Lead-Based Paint Inspection Report

Project:

Four (4) Hydrants
Located in Fort Allen Training Center,
Juana Díaz, Puerto Rico

Client:
PRARNG, Environmental Branch

ZEM-26213
September 2026

Prepared By:

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Section 1: Executive Summary

1.1 Introduction

A Selective Lead-Based Paint inspection was conducted on September 15, 2026, at Four (4) Hydrants located in Fort Allen Training Center, in the municipality of Juana Díaz, Puerto Rico. Refer to *Appendix E: Demolition Plans* for specific project locations provided by the client. The lead-based paint inspection was performed to identify paint that contains lead above allowable levels and to assist with compliance with local, state, and federal regulations.

1.2 Summary of Property Evaluation

The inspection consisted of the evaluation of selective exterior areas of the project mentioned above (refer to *Appendix F: Demolition Plans* for specific project locations). **The inspection determined that lead-based paint was present in selective components and surfaces throughout the project on the inspection date.** Table 1-1 identifies the components positive for lead. Table 2-1 identifies lead-based paint as defined by the U.S. Environmental Protection Agency (EPA) and the Department of Natural and Environmental Resources (DRNA) of Puerto Rico. For specific locations and additional details on the lead location, reference Sections 2 and 3.

1.3 Property Locations of Building Components with Lead-Based Paint

Table 1-1 summarizes the site components and surfaces coated with lead-based paint. Additional details identifying positive lead-based paint findings within specific areas and on surfaces are provided in Section 2: Lead-Based Paint Inspection Report. The "substrate" is the building component material directly beneath the painted surface. Photographic documentation is for reference purposes and doesn't necessarily include all the surfaces with lead-based paint and/or components containing lead. The quantification of positive materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

If homogeneous materials not accounted for are identified in areas not described in this report or inaccessible areas described in Section 2.3.3, they shall be managed as containing lead. If suspected components that could contain lead are encountered underneath currently installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed. Refer to Appendix E: Location of Positive Materials for specific locations.

Table 1-1: Summary of Components Containing Lead				
Area	**Component**	**Color**	**Substrate**	**Approximate Amount**
Hydrants 3 & 4	Bollards	Yellow	Metal	3 Units

Note:

1. The quantification of positive materials presented in this table is only an estimate. If an abatement of the materials will be conducted, the Contractors shall estimate the amount of materials to be abated.

Section 2: Lead-Based Paint Inspection Report

2.1 Overview of the Evaluation

This lead-based paint inspection was a selective investigation to identify all lead-based paint on a surface-by-surface basis (refer to *Appendix F: Demolition Plans* for specific project locations provided by the client). A lead-based paint inspection conforming to HUD guidelines was performed at the project mentioned above.

An average of 15 samples were taken at identified surfaces of the evaluated areas using an X-ray fluorescence (XRF) analyzer. The evaluation found that lead-based paint was present in selective components and surfaces throughout the project on the assessment date (See Table 1-1).

Some of the remaining XRF test locations exhibited lead-in-paint levels below the level that EPA identifies as lead-based paint, namely 1.0 mg/cm^2. Such surfaces could create dust-lead or soil-lead hazards if the paint is turned into dust by abrasion, scraping, or sanding. Should these or any lead-containing components or surfaces be disturbed in any manner that generates dust, care should be taken to limit its spread.

Testing was performed by Miguel A. Peña, state-certified lead inspector LBPI-19026-270, using the Niton XLp-300A XRF, SN-18574. The credentials are provided in Section 3, Appendix A: Certifications, Licenses, and Accreditations. The XRF analyzer is designed to measure the lead content of surface coatings on various building surfaces, substrates, and components. The measurement is rapid and nondestructive and, according to the manufacturer, can detect lead concentrations within numerous layers of various surface coatings.

Please refer to the XRF Testing Results Section 3, Appendix B: XRF Sampling Data for each inspected area's detailed analytical testing results. The reports provide complete testing data.

2.2 Sampling Procedure

The Lead-Based Paint Sampling Procedure was designed to evaluate and document all the data obtained from the inspection in a sequential method that provided confidence at the moment of the presentation of the results.

The survey followed the methodology established in the HUD Guidelines for the Evaluation and Control of Lead-Based Paint in Housing (2012 revision) and the Department of Natural and Environmental Resources (DRNA) of Puerto Rico Regulation 9098: Regulation for Proper Management of Lead-Based Paint Activities. The surface-by-surface evaluation was performed as follows:

- If the lead concentration measured by the XRF Spectrum Analyzer is less than 1.0 mg/cm^2, it is considered negative.

- If the lead concentration measured by the XRF Spectrum Analyzer is equal to or greater than 1.0 mg/cm^2, it is considered positive.

A name was assigned to each functional space of the project based on the use of that space. A code letter or number was assigned if no name could be assigned.

Each wall surface was named with letters beginning with wall A, the wall facing the main entrance direction. The wall on your left will be wall B, the wall in front will be wall C, and the wall on your right will be wall D.

2.3 Results Presentation

This section describes the project components and surfaces coated with lead-based paint (LBP) and/or containing lead, which were observed in the inspection. Please note that the recommendations given are the minimum required action, which should be taken based on our professional judgment.

According to the DRNA lead regulations, before demolishing a structure containing lead-based paint, the contaminated surfaces or substrates must be abated or removed. The abatement firm must be certified as an abatement firm by the DRNA.

2.3.1 Specific Findings

The following LBP was found to contain more than or equal to 1.0 mg/cm^2 for what the Department of Natural and Environmental Resources (DRNA) of Puerto Rico identifies as lead-based paint or materials containing lead:

- Bollards

2.3.2 Homogeneous Areas with Special Considerations

NONE

2.3.3 Inaccessible Areas Presumed to be Lead-Based Painted

NONE

2.4 Lead Regulatory Levels

The lead regulatory levels provided below are those used when preparing this lead-based paint evaluation or when evaluating data collected. The EPA regulatory levels are the same as the state regulatory levels provided in the following table.

Table 2-1: Lead Regulatory Levels

	EPA/DRNA Levels
Lead-Based Paint	**1.0 mg/cm^2 or 0.5% by weight (or 5,000 ppm)**

2.5 Conditions and Limitations—Disclaimer

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection thoroughly and professionally, consistent with commonly accepted industry standards. The Preparer cannot guarantee and does not warrant that this evaluation has identified all adverse environmental factors and/or conditions affecting this project on the evaluation date.

The results reported, and conclusions reached by the Preparer are solely for the Owner's benefit. The results and opinions in this report, based solely on the conditions found at the project on the evaluation date, are valid only on that date. The Preparer assumes no obligation to advise the client of any changes in any actual or potential lead-based paint hazards at this project beyond the evaluation date.

The lead inspection was performed to ready accessible components and surfaces. If suspected components that could contain lead are encountered underneath currently installed tiles or other construction material, they shall be managed as containing lead until the appropriate test is performed. According to the DRNA in the "Regulation for the Proper Management of Lead-Based Paint Activities" Rule 139 (Section E, Part 17), all lead-based paint reports have a validity period of five (5) years.

2.6 Abatement Conditions

As defined by HUD and the Department of Natural and Environmental Resources (DRNA) of Puerto Rico, abatement means any set of measures designed to permanently eliminate lead-based paint and/or lead-based paint hazards. The people providing these services must be trained under the DRNA licensing/certification requirements. The product manufacturer and/or contractor must warrant abatement methods to last at least 20 years, or these methods must have a design life of at least 20 years.

- onsite or offsite removal of lead-based paint from substrates and components

- replacement of components or fixtures painted with lead-based paint
- permanent enclosure of lead-based paint with construction materials mechanically fastened to the substrate
- encapsulation of lead-based paint with specially designed encapsulant products
- removal or permanent covering (concrete or asphalt) of soil-lead-based paint hazards

If enclosure or encapsulation is conducted as an abatement method, the lead-based paint remains on the property, so ongoing lead-based paint maintenance is required.

2.7 Recommendations

According to the DRNA lead regulations, before demolishing a structure containing lead-based paint, the contaminated surfaces or substrates must be abated or removed. The waste generated has to be characterized to determine if the waste generated is hazardous or non-hazardous waste. The abatement firm must be certified as an abatement firm by the DRNA. Workers conducting abatement must be trained and certified as abatement workers by a training provider accredited by the DRNA.

2.8 Environmental Assessment Report Certification

Zimmetry Environmental Management Corp. has performed this lead-based paint inspection thoroughly and professionally, consistent with commonly accepted industry standards. The inspection was conducted on September 15, 2026, by Miguel A. Peña, state-certified lead inspector LBPI-19026-270, qualified by experience, education, and training in the recognition of lead-based paint and approved sampling techniques using the Niton XLp-300A XRF, SN-18574.

Miguel Peña
Environmental Lead Inspector

Section 3: Appendices

Appendix A: Certifications, Licenses, and Accreditations

Appendix B: XRF Sampling Data

Appendix C: XRF's Performance Characteristics Sheet

Appendix D: Photographic Record

Appendix E: Location of Positive Materials

Appendix F: Demolition Plans

APPENDIX A

Certifications, Licenses and Accreditations

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DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES

DRNA

GOBIERNO DE PUERTO RICO

Este certificado es otorgado a:

ZIMMETRY ENVIRONMENTAL MANAGEMENT, CORP.

Por haber cumplido con los requisitos establecidos en el Capítulo VI, Regla 127 del Reglamento para el Manejo Adecuado de Actividades de Pintura con Base de Plomo. Se le otorga esta certificación como Firma para llevar a cabo actividades relacionadas a Mitigación de Pintura con base de plomo en la jurisdicción de Puerto Rico.

Número de Certificado
LBPF-05026-009

Fecha de emisión: Marzo 3, 2026
Fecha de Expiración: Marzo 4, 2027

Firma Autorizada
Departamento de Recursos Naturales
y Ambientales

CERTIFICACIÓN PLOMO PUERTO RICO



Esta tarjeta autoriza a:
Miguel Peña Ruiz
Para realizar actividades relacionadas a Mitigación de Pintura con Base de Plomo

Disciplina: **Inspector**
Fecha de Expiración May 20, 2027

Certificación #:
LBPI-19026-270

DRNA

Firma Autorizada

CUSTOMER TRAINING

Thermo Scientific Niton XRF Analyzer Operator's Training Certificate

This is to certify that

Miguel Peña

has successfully completed the Thermo Fisher Scientific Niton XRF Analyzer Operational Training Course. The topics of this course include device configuration, sample preparation, safe operation and analysis, interpretation of results, and routine maintenance of the Thermo Scientific Niton XRF Analyzer.

Course date: May 29, 2017
Course teaches by: Thermo Fisher Portable Analytycal Inc.



Juan C. Cruz
Regional Sales Manager
Latin America & the Caribbean

Part of Thermo Fisher Scientific

Thermo SCIENTIFIC

APPENDIX B

XRF Sampling Data

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PROJECT:	Four Hydrants Located in Fort Allen Training Center, Juana Díaz, PR			CLIENT: PRARNG, Environmental Branch			
DATE:	9/15/2026			LBP Inspector: Miguel A. Peña			
Sample ID.	Functional Space	Location	Color	Subst.	XRF Reading mg/cm2	Pos/Neg	Comments
1	Calibration				1.00		
2	Calibration				1.00		
3	Calibration				1.00		
4	Hydrant 1 Area	Hydrant	Yellow	Metal	0.02	Negative	
5	Hydrant 1 Area	Hydrant	Yellow	Metal	0.00	Negative	
6	Hydrant 2 Area	Hydrant	Yellow	Metal	0.16	Negative	
7	Hydrant 3 Area	Hydrant	Yellow	Metal	0.02	Negative	
8	Hydrant 3 Area	Bollard	Yellow	Metal	3.00	Positive	
9	Hydrant 3 Area	Bollard	Yellow	Metal	3.10	Positive	
10	Hydrant 4 Area	Hydrant	Yellow	Metal	0.18	Negative	
11	Hydrant 4 Area	Bollard	Yellow	Metal	2.00	Positive	
12	Hydrant 4 Area	Pole	Yellow	Wood	0.00	Negative	
13	Calibration				1.00		
14	Calibration				1.00		
15	Calibration				1.00		

APPENDIX C

XRF Performance Characteristic Sheet

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Performance Characteristic Sheet

EFFECTIVE DATE: **September 24, 2004** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: *Niton LLC*
Tested Model: *XLp 300*
Source: ^{109}Cd
Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.
XLp 300A, XLp 301A, XLp 302A and XLp 303A.
XLi 700A, XLi 701A, XLi 702A and XLi 703A.
XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is <u>not</u> needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm^2)		
Substrate	25th Percentile	Median	75th Percentile	Pb < 0.25	0.25 ≤ Pb<1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

APPENDIX D

Photographic Record

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Photo No. 0002	**Date:** 09/15/2026	
Description: **Hydrant 3 Area** Lead-based painted metal bollards.		

Photo No. 0001	**Date:** 09/15/2026	
Description: **Hydrant 4 Area** Lead-based painted metal bollard.		

Photographic Documentation is for reference purposes and doesn't necessarily include all the surfaces with lead.

APPENDIX E

Location of Positive Materials

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Figure 1. Fort Allen Training Center – Project Areas

Lead Legend:

1 Bollards

Note:
The layout of materials shown in this figure is for illustrative purposes only. For actual location and quantity of materials refer to the survey report.

Zimmetry Environmental
Environmental Building Inspectors
Indoor Environmental Quality / Mold Assessments, Asbestos, Lead Based Paint Consulting – Phone – Fax (787) 995-0005

Project: Four (4) Hydrants at Fort Allen Training Center, Juana Diaz, PR

Date: September 2026 | Project No: ZEM-26213

APPENDIX F

Demolition Plans

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Figure 1. Fort Allen Training Center – Project Areas

Note:
The layout of materials shown in this figure is for illustrative purposes only. For actual location and quantity of materials refer to the survey report.

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