation we reviewed for the 68 units was limited to routine maintenance activities and there was no evidence that lead-based paint was considered. Because the Authority has not performed required risks assessments, it has not assessed which locations in its public housing units constitute health hazards. The lack of required risk assessments limits the Authority's ability to treat lead-based paint as it cannot implement interim measures to control health hazards. As a result, the Authority has not incorporated ongoing lead-based paint maintenance and reevaluation activities into its regular building operations.

Visual assessments[24] are a part of ongoing maintenance and reevaluation activities of lead-based paint. Authority personnel indicated that visual assessments of lead-based paint were conducted as part of annual inspections of its public housing units. However, without knowing the location of lead-based paint and past treatments, if any, applied at a particular unit, it is doubtful that this procedure will be effective. Only one of 68 annual inspections provided by the Authority contained language indicating that a visual

[23] According to the Authority, for these 38 of the 52 sampled developments (73 percent), 28 were abated through removal of lead-based paint, nine through encapsulation of lead-based paint, and one through both methods.

[24] 24 CFR § 35.110 provides that visual assessments mean "looking for, as applicable: (1) Deteriorated paint; (2) Visible surface dust, debris, and residue as part of a risk assessment or clearance examination; or (3) The completion or failure of a hazard reduction measure."

assessment of lead-based paint was included as part of the annual inspection. However, the Authority did not provide a lead-based paint inspection or a risk assessment report for that unit. In addition, the lead disclosure form indicated that management did not have knowledge whether lead-based paint was present at the unit. Without a lead-based paint inspection or risk assessment, the visual assessment could not properly identify any lead-based paint in the unit, and whether it had deteriorated or not. When projected to the universe, we estimate that at least 20,545 units out of a universe of 21,339 public housing units, or 96 percent, did not have a visual assessment included as part of the Authority's required annual inspection.

The Authority Did Not Adequately Provide Tenant Disclosures

The Authority did not consistently disclose the presence of lead-based paint or provide accurate records to tenants as required.

Before a tenant signs a lease for housing built before 1978, landlords must disclose any known information about lead-based paint or lead-based paint hazards in the unit. Tenant disclosure provides families with essential information about environmental hazards, property conditions and their rights and responsibilities.

From our sample of 68 public housing units, we found the following discrepancies:

- Disclosures for 15 units indicated the Authority did not have any knowledge or that there are no records related to lead-based paint hazards. However, the Authority's data indicated that the project had been abated for lead-based paint hazards.
- Multiple disclosures for eight units had discrepancies between the documents. For these units, the Authority provided more than one tenant disclosure form, and the information across these forms was inconsistent. Some tenant disclosures indicated that the Authority had no knowledge or records related to lead hazards at the unit, while other disclosures stated that the lead hazard had been mitigated or that the Authority had records indicating the presence of lead-based paint for the same unit.
- Disclosures for six units did not indicate the unit's lead-based paint status (mitigated, unmitigated, etc.)
- In one case, the disclosure indicated that lead-based paint had been abated when the Authority's data listed the project as unabated. In another case, the Authority provided incorrect status information to the tenant indicating that the unit was unmitigated when the Authority's data indicated that the project had been abated through encapsulation.

Weak Governance and Inadequate Oversight by the Authority

The above deficiencies exist due to weak governance and inadequate oversight by the Authority. Leadership failed to allocate the necessary resources, implement effective risk management practices, and maintain up-to-date policies aligned with regulations. Poor information management and communication further contributed to gaps in tracking lead-based paint hazards and informing affected families. Additionally, the lack of monitoring and oversight prevented the timely identification and correction of deficiencies, ultimately compromising the safety of public housing residents, particularly young children.

In response to our inquiry about the lack of lead-based paint inspections and risk assessments, Authority officers stated that several of the lead-based paint inspections and risk assessments were performed during the 1990s and 2000s. However, when we asked why the inspections were not provided during our fieldwork, the officers indicated that these were old inspections that used sampling methodologies and that some records were lost during an office move. This demonstrated a fundamental lack of understanding of the role and importance that lead-based paint inspections play in the ongoing management of lead-based risks in public housing. Whether lead-based paint inspections are old, or performed using statistical sampling, they provide key information about possible locations of lead-based paint in public housing units, which is necessary to properly perform periodic risk assessments and establish an ongoing maintenance program.

Authority officials stated that during the late 1990s and early 2000s environmental officers responsible for managing lead paint in public housing were fired from the agency and re-hired later. After being rehired, these officers did not have a person in charge of that office until 2008 and the number of employees at the Bureau of Environmental and Technical Affairs remained very low. In addition, an Authority officer told us that it has been nearly impossible to maintain adequate record-keeping when there have been multiple modernization projects underway and having so many assigned responsibilities related to lead, asbestos, permits, and working with agency liaisons. According to Authority officials, at the time of our interview, only one employee remained at the Bureau of Environmental and Technical Affairs, a division within PRPHA responsible for managing environmental issues, including lead-based paint. As a result, Authority leadership failed to allocate the necessary resources to adequately manage lead-based paint in its public housing units.

Further, the Authority did not have adequate lead-based paint policies and procedures. The policy describes some responsibilities related to the abatement of lead-based paint, including references to an EPA brochure entitled "Steps to Lead Safe Renovation, Repair, and Painting" for unit rehabilitation work that disturbs lead-based paint. It also included instructions on how to handle EBLL cases in children. However, the policy did not contain guidance related to performing lead-based paint inspections and risk assessments, designating units as "lead-free" or "lead-safe," performing ongoing maintenance of lead-based paint, or disclosing the status of lead-based paint to public housing residents.

Public housing has the most stringent federally-assisted housing lead hazard reduction standard, which requires full abatement. [25] Authority leadership are responsible for ensuring that public housing participants live in housing that is free from health hazards. Authority leadership should have ensured that its environmental responsibilities with respect to lead-based paint were fulfilled, such as ensuring that all public housing units had lead-based paint inspections and risk assessments,[26] and that all public housing where abatement had not yet taken place were treated through interim controls.[27]

[25] 24 CFR § 35.100(c)
[26] 24 CFR § 35.1115(a) and (b)
[27] 24 CFR § 35.1120(b)

Conclusion

The Authority failed to allocate necessary resources, implement effective risk management practices, and maintain up-to-date policies aligned with HUD regulations. In addition, weak governance, including poor information management and communications, further contributed to weaknesses in tracking lead-based paint hazards and informing affected families. As a result, insufficient management of the Authority's lead-based paint in public housing units prevented the timely identification and correction of hazards, ultimately compromising the safety of public housing residents, particularly those with children under 6 years of age who are at an increased risk of exposure to lead-based paint hazards and resulting adverse health effects.

Recommendations

We recommend that the Director of the Caribbean Office of Public Housing requires the Authority to:

1A. Conduct risk assessments in public housing without adequate lead-based paint inspection documentation to ascertain the existence of lead-based paint hazards.

1B. Conduct lead-based paint inspections at public housing abated through removal methods where an abatement report is unavailable to ensure that units are "lead-free."

1C. Abate or implement interim control measures to reduce the risk of exposure to lead-based paint hazards identified through risk assessments.

1D. Implement an ongoing maintenance program for lead-based paint to ensure unabated and "lead-safe" units remain hazard free.

1E. Implement adequate policies and procedures regarding the management of lead-based paint in its public housing, including maintaining adequate records, completing interim controls, and conducting ongoing maintenance for lead-based paint hazards.

1F. Ensure that it provides appropriate and accurate lead-based paint disclosures to prospective and current tenants.

Management Response

PRPHA's management acknowledged and generally concurred with the recommendations and described circumstances that contributed to the issues identified during the audit period. Management also highlighted corrective actions implemented after the audit period, including updates to internal policies and procedures, enhancements to oversight and internal controls, expansion of staff capacity, and improvements to their systems. In addition, management stated that it plans to implement ongoing training, conduct reviews of cases cited in the recommendations to ensure compliance with applicable reporting requirements, and provide supporting documentation where required. Management indicated that it has learned from past deficiencies, implemented meaningful improvements, and is committed to preventing similar issues in the future.

PRPHA's comments are included in Appendix A.

OIG Evaluation of Management Response

We acknowledge PRPHA's concurrence with the recommendations and its commitment to strengthening oversight and internal controls. Management's response is generally responsive to the recommendations. We encourage PRPHA to work with HUD through the audit resolution process to ensure that all corrective actions fully address each recommendation, including completion of any required reviews, verification of supporting documentation, and implementation of training and procedural enhancements to prevent recurrence of the identified deficiencies.

PRPHA included voluminous additional information and records that by themselves did not constitute comments on the findings and recommendations. As such, we determined the additional information was not appropriate to include in the final report. If relevant, the information will be reviewed during the audit resolution process.

The Authority's Program for Managing EBLLs in Children Has Crucial Weaknesses

The Authority implemented procedures in HUD's LSHR for the management of EBLL in children under 6 years of age, but improvements are needed. We found that the Authority promptly completed environmental investigations for all 12 EBLL cases reported through December 2023. However, the Authority (1) did not notify these families of the results of environmental investigations in any of the 12 cases, (2) did not notify HUD in a timely manner of the results of environmental investigations in eight cases, and (3) did not perform required hazard reduction in one case. The Authorities' policies for managing EBLL cases were outdated and contained operational and communication gaps, indicating the need for continued efforts to strengthen monitoring and ensure the protection of residents, particularly young children. While the Authority took steps to complete the environmental investigations for EBLL cases, individuals and families, especially those with children under 6 years old, were not adequately informed of lead-based paint hazards, increasing the risk of prolonged exposure and delayed medical intervention. These deficiencies could limit HUD's ability to properly oversee and mitigate lead hazards in public housing units.

The Authority Took Initial Actions Following EBLL cases

The Authority promptly completed environmental investigations for 12 EBLL cases reported during our audit period. In all cases, the Authority promptly requested emergency lead-based paint inspections and risk assessments. These procedures were appropriately expanded to include a family questionnaire, and additional risk assessments of other units where the child lived, or that the child frequented.[28]

In addition, the Authority appropriately informed HUD of new EBLL cases within 5 business days[29] in 11 of 12 cases. The Authority indicated that it did not inform HUD of the remaining case in a timely manner because the person responsible for reporting the EBLL cases was on medical leave. The latter case was one of two cases that were exempt from LSHR because these were constructed after 1978. However, the Authority decided to perform environmental investigations as a precaution because lead-based paint could have been present despite the more recent construction dates. In one of the cases, lead-based paint was found in a drainpipe, a common occurrence at various developments reviewed during the audit. We consider that the Authority's actions were prudent because the well-being of a child was at stake.

In 11 of 12 cases HUD OIG reviewed, the Authority performed environmental investigations within 15 calendar days, as required. HUD requires[30] environmental investigations to be completed within 15 calendar days after the PHA is notified by the public health department or other medical provider. In one case, the environmental investigation was completed in 24 days due to delays with the firm conducting the investigation, according to Authority records.

[28] HUD Notice PIH 2017-13 defines environmental investigations as a risk assessment with additional questions for the family regarding other sources of lead exposure (e.g., water, pottery, daycare settings), and testing of other potential sources of lead exposure.

[29] 24 CFR § 35.1130(e)(2)

[30] 24 CFR § 35.1130(a)

The Authority Did Not Communicate Results of Environmental Investigations to Affected Families

The Authority did not notify families of the results of environmental investigations in any of the 12 EBLL cases reviewed. In addition, the Authority did not notify HUD in a timely manner of the results of environmental investigations in eight cases, and in one case did not notify HUD at all. Notifications to HUD ranged between 8 and 36 business days after the 10-business day requirement. HUD guidance[31] states that after receiving the results of an environmental investigation the PHA must notify their assigned HUD field office contact within 10 business days, and the family of the results within 15 calendar days. Because the Authority did not notify residents of the results of environmental investigations, parents may not be aware of the locations where lead-based paint may be present in their unit and would not be able to take action to prevent health hazards.

The Authority's policy for managing EBLL cases did not specify the steps that staff needed to follow to notify HUD and the affected families. Authority officials indicated that they were aware of the notification requirements and believed that notifications to families were being carried out properly. However, we requested information several times and the Authority did not provide it.

In one case, the Authority identified lead-based paint hazards in an environmental investigation. When asked, the Authority did not provide evidence it abated the lead-based paint hazard. However, the risk assessor identified a peeling lead-based paint hazard and provided a lead hazard control plan, but the Authority did not provide evidence that it abated the hazard or implemented interim controls.

Lead-Based Paint Policies and Procedures Were Weak

The Authority's policy for managing lead-based paint lacks adequate procedures to (1) conduct environmental investigations, and (2) notify HUD and residents of environmental investigation results.

Environmental Investigations - The Authority's policy places responsibility on public housing management agents to conduct risk assessments within 15 days of the EBLL notification, while current HUD regulations require conducting an environmental investigation. Further, the Authority's policy is limited to establishing a 30-day period to respond to the risk assessment recommendations without referring to proper hazard reduction activities, or the appropriate monitoring procedures for such activities. The Authority policy is outdated, as HUD requirements[32] were amended on January 13, 2017, to require environmental investigations.

Disclosure of Environmental Investigation Results - The Authority's policy does not require providing a copy of risk assessment results to the lessee of the unit and does not require informing HUD within 10 calendar days of the results of the environmental investigations. As a result, the policy the Authority followed for managing EBLL cases was outdated and contained operational and communication gaps, indicating the need for continued efforts to strengthen monitoring and protect residents, particularly young children. According to an Authority official, the policies have not been updated because HUD

[31] HUD Notice PIH 2017-13

[32] 24 CFR § 35.1130

never informed the Authority that its policies were deficient and Authority leadership did not independently determine that its policies needed to be updated.

Conclusion

Generally, the Authority promptly managed EBLL cases in children when it was notified after conducting the equivalent of an environmental investigation within required timeframes. However, the Authority should improve notifications to HUD and families and follow up on the results of environmental investigations. The Authority's policy for managing EBLL cases was outdated and contained operational and communication gaps, indicating the need for continued efforts to strengthen monitoring and ensure the protection of residents, particularly young children. While the Authority implemented procedures in HUD's LSHR with respect to managing EBLL in children under 6 years of age, individuals and families, especially those with children under 6 years old, were not adequately informed of lead-based paint hazards, increasing the risk of prolonged exposure and delayed medical intervention as well as abating the hazards.

Recommendations

We recommend that the Director of the Caribbean Office of Public Housing require the Authority to:

2A. Revise and update the Authority's policies to ensure that environmental investigations are completed for EBLL cases and ensure that HUD and residents are notified of the results of environmental investigations in a timely manner.

2B. Coordinate with HUD to provide training for the Authority's employees on managing of lead-based paint hazards and to provide technical assistance such as developing written procedures, improving internal controls, or contracting with subject matter experts to address the issues cited in this report.

2C. Provide evidence that it abated lead-based paint hazards in one EBLL case where the Authority did not abate the hazards identified in an environmental investigation.

Management Response

PRPHA's management acknowledged and generally concurred with the recommendations and described circumstances that contributed to the issues identified during the audit period, including staffing constraints. Management highlighted corrective actions implemented after the audit period, such as revising EBLL-related policies and procedures, enhancing oversight and internal controls, formalizing workflows, and retraining staff. In addition, management stated that it will continue to monitor EBLL cases, review applicable files to ensure compliance with reporting and notification requirements, and maintain appropriate documentation. Management indicated that it has taken steps to address the identified deficiencies and is committed to preventing similar issues in the future.

Management's full comments are included in Appendix A.

OIG Evaluation of Management Response

We acknowledge PRPHA's concurrence with the recommendations and its commitment to improving EBLL case management and reporting. Management's response is generally responsive to the

recommendations. We encourage PRPHA to work with HUD through the audit resolution process to ensure that corrective actions are fully implemented and operating effectively, including timely notifications, completion of environmental investigations, hazard reduction activities, and documentation to prevent recurrence of the deficiencies identified.

PRPHA included voluminous additional information and records that by themselves did not constitute comments on the findings and recommendations. As such, we determined the additional information was not appropriate to include in the final report. If relevant, the information will be reviewed during the audit resolution process.

Scope and Methodology

We performed our work between January 2024 and January 2025 at our offices in San Juan, Puerto Rico. Our review generally covered the period January 1, 2022, through December 31, 2023, but we expanded this period as necessary.[33]

To accomplish our audit objective, we had discussions with the Authority's and HUD's management officials and staff. In addition, we reviewed

- 42 U.S.C. (United States Code) 63, 63(a), and 1437d; the Lead Disclosure Rule and LSHR at 24 CFR part 35;[34] EPA requirements at 40 CFR part 745; HUD's Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing; HUD's Public and Indian Housing (PIH) notices; information from HUD's EBLL tracker; and information maintained in HUD's Inventory Management System-PIH Information Center.

- The Authority's policies and procedures for managing lead-based paint, including the pre-1978 development status log, service work orders, lead-based paint inspection and risk assessment reports, lead-based paint clearance reports, lead-based paint disclosures, annual inspection reports, and records related to EBLL cases.

The Authority maintained a log in the form of an Excel database to track the status of lead-based paint in its public housing developments. After completing data reliability testing on the log,[35] the log included the status for 207 developments with lead-based paint status of abated, either through removal or encapsulation, unmitigated, or combinations thereof. We statistically selected a sample of 52 developments to determine whether lead-based paint inspections were completed in accordance with the LSHR. When the inspection identified lead-based paint for a particular development, we determined whether the Authority completed a lead-based paint risk assessment, and whether the Authority contracted with a certified lead-based paint professional to abate any lead-based paint. We determined that the data in the Authority's development status log was reasonably reliable to use as a source for sampling purposes.

The Authority's public housing data contained records of 53,339 units as of 2023. We performed procedures to clean and validate the data by removing units built after 1978, units selected for demolition, zero-bedroom units, units for the elderly and disabled, vacant units, and units that according to the development log and other data provided by the Authority have had lead-based paint removed. The resulting file contained 21,339 units that were either unabated or abated through encapsulation methods. We statistically selected a sample of 68 units and reviewed Authority records to evaluate

[33] We expanded our scope for the lead-based inspections, risk assessments and tenant disclosures to whenever these items last occurred.

[34] See appendix C for details regarding Federal lead-based paint requirements.

[35] We performed procedures to normalize and validate data by (1) converting records representing projects into developments (one project could encompass two or more developments); (2) removing records that were not present in unit data provided by the Authority, (3) removing developments no longer in the Authority's inventory, and (4) merging projects having the same development number and lead-based paint status into one development. In addition, we cleaned data by removing developments built after 1978, vacant developments, developments approved for demolition, or a combination thereof.

compliance with ongoing maintenance and re-evaluation requirements, interim control timeframes, lead-based paint disclosures, and visual assessments, among others.

During our audit, the Authority 12 reported cases of children under 6 years of age with EBLLs associated with 12 of the Authority's units. We reviewed all 12 cases and the associated units to determine whether the Authority properly handled these cases and managed the associated units in accordance with the LSHR. Since we reviewed 100 percent of the cases, projection to the universe was not applicable.

Methodology for Projections of Developments

We employed a stratified random sample of 52 developments for review among the universe of the Authority's 207 developments. We used the developments to design seven strata. We detail the sample counts per strata and sampling weights on the sample design table below.

Sample Design Table				
Stratum Label	Development Units size	Total Count in Strata	Sample Count	Sampling Weight
Group 1	0-100 units	59	15	3.93
Group 2	101-200 units	67	17	3.94
Group 3	201-300 units	47	11	4.27
Group 4	301-400 units	14	3	4.66
Group 5	401-500 units	10	2	5.00
Group 6	501-600 units	5	2	2.50
Group 7	>601 units	5	2	2.50
	Total	207	52	N/A

We computed the percentage and number of counts of records with exceptions based on the sampling results and we extended this result to the population using the surveyfreq[36] procedure provided by SAS®.[37] We estimated the lower confidence interval using a Gaussian[38] sampling distribution, which is

[36] The surveyfreq procedure produces one-way to n-way frequency and crosstabulation tables from sample survey data. These tables include estimates of population totals, population proportions, and their standard errors. Confidence limits, coefficients of variation, and design effects are also available. The procedure provides a variety of options to customize the table display. Please reference The SURVEYFREQ Procedure (sas.com) for more information.

[37] SAS (previously "Statistical Analysis System") is a statistical software suite developed by the SAS Institute for data management, advanced analytics, multivariate analysis, business intelligence, criminal investigation, and predictive analytics.

[38] In statistics, a normal distribution, or "Gaussian" distribution, is a type of continuous probability distribution for a real-valued random variable.

appropriate for error rates in this range. We extended these percentages to the 207 records in the universe to get the total universe count of developments with a deficiency.

The basic estimation calculations are as follows:

$Count_{LCL}$ = N * (pct - $t_{\alpha/2}\, SE_{\%}$)

$Count_{LCL}$	= Total number of sampling units with the error after deducting a margin of error.
N	= Total number of sampling units in the sampling frame.
pct	= Weighted percent of sampling units with the error in the sampling frame.
SE%	= Standard error per unit, as applies to projecting proportions.
tα/2	= Student's - t for projecting a one-sided confidence interval for a sample of this size.

Our findings with mathematical demonstrations are as follows:

Percentage-Count Projection Results: Limited Scope Inspections

HUD defines limited scope inspections as including only certain units or areas that were to undergo improvements. In 19 of the 52 records reviewed, the audit team found that the records were materially accurate. This amounts to a weighted average of 34.56 percent of the sample. Deducting for a statistical margin of error we can say-- with a one-sided confidence interval of 95 percent-- that at least 25.27 percent of the records in the sample were materially accurate. Extending this percentage to the universe of 207 records, at least 52 records meet this condition, and the count could be more.

Percentage Calculation: $34.56\% - (1.671 \times 5.53\%) \approx 25.27\%_{LCL}$
Total Cases Projection: $207 \times (34.56\% - (1.671 \times 5.53\%)) \approx 52_{LCL}$

Percentage-Count Projection Results: No Lead-Based Paint Inspections

HUD requires that in all public housing developments a lead-based paint inspection shall be conducted. In 18 of the 52 records reviewed, the audit team found exceptions. This amounts to a weighted average of 34.9 percent of the sample. Deducting for a statistical margin of error we can say- with a one-sided confidence interval of 95 percent- that at least 25.76 percent of the records in the sample had an exception. Extending this percent to the universe of 207 records, at least 53 records meet this condition, and the count could be more.

Percentage Calculation: $34.9\% - (1.671 \times 5.44\%) \approx 25.76\%_{LCL}$
Total Cases Projection: $207 \times (34.9\% - (1.671 \times 5.44\%)) \approx 53_{LCL}$

Methodology for Projections of Units

We employed a stratified random sample of 68 units for review among the universe of the Authority's 21,339 units. To get proper coverage of all the data points for this universe, we are stratified by the

management agent for each development. We detail the sample counts per strata and sampling weights on the sample table below.

Sample Design Table			
Strata	Total Count in Strata	Sample Count	Sampling Weight
01-SP Management	3,552	11	322.91
02-MAS Corp.	1,020	3	340
03-Martinal Property	2,407	8	300.88
04-AM Contract	1,908	6	318
05-Mora Housing	1,403	5	280.60
06-MJ Consulting	1,632	5	326.4
07-Individual Management	2,269	7	324.14
08-J.A. Machuca	3,877	12	646.17
10-Inn Capital Housing	3,271	11	892.09
Total	21,339	68	N/A

We computed the percentage and number of counts of records with exceptions based on the sampling results and we extended this result to the population using the surveyfreq[39] procedure provided by SAS®.[40] We estimated the lower confidence interval using a Gaussian[41] sampling distribution, which is appropriate for error rates in this range. We extended these percentages to the 21,339 records in the universe to get the total count of these records.

The basic estimation calculations are as follows:

$$Count_{LCL} = N * (pct - t_{\alpha/2}\, SE_{\%})$$

$Count_{LCL}$ = Total number of sampling units with the error after deducting a margin of error.
N = Total number of sampling units in the sampling frame.
pct = Weighted percent of sampling units with the error in the sampling frame.
SE% = Standard error per unit, as applies to projecting proportions.

39 The surveyfreq procedure produces one-way to n-way frequency and crosstabulation tables from sample survey data. These tables include estimates of population totals, population proportions, and their standard errors. Confidence limits, coefficients of variation, and design effects are also available. The procedure provides a variety of options to customize the table display. Please see The SURVEYFREQ Procedure (sas.com) for more information.

40 SAS (previously "Statistical Analysis System") is a statistical software suite developed by SAS Institute for data management, advanced analytics, multivariate analysis, business intelligence, criminal investigation, and predictive analytics.

41 In statistics, a normal distribution or "Gaussian" distribution is a type of continuous probability distribution for a real-valued random variable.

$t_{\alpha/2}$ = Student's - t for projecting a one-sided confidence interval for a sample of this size.

Our findings with mathematical demonstrations are as follows:

Percent/Count Projection Results: Visual Assessment not Provided

For units with lead-based paint, HUD requires that visual assessments for deteriorated lead-based paint be conducted at least annually. In 67 of the 68 records reviewed, the audit team found exceptions. This amounts to a weighted average of 98.61 percent of the sample. Deducting for a statistical margin of error we can say- with a one-sided confidence interval of 95 percent- that at least 96.28 percent of the records in the sample were materially accurate. Extending this percentage to the universe of 21,339 records, at least 20,545 records meet this condition, and the count could be more.

Percentage Calculation: $98.61\% - (1.671 \times 1.39\%) \approx 96.28\%_{LCL}$
Total Cases Projection: $21{,}339 \times (98.61\% - (1.671 \times 1.39\%)) \approx 20{,}545_{LCL}$

We conducted the 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 objective(s). We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Appendix

Appendix A – Management Response

Draft Response to Findings

In compliance with the Public Policy Act of the Commonwealth of Puerto Rico, the Public Housing Administration (PHA) established an Environmental Office in 1992 to evaluate and conduct studies on lead-based paint in all public housing projects built before 1978. These samplings were carried out between 1992 and 1994. (see Exhibit 1 of attached sample)

Subsequently, between 1994 and 1996, the PHA conducted Lead Risk Assessment studies, both awarded through bidding to AES International Inc. (see Exhibit 2 attached copies of the contracts). At the end of 1996, the PHA laid off the staff and closed the Environmental Office, thus interrupting the continuity of these studies.

Over the years, due to multiple relocations and the transfer of files to different storage companies, the documents related to the lead risk assessment studies were lost. However, the original lead-based paint sampling studies are still preserved in our office. As a result, no documentation is available for the initial risk assessment studies conducted by PHA.

In 2001, the PHA established the Technical and Environmental Affairs Bureau under its Project Development and Construction Division. In 2007, the TEAB requested funding to contract firms to resume these studies; however, the work could not be carried out because the funds were not allocated.

Given this situation, the PHA proposes to restructure its processes and implement a pilot plan to resume the contracting of these studies and ensure compliance with the requirements identified in the environmental audit conducted by the OIG on October 11, 2022.

The following are the responses to each of the findings identified in the audit accordingly:

1A Lead Inspection and Risk Assessment Reports

Even though the Authority completed all lead-based paint inspections on all pre-1978 constructed public housing developments in 1994, these have become obsolete. According to the new Lead-Based Paint regulations from our local Department of Natural and Environmental Resources Agency,

these LBP inspections expire after 5 years. The Authority has initiated new inspections on various developments through the island in compliance with this new regulation. These actions are part of our broader corrective plan to ensure compliance with HUD's lead-safe housing requirements.

1B Risk Assessments and Reevaluations

The Authority concurs with the findings. Historically, risk assessments were primarily conducted in response to identified EBLL cases, rather than on a development-wide basis. The Authority is proposing the implementation of a standardized process for conducting full risk assessments and periodic revaluations across all developments, regardless of EBLL status. All assessments will be documented and maintained in accordance with federal requirements.

1C Lead-Free Determinations

The Authority agrees with the finding. Because historical documentation was incomplete, the Authority has not been able to accurately classify units as "lead-free" or "lead-safe." As part of our corrective measures and process, the Authority is proposing to continue update inspections and record verification to newly updated LBP inspections to establish accurate lead-status classifications for all units. Once classifications are confirmed, they will be incorporated into unit environmental records and property management files.

1D Abatement or Interim Controls (including visual assessments and hazard reduction)

The Authority acknowledges the finding. We recognize that abatement documentation was missing for several developments where abatement activities had reportedly taken place. To address this, the Authority is proposing to conduct verification of new inspections to be conducted and, once risk assessments are conducted and when necessary, new hazard reduction or interim control measures will be established. We have started and continue strengthening internal procedures to ensure all future abatement activities are properly documented, stored, and available for audit.

1E Lead Disclosures

The Authority concurs with the findings. The Authority is updating its procedures to ensure that all prospective and current tenants receive complete and accurate lead-based paint disclosures. Staff training has been initiated, and file audits are being conducted to ensure disclosure compliance. The Authority is implementing standardized forms and enhancing oversight to prevent inconsistencies in tenant notification.

1F Reporting and Management of EBLL Cases

The Authority has implemented revised protocols to comply with the EBLL rule (see Exhibit 3 of attached samples). The Authority acknowledges that due to the limited personnel in our office, we have delegated the contracting of these studies to be carried out through Project Management Agents. We have proposed and are establishing new measures to ensure timely notification to families and HUD, in full alignment with the EBLL rule. Additionally, a corrective workflow has been established to prevent delays in environmental investigations and hazard reduction. Staff responsible for case management and environmental compliance are being retrained to ensure full adherence to reporting and corrective action requirements.

Comprehensive Compliance Strategy for Lead-Based Paint Findings

Phase 1 – Immediate Corrective Actions (0–90 days)

1. Establish a Lead Compliance Task Force

- Include Environmental Compliance, Property Management, Legal, Procurement, and Maintenance.
- Assign a Lead Compliance Coordinator responsible for all deliverables.
- Set weekly progress reviews and reporting.

2. Conduct a Full Records Audit

- Inventory all existing lead-based paint inspection, abatement, risk assessment, and disclosure records.
- Create a centralized electronic master log of:
  - Developments
  - Buildings
  - Units
  - Documents available / missing
- Identify high-priority gaps (e.g., missing abatement reports, lack of risk assessments).

3. Continue Correct EBLL Case Procedures

- Issue written directives reinforcing HUD EBLL requirements.
- Conduct mandatory refresher training for all staff involved in reporting or responding to EBLL cases.
- Implement a checklist system for:
  - Notifications to families
  - Notifications to HUD
  - Environmental investigations
  - Hazard reduction timelines

PHASE 2 – Inspection and Assessment Compliance (90–240 days)

4. Contract Qualified Lead Inspectors/Risk Assessors

- Procure licensed contractors to perform:
  - Missing lead-based paint inspections
  - Missing risk assessments

- Revaluations
- Clearance testing after hazard reduction

- Ensure all work complies with HUD/EPA standards.

5. Perform Inspections and Risk Assessments for All Required Developments

- Prioritize:
  - Developments with no documentation
  - Developments where abatement occurred but no report exists
  - Developments with aging interim controls
- Document all results and integrate into the central database.

6. Validate Lead-Free and Lead-Safe Classifications

- Based on new inspections:
  - Assign each unit a clear classification: **Lead-Free**, **Lead-Safe**, or **Lead-Present**.
- Update property files and management systems accordingly.

Phase 3 – Hazard Reduction and Maintenance (240–365 days)

7. Address Hazards Identified

- Develop a work plan for:
  - Interim controls
  - Abatement
  - Clearance testing
- Prioritize by hazard severity and occupancy of vulnerable populations (children, pregnant women).

8. Implement an Ongoing Lead-Safe Maintenance Program

- Include:
  - Annual visual assessments
  - Recurring paint stabilization
  - Prompt repair of deteriorated paint
- Integrate into the preventive maintenance schedule.

9. Document All Abatement and Interim Controls

- Create standardized forms for:
  - Before-and-after photos
  - Contractor reports
  - Clearance test certifications

Phase 4 – Compliance Controls, Training, and Sustainability (ongoing)

10. Strengthen Lead Disclosure Compliance

- Use standardized disclosure packets for all tenants.
- Require supervisors to verify that disclosures are:
  - Provided
  - Signed
  - Filed
  - Entered in the electronic system
- Perform random quarterly file audits.

11. Staff Training Program

Provide mandatory training for:

- Environmental compliance personnel
- Property managers
- Maintenance staff
- Contractors
- New hires

Training topics:

- HUD LBP rules
- EPA RRP requirements
- Disclosure procedures
- Documentation and recordkeeping

12. Update Policies and Procedures

- Revise or create written policies on:
  - Inspections
  - Risk assessments
  - Abatement/interim controls

- EBLL case procedures
- Disclosure requirements
- Ongoing maintenance

- Issue the revised manual and require staff acknowledgment.

13. Establish Internal Audits and Quality Control

- Quarterly review of:
  - Inspection completion
  - Risk assessments
  - Disclosure compliance
  - EBLL reporting timelines
- Use audit results to correct deficiencies proactively.

Phase 5 – Reporting and Oversight

14. Submit Periodic Progress Reports to HUD

- Provide HUD/OIG a structured update every 30–60 days until full compliance is achieved.
- Include:
  - Inspections completed
  - Risk assessments completed
  - Hazards identified and corrected
  - Disclosure compliance rates
  - Policy updates

15. Maintain a Long-Term Compliance Database

- A centralized, searchable system that stores:
  - All environmental documents
  - Unit classifications
  - Tenant disclosures
  - EBLL case documentation
  - Abatement reports
  - Maintenance records