

MISSOURI HOUSING DEVELOPMENT COMMISSION

ENVIRONMENTAL REVIEW GUIDELINES

2009 NOFA

MHDC Form 1400



Revised 12/15/08

3435 Broadway Boulevard
Kansas City, Missouri 64111

ENVIRONMENTAL REVIEW GUIDELINES

I. INTRODUCTION.

All developments requesting and receiving approval for low-income housing tax credits, fund balance loans, HOME funds, or Risk Share insurance are required to pass an environmental review as a condition of financing. The primary objectives of this document are to set forth guidelines to assist the developer in understanding the requirements for a complete environmental review by the Missouri Housing Development Commission (MHDC).

It is the responsibility of the Owners and their agents to provide MHDC with the appropriate documentation to insure smooth and timely processing of environmental exhibits for application and firm commitment review, loan closings and final project acceptance.

II. APPLICATION STAGE

All applicants must include Form 1302 Site Evaluation, filled out in its entirety. The form may be completed by an environmental professional, architect, engineer, or the applicant, and it must be signed by the author. Every attempt should be made to address the recognized environmental concerns to the best of one's ability.

The zoning letter provided in the application will be utilized for the firm submission environmental review if it includes the required information as noted in the Developer's Guide Chapter 3: Application.

While the application stage only requires a notification letter be sent to the superintendent of the school district in which a new construction or conversion proposal is located, a response letter will be required at firm submission to complete an environmental review. It is advisable to obtain the response letter and include it with the application.

Once an applicant has submitted an application for a project that anticipates the use of HOME funding or Risk Share insurance, no funds of any nature may be committed to that project until the environmental review has been approved by HUD. In addition, no choice limiting action can be taken until the environmental review is approved (24 CFR 58.22). Choice limiting actions include real property acquisition, repair, rehabilitation, construction, demolition, site clearance or leasing activities. Regardless of the type of funding requested or approved, MHDC does not allow any applicant to commence any type of construction activity prior to completion of the environmental review, issuance of the firm commitment for funding, and closing of construction financing and admittance of the tax credit investor. Please contact MHDC with questions concerning choice limiting activities or the status of a property.

III. FIRM SUBMISSION

A. SINGLE PHASE DEVELOPMENTS.

The following documentation must be submitted to the project underwriter no later than April 1 of the year in which the conditional commitment is issued. In addition to the documentation requested in these guidelines, MHDC shall also complete a full environmental review according to HUD protocol. The developer will be required to abide by any mitigating measure, condition or requirement resulting from MHDC's environmental review.

For developments receiving HOME funds or Risk Share insurance, MHDC shall complete the review required by HUD, in compliance with 24 CFR Part 58; specifically, the laws and authorities listed under §§ 58.5 and 58.6. MHDC encourages submission earlier than April 1 in order to complete the review, required advertising and HUD authorization process prior to the issuance of the firm commitment. **No firm commitments will be issued prior to MHDC's receipt of the HUD Authorization to Release Grant Funds.**

Developments located on large vacant parcels, with plans to be divided into successive phases, must have environmental review reports performed on the **entire** site, including the current and planned phases. This all-encompassing review must follow the HOME review procedures regardless of the type of financing provided on the first phase. This will ensure subsequent phases may be eligible for future HOME funds. Information specific to multiple phases is addressed in section III.B.

Required items include:

1. FEMA Flood Zone Area Map, including the referenced area, community panel number and date, or, a determination letter from FEMA stating the site is not located in a flood plain. If this map is not available for the development site, other evidence acceptable to MHDC, showing the site is not prone to flooding, must be provided. **The exact location of the development must be clearly marked on the map.**

- If the development appears to be located in a flood plain but the site is positioned at a higher elevation, supply a FEMA determination letter.
- If the site is in an area that is unmapped, submit either a certification from a civil engineer or a FEMA determination letter.
- The form to obtain the FEMA determination letter may be obtained on the web at FEMA.gov.

2. For new construction developments, a Geotechnical Engineering Report meeting the following standards:

- a. Identification and description of soils by the nomenclature of the Unified Soils Classification System.
- b. Borings must be in, or adjacent to, the proposed foundation area.

- c. At least one boring must be made for every 2500 square foot of foundation area. For buildings supported on pilings, one boring must be made for every 1600 square foot of foundation area.
- d. Borings must be at least to the bottom of the proposed footings and deep enough to locate bearing strata, which will support the proposed structure. When rock is encountered, the depth of drilling into the rock shall be sufficient to establish rock quality regarding voids, fissures and strength.
- e. When ground water conditions influence the building design, observation of ground water levels must be recorded at the time of boring, and at least 48 hours later.
- f. Identify whether the geological conditions of the development site are such that radon may exceed acceptable levels in completed buildings.

3. Radon Test – For all existing residential structures, whether rehabilitation or conversion, a radon test must be performed in one basement or first-floor unit or similar location for each building in the development. If the test results are above 4pCi/L, further testing of all units in the basement or first floor must be completed.

4. Phase I Environmental Assessment Report, which is a key component of the environmental review as well as an important part of the “Innocent Landowners Defense” for the benefit of the Owner. If the Phase I recommends additional research or a Phase II report, this documentation must be provided as well. It is advisable that the Owner read the report(s) thoroughly prior to submission. The Phase I must meet the following requirements:

- Be prepared by an entity qualified to provide a comprehensive environmental site assessment, according to the ASTM Standard E 1527-05 (See Exhibit "A").
- Be organized according to the table of contents and report format recommended by ASTM 1527-05.
- Include a statement that MHDC may rely on the report or provide a reliance letter from the environmental consultant.
- Be no more than 180 days old at the time of submission or April 1, whichever is later. Phase I Environmental Reports that will be more than 180 days old prior to the anticipated closing date must be accompanied by an update letter and a current EDR, Inc. report performed by the environmental professional who prepared the original report.
- Significant Assumptions: If there are no assumptions, it must be stated in the report.
- Limitations and Exceptions:
 - Address physical site restrictions;
 - Explain historical data gaps;
 - Include a statement if there are no limitations and exceptions.

- Special Terms and Conditions - State any special terms and conditions given by the entity engaging the professional, such as a directive not to contact previous owners or an unrealistic timeframe for completion.
- Location and Legal Description.
 - Be as specific as possible with the address;
 - Include the legal description in the body of the report, not as an exhibit.
- Improvements to the Site – list roads, parking lots, other structures, etc.
- Current Use of Adjoining Properties – provide specific descriptions.
- User-Provided Information – the entity engaging the environmental professional **must supply the following**:
 - Title policy;
 - Information on environmental liens or use limitations;
 - Special knowledge of the property and its previous uses;
 - Commonly known information;
 - Value reduction due to environmental issues;
 - Name of the current owners, property manager, and occupants if applicable;
 - Reason for requesting the environmental review (i.e., limited liability protection to CERCLA liability).

The environmental professional must address this user-provided information in the report.

- Records Review – individual issues must be addressed separately in the records review and in the opinion and findings section of the report. This includes addressing the following:
 - Standard environmental record sources.
 - Physical setting sources – geological description of the land.
 - Historical use of the property – from 1940 or the earliest development.
 - Historical use of information on adjoining properties – from 1940 or the earliest development.
- Site Reconnaissance:
 - Address how the site was “walked” and state any limiting conditions;
 - Include a general description of the site;
 - List exterior observations.
 - Interior observation giving a description of each room observed.
- Interviews:
 - The current owner, site manager, and non-residential occupants must be interviewed;
 - Appropriate government officials must be interviewed in person or by telephone;
 - Letters are acceptable if sufficient time is allowed for a response and follow-up is completed if no response is received.
- Findings – must include any items that are a possible environmental concern, each listed separately.
- Opinions – findings must be addressed on an item-by-item basis and state why it is or is not a recognized environmental concern.

- Conclusion – must include one of the two statements provided in the checklist verbatim.
- Deviations – must address when the environmental professional deviated from ASTM 1527-05 standards and why.
- References – must state the source(s) of the data.
- Signature – must be signed by the professionals involved in the body of the report and not solely in the cover letter.
- Qualifications of the Professionals – must include verbatim both statements shown in the checklist.
- Appendices – must include a signed copy of the contract between the environmental professional and the entity engaging it. Pricing may be redacted.
- Statements such as “follows generally accepted practices” or “customary practices” are not acceptable.

5. For proposed rehabilitation or demolition of existing buildings, asbestos issues must be addressed with the following:

- a. Asbestos inspection report;
- b. Licensing information and certifications for the asbestos inspector;
- c. Abatement plans if applicable.

6. For proposed rehabilitation or demolition of existing buildings constructed prior to 1978, lead-based paint issues must be addressed with the following:

- a. Lead-based paint inspection report or risk assessment, dated within twelve months;
- b. Licensing information and certifications for the lead inspector or risk assessor;
- c. Abatement plans if applicable.

See Exhibit "B" for further information regarding the MHDC Lead-Based Paint Policy and Procedures.

7. For HOME and federally-insured developments, please provide the following:

- a. A copy of the completed Section 106 Project Information Form and the completed Cultural Resource Assessment with required exhibits as submitted to the Missouri Department of Natural Resources, Historic Preservation Officer (P.O. Box 176, Jefferson City, Missouri, 65102-0716).
- b. A copy of the Section 106 Review response from the Missouri Department of Natural Resources.

Please note that the review must include consideration for fill dirt to be brought onto the site or removed from the site. The form must include the specific location where the fill dirt is originating (if it is to be brought on-site) or where it will be delivered (if it is to be removed). If the geotechnical report requires fill dirt and the Section 106 process does not include a review of the fill source, the Section 106 Project Information Form and review will need to be completed with this information before the project can proceed through the public comment and HUD authorization process. If a Section 106 review has previously been approved by DNR for the same borrow and fill area being proposed for a new development, the Section 106 review does not need to be repeated. In such cases, please provide documentation from the initial Section 106 review.

8. Utility letters from the service providers ensuring the availability of electric, gas, water and sewer services (as applicable) to the property.

9. For family proposals bringing new units on-line (either new construction or conversion developments), a letter from the superintendent of the school district in which the property is located must be submitted if it was not included with the original application.

10. Noise Standards –MHDC shall calculate noise levels for the interior and exterior of the proposed development according to HUD’s review procedures. MHDC may request a Figure 19 form to be filled out by the project architect in order to calculate noise mitigation addressed by building components. Development receiving HOME funds or Risk Share insurance must meet HUD’s noise standards in order to receive approval for funding.

B. MULTIPLE PHASE DEVELOPMENTS.

It is common for developers to seek financing from MHDC while planning large-scale, multifamily developments, with the intent to split this master development into two or more staged phases. According to 24 CFR §§ 58.32, HUD requires that multiple phase developments be considered in the aggregate and undergo a comprehensive environmental review prior to the commencement of the initial phase. Whether the initial development phase is funded with federal funds or not, the environmental review must be performed on the entire site at the inception of the first phase in order to make future phases eligible for federal funding. The review process includes the advertisement and public comment period, the fifteen day HUD review, and the authorization from HUD to release funds, all of which address the characteristics, results of the review, proposed number of units, and total development costs of the **entire** master development.

In order to meet federal and MHDC requirements, MHDC requires all submitted environmental review items cover the entire proposed master development when meeting firm submission requirements for the initial phase. The developer must provide a description of the type of development proposed, and estimate the potential total number of units and development costs for the master development. By performing an all-

inclusive environmental review, MHDC is not committing, promising, or otherwise assuring the approval of funding for any future phase. MHDC is aware of the difficulty in providing estimates for phases that may or may not occur, with no firm timelines for completion should all phases eventually be funded. Performing an all-inclusive review does not require extensive architectural or engineering work at this stage for future phases. Most review items collected by the developer at this stage will not need to be updated in the event future phases are approved.

If new activities are contemplated, or there is a major change in the scope (i.e., increase in density of 20% or more) of a later phase, MHDC will re-advertise for public comment, and request a new authorization from HUD for the release of federal funds.

Prior to the issuance of a firm commitment for the initial phase, the following documentation covering *the entire master development* must be submitted:

1. Zoning letter from the controlling municipal or county government. MHDC will not require an updated letter for future phases unless there is a change in the zoning.
2. Utility letters ensuring the availability of electric, gas, water and sewer services to the entire site. MHDC will not require updated letters for future phases for environmental review procedures.
3. FEMA Flood Zone Area Map as addressed in section III.A.1 above. No update will be required for future phases.
4. For new construction developments, a Geotechnical Engineering Report meeting the following standards:
 - a. Identification and description of soils by the nomenclature of the Unified Soils Classification System.
 - b. Borings must be in, or adjacent to, the proposed foundation area.
 - c. At least one boring must be made for every 2500 square foot of foundation area. For buildings supported on pilings, one boring must be made for every 1600 square foot of foundation area.
 - d. Borings must be at least to the bottom of the proposed footings and deep enough to locate bearing strata, which will support the proposed structure. When rock is encountered, the depth of drilling into the rock shall be sufficient to establish rock quality regarding voids, fissures and strength.
 - e. When ground water conditions influence the building design, observation of ground water levels must be recorded at the time of boring, and at least 48 hours later.
 - f. For future phases, if a basic site plan has been prepared that identifies potential footprints of buildings, one boring must be completed within the footprint of each building. If a basic site has

not been prepared, the developer may use its best efforts to identify potential building areas, with no fewer than one boring per a five-acre area.

- g. Identify whether the geological conditions of the development site are such that radon may exceed acceptable levels in completed buildings.

No updates will be required for the environmental review; however, the MHDC architectural department will require structural borings to be completed for each future phase upon approval for funding as a part of the routine firm submission review.

5. Radon – For all existing residential structures, whether rehabilitation or conversion, a radon test must be performed in one basement or first-floor unit or similar location for each building in the development. If the test results are above 4pCi/L, further testing of all units in the basement or first floor must be completed. Testing must be repeated on existing buildings in future phases as part of the firm submission process.

6. Phase I Environmental Assessment Report as detailed in section III.A.4 above. If the Phase I recommends additional research or a Phase II report, this documentation must be provided as well. Upon approval of a future phase, an update letter from the environmental consultant who prepared the original Phase I assessment, accompanied by an updated EDR, Inc. report, will be required for the firm submission review.

7. For proposed rehabilitation or demolition of existing buildings, asbestos issues must be addressed as described in section III.A.5 above. No updates for future phases will be required.

8. For proposed rehabilitation or demolition of existing buildings constructed prior to 1978, lead-based paint issues must be addressed as described in section III.A.6 above. No updates for future phases will be required.

9. For HOME and federally-insured developments, provide the review documentation as outlined in section III.A.7 above. No updates are required unless a new source and/or destination of fill dirt is proposed for the development.

10. For family proposals bringing new units on-line (either new construction or conversion developments), a letter from the superintendent of the school district in which the property is located must be submitted if it was not included with the original application. No update is required if the original letter notified the superintendent of the full number of units anticipated for the entire multi-phase family development.

11. Noise Standards –MHDC shall calculate noise levels for the interior and exterior of the proposed development according to HUD’s review procedures. MHDC may request a Figure 19 form to be filled out by the project architect in order to calculate noise mitigation addressed by building components. If the noise calculation is considered

acceptable for the first phase, it shall be deemed acceptable for all phases unless there is a material change in the source of noise or the type of building construction at the time a future phase is approved. Development receiving HOME funds or Risk Share insurance must meet HUD's noise standards in order to receive approval for funding.

IV. FIRM SUBMISSION REVIEW PROCESS

A. GENERAL DESCRIPTION.

Firm submission documentation shall be reviewed by MHDC staff as part of the firm commitment process. Environmental review includes consideration of additional items as listed below. Strict adherence to HUD standards regarding these items is required for developments receiving HOME funds or Risk Share insurance; however, MHDC may require action as it deems necessary in its sole discretion for developments with other types of financing.

1. Wetlands determination. MHDC shall consult wetlands maps available at <http://www.fws.gov/nwi> and inspect the physical features and vegetation on the site to determine whether wetlands are present as defined in section 7(c) Executive Order 11990 for the protection of wetlands. Whether natural or man-made, year-round or seasonal, many areas where there is standing water at least a portion of the year may be considered wetlands according to government regulation.

2. Airport clear zones. HUD requires that there be a distance of at least 3,000 feet from the end of runways of all civil airports and 2.5 miles from military airports to the project site. Civil airports include both paved and grass landing strips.

3. Non-attainment areas. MHDC staff consults the website located at www.epa.gov/oar/oaqps/greenbk to check the location for pollutants. Counties considered "nonattainment" areas have EPA zone requirements for a state implementation plan. A determination letter from the local authority may be required if the property is located in a nonattainment area. The developer will need to contact the authority which may be a municipal, county or special government entity in order to obtain the letter.

4. Endangered species. MHDC staff conducts a heritage review through <http://mdcgis.mdc.mo.gov/heritage/newheritage/heritage.htm> in order to determine whether there may be an endangered species located in the development area. Certain construction controls or prohibitions may be required in order to proceed with the development (i.e., the use of silt fences or a seasonal moratorium on cutting down trees).

B. MITIGATING ITEMS.

Results of environmental reviews that exhibit conditions that are unacceptable to MHDC shall be communicated to the developer as soon as possible to determine whether the

condition can be rectified. In many cases, there may be environmental issues that are unacceptable but may be mitigated by remediation or other actions during construction. Such mitigating items will be listed in a memo to the firm commitment letter with details addressing the required mitigating action and the deadline for completion of the activity. Further action including a permit application to the US Army Corps of Engineers may be required.

Environmental issues that may be allowed pending mitigation during the construction process include but are not limited to:

1. The removal or encapsulation of contaminated soil;
2. The execution and recording of a deed restriction prohibiting the use of ground water;
3. The development of full asbestos abatement plans, the production of an Operations & Maintenance manual for asbestos that is contained and remains in place, and/or licensing information and certifications for the asbestos inspector, abatement contractor, and landfill where the asbestos will be disposed;
4. The development of full lead-based paint remediation or interim control plans, the production of an Operations & Maintenance manual for lead-based paint that is contained and remains in place, and/or licensing information and certifications for the for lead-based paint inspector, risk assessor, abatement contractor, and landfill where the for lead-based paint will be disposed;
5. Activities or controls to protect endangered species;
6. The replacement of wetlands;
7. The construction of venting mechanisms to mitigate radon levels;
8. Special construction/site features to reduce the potential for flooding as well as the procurement of flood insurance;
9. The construction of retaining walls or berms to reduce noise levels;
10. For new construction developments identified in the geotechnical report as having a current or potential future danger of unacceptable radon levels, radon testing to be performed upon completion of construction but prior to the final allocation or tax credits or approval for loan conversion/permanent loan closing as well as every five years thereafter.

C. HUD AUTHORIZATION TO RELEASE FUNDS

Developments receiving **HOME funds or Risk Share insurance** are required to complete a process for final authorization from HUD following the completion of the environmental review. This process includes an advertisement in the local newspaper with a designated period allowed for public comment followed by a 15-day review period by HUD officials. At the successful completion of the advertising and comment process, HUD issues an authorization to proceed which allows MHDC to issue a firm commitment for the HOME or Risk Share transaction. MHDC shall not execute a firm commitment prior to the receipt of HUD's authorization.

Neither HUD funds nor non-HUD funds can be committed to a development until HUD has approved MHDC's environmental review and issued its Authorization to Release Grant Funds. No choice limiting action may be taken until HUD review and authorization are complete (24 CFR 58.22). Choice limiting actions include real property acquisition, demolition, site clearance, rehabilitation, and construction activities.

The types of review and release processes are as follows:

1. Full environmental review is required for new construction of more than five units or substantial rehabilitation (proposed construction costs greater than 75% of replacement value, unit density change of greater than 20%, or a change in use). Upon satisfactory review, MHDC publishes notification in the local newspaper and offers a 15-day public comment period followed by a 15-day period for HUD review. Upon completion of the entire process and approval of the review, HUD issues an Authorization to Release Funds.

2. A proposal may be designated categorically excluded if the proposed construction costs for rehabilitation do not exceed 75% of replacement value, unit density change does not exceed 20%, and there is no change in use. If there are issues that require mitigation, MHDC publishes notification in the local newspaper and offers a 7-day public comment period followed by a 15-day period for HUD review. Upon completion of the entire process and approval of the review, HUD issues an Authorization to Release Funds.

3. A proposal is considered exempt if: (i) it meets the conditions to be categorically excluded and there are no mitigating items or (ii) it is new construction of four or fewer units and there are no mitigating items. In this instance, no advertising is required and no notification is sent to HUD.

4. Proposed developments located in a 100-year flood plain or developments considered a critical action and located in a 500-year flood plain are subject to certain limitations. MHDC prohibits new construction in 100-year flood plains. Rehabilitation projects located in a 100-year flood plain are required to complete the eight-step review process required by HUD when federal funds are involved. Federally-funded or insured developments located in a 500-year flood plain and considered to be a critical action are also required to go through the eight-step review process. A critical action pertains to the type of development without an independent living environment whose occupants may not be sufficiently mobile to avoid loss of life or injury due to flooding or storm events.

Developments determined by MHDC to be acceptable to be rehabilitated or constructed despite the flood plain designation must complete two advertising/public comment periods. The first advertisement notifies the public of the intention to develop/redevelop the property in a flood plain, followed by a 15-day comment period. MHDC must then advertise a notice that no better site has been identified, and the decision has been made to construct or rehabilitate the property in the flood plain. This notification is also followed by a 15-day comment period. Upon the completion of both

publications, MHDC will transmit the review to HUD for its 15-day review period. HUD issues an Authorization to Release Funds upon its approval of the environmental review.

V. CLOSING AND CONSTRUCTION

MHDC staff will confirm that outstanding environmental issues required to be resolved prior to loan closing or during the construction process are completed. MHDC's construction inspectors will be notified of any special requirements to be confirmed during the construction process as they perform their monthly inspections. Final approval for loan funding or for the allocation of tax credits may be delayed or denied if required actions are not taken.

EXHIBIT “A”

PHASE I ASTM STANDARDS

**Recommended Table of Contents and Report Format
(Reference ASTM E 1527-05)**

1.0 Summary			6.0 Site Reconnaissance	6.1 Methodology and Limiting Conditions
2.0 Introduction	2.1 Purpose			6.2 General Site Setting
	2.2 Detailed Scope-of-Service			6.3 Exterior Observations
	2.3 Significant Assumptions			6.4 Interior Observations
	2.4 Limitations and Exceptions		7.0 Interviews	7.1 Interview with Owner
	2.5 Special Terms and Conditions			7.2 Interview with Site Manager
	2.6 User Reliance			7.3 Interviews with Occupants
				7.4 Interviews with Local Government Officials
3.0 Site Description	3.1 Location and Legal Description			7.5 Interviews with Others
	3.2 Site and Vicinity General Characteristics		8.0 Findings	
	3.3 Current Use of the Property		9.0 Opinion	
	3.4 Descriptions of Structures, Roads, Other Improvements on the Site (including heat/cooling system, sewage disposal, source of potable water)		10.0 Conclusions	
	3.5 Current Uses of the Adjoining Properties		11.0 Deviations	
4.0 User Provided Information	4.1 Title Records		12.0 Additional Services	

	4.2 Environmental Liens or Activity and Use Limitations		13.0 References	
	4.3 Specialized Knowledge		14.0 Signature(s) of Environmental Professional(s)	
	4.4 Commonly Known or Reasonably Ascertainable Information		15.0 Qualification(s) of Environmental Professional(s)	
	4.5 Valuation Reduction for Environmental Issues		16.0 Appendices	16.1 Site (Vicinity) Map
	4.6 Owner, Property Manager, and Occupant Information			16.2 Site Plan
	4.7 Reason for Performing Phase I			16.3 Site Photographs
	4.8 Other			
5.0 Records Review	5.1 Standard Environmental Record Sources			16.4 Historical Research Documentation (aerial photographs, fire insurance maps, historical topographical maps, etc.)
	5.2 Additional Environmental Record Sources			16.5 Regulatory Records Documentation
	5.3 Physical Setting Sources(s)			16.6 Interview Documentation
	5.4 Historical Use Information on the Property			16.7 Special Contractual Conditions between User and Environmental Professional
	5.5 Historical Use Information on Adjoining Properties			16.8 Qualification(s) of the Environmental Professional(s)

Definition of Environmental Professional and Relevant Experience
(Reference ASTM 1527 – 05)

Environmental Professional

Environmental Professional means:

(A) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases on, at, in, or to a property.

(B) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the commonwealth of Puerto Rico) to perform environmental inquiries and have the equivalent of three (3) years of full-time relevant experience; or (ii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iii) have the equivalent of ten (10) years of full-time relevant experience.

(C) An environmental professional should remain current in his or her field through participation in continuing education or other activities.

(D) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken.

(E) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

Relevant Experience

Relevant experience, as used in the definition of environmental professional in this section, means: participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analysis, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases to the subject property.

Exhibit "B"

MHDC Lead-Based Paint Policy and Procedures

MHDC Rental Housing Production Programs Guidelines for Rehabilitation Projects

- 1) MHDC requires a physical needs assessment for all rental housing production proposals for the rehabilitation of existing buildings. The physical needs assessment must include an assessment of the presence or suspected presence of lead-based paint, asbestos or mold for all proposals.
- 2) Developers must provide the age of the structure as requested in the Rental Production application FIN-100.
- 3) Developers must submit the following documents with the Part 1 application for firm commitment (generally due March 1 of each year):
 - a) Phase I Environmental Report with potential lead hazard identified for buildings constructed prior to 1978;
 - b) Lead Hazard Evaluation Procedures; and
 - c) Lead Hazard Reduction Procedures.

As the result of the firm submission review, MHDC staff shall indicate the required lead hazard reduction work and protective measures to be followed during construction.

- 4) Prior to the conversion or closing of a permanent loan with MHDC, the borrower shall provide:
 - a) Tenant Notification Procedures;
 - b) Lead Clearance;
 - c) Contractor's Abatement License; and
 - d) Ongoing Maintenance Procedures, if required.

HOME Rental Production Program

Lead-Based Paint Reference Guide

(24 CFR Part 35)

Revised 07/20/2007

(Sub-Grantees are to refer to and comply with all of the pertinent lead paint regulations. The following is only an overview.)

A. HUD's Lead-Safety Regulation

Federal Register (Wednesday, September 15, 1999)

Department of Housing and Urban Development

24 CFR Part 35, et al.

Requirements for Notification, Evaluation, and Reduction of Lead-Based Paint Hazards in Federal Owned Residential Property and Housing Receiving Federal Assistance; Final Rule

B. Exemptions 24 CFR 35.115

- Post-1977 housing (1978 and newer)
- Zero-bedroom units
- Property certified as lead safe
- Property where lead-based paint was removed
- Rehabilitation or maintenance activities that do not disturb painted surfaces
- Emergency actions

C. Documentation Required

1. **Notice To Occupants:** Occupants must be provided with the following documentation:
 - a. EPA Lead Hazard Information Pamphlet at the time of purchase or lease;
 - b. "Notice of Hazard Evaluation" (or presumption) within 15 calendar days of the date when the evaluation is received or the presumption is made (24 CFR 35.125(a)); and
 - c. "Notice of Hazard Reduction & Clearance" no more than 15 calendar days after the hazard reduction activities have been completed (24 CFR 35.125(b)(1)).
2. **Hazard Reduction:** The following documentation must be completed:
 - a. Final scope of work addressing both lead and non-lead paint prior to firm commitment for construction funded from the multifamily HOME Rental Production Program.
 - b. For lead reduction activities that are performed on properties funded through the single-family HOME Repair Program, MHDC requires the contractor supervisor to be trained in Safe Work Practices.

- c. For properties funded through the multifamily HOME Rental Production Program, MHDC requires the Owner to hire a contractor certified as a lead-based paint specialist. A copy of the contractor's Lead Abatement Contractor license is required prior to conversion/permanent closing.
 - d. For properties funded through the multifamily HOME Rental Production Program, certification by the contractor that Safe Work Practices (*24 CFR Part 35.1350*) have been observed is required prior to conversion/permanent closing.
3. **Clearance Report:** Clearance must be performed by a licensed Risk Assessor after all rehab work is done, with a copy of the clearance report and qualifications of the Risk Assessor sent to the MHDC Homeownership division at the time of payment request (HOME Repair Program) or to the MHDC Rental Production division prior to conversion/permanent closing (HOME Rental Production Program).

D. General Procedural Overview

For single-family properties receiving funds from the HOME Repair program:

- 1. A visual assessment walk-through by an HQS inspector trained in visual assessment (per self-administered HUD Internet course at <http://www.hud.gov/offices/lead>) looks for defective paint and applies the *de minimis levels* (*24 CFR Part 35.1350(d)*) to all rehabilitation work to be performed regardless of defective paint.
- 2. MHDC staff reviews the level of HOME rehabilitation assistance and calculates the applicable lead-based paint requirements.

For multifamily developments receiving funds from the HOME Rental Production Program:

- 1. A lead paint inspection or risk assessment must be performed by a licensed lead-based paint professional.
- 2. MHDC staff reviews the results and determines mitigating items that must be addressed prior to the completion of construction.

The rehabilitation scope of work must integrate both “lead” and “non-lead” triggered activities. (Provide the preliminary work write-up to Risk Assessor, then incorporate the assessment's findings.)

- 1. **De Minimis Levels:** *De minimis levels* are exceptions to safe work practices **and defined as work** which disturbs less than:
 - a. 10 square feet on exterior surfaces;
 - b. 2 square feet in any one interior room or space; or

- c. 10 percent of area of a interior or exterior component with a small area (sills, baseboards, etc.).
2. **Lead-Triggered Activity:** A lead-triggered activity is anything that is a lead hazard, or reduces a lead hazard, including:
 - a. Any defective paint surface (until tested to be non-lead)
 - b. Any rehabilitation work greater than the *de minimis levels* disturbing a lead painted surface to be performed with safe work practices
 - c. Any abatement activities from risk assessment
 3. **Course of Action:**
 - a. Determine the level of hazard evaluation and reduction (*24 CFR 35.915-930*).
 - b. Presume lead or evaluate (*option – 24 CFR 35.120*); evaluation recommended.
 - c. Perform Lead Paint Inspection and/or risk assessment and/or Lead Hazard Screen by licensed personnel.
 - d. Include in the scope of work for “lead” activities the interim controls and/or abatement recommendations from a risk assessor and safe work practices for items determined to be lead paint.
 - e. Determine impact of ‘occupant relocation’ requirements (*24 CFR 35.1345*).
 - f. Based on the results of Lead Paint Inspection and/or risk assessment and/or Lead Hazard Screen, establish contractor qualifications (*see Safe Work Practices 24 CFR 35.1325-1330*), safe work practices to be used (including occupant protections), and achieve clearance in bid invitation and contract.
 - g. Relocate occupants and belongings, if necessary (*24 CFR Part 35.1345*).
 - h. Supervise work so that “Safe Work Practices” at 24 CFR Part 35.1350 are used: worksite is prepared/contained and occupants and their belongings are protected, prohibited methods of paint removal are not used, specialized cleaning is conducted to achieve clearance, certification is made that Safe Work Practices have been followed.
 - i. Collect lead dust wipe and soil clearance samples upon the completion of the work.
 - j. Achieve clearance and obtain report approval after all rehab work is done.

E. Lead Hazard Evaluation Methods & Qualifications

1. **Visual Assessment (accepted for HOME Repair only):** A visual assessment for deteriorated paint consists of a visual search for cracking, scaling, peeling, or chipping paint. This assessment does not identify the presence of lead, only the potential danger. The assessment is performed by either a licensed risk assessor or Housing Quality Standards (HQS) inspector trained in visual assessment.
2. **Lead Paint Inspection:** A lead-based paint inspection is a surface-by-surface investigation to determine the presence of lead-based paint through XRF analyzer testing and laboratory analysis. Lead Paint Inspections must be

conducted by state licensed lead paint inspectors or risk assessors and are only valid for one year.

3. **Risk Assessment**: A risk assessment is a comprehensive investigation of a dwelling to identify lead-based paint hazards that includes paint testing, dust and soil sampling, and a visual evaluation. Risk assessment details are summarized in a written report with recommendations for actions. A licensed risk assessor must conduct the assessment.
4. **Lead Hazard Screen**: A lead hazard screen is similar to a risk assessment. The sampling is less extensive, but the requirements are more stringent. If the unit fails the lead hazard screen, then a full risk assessment must be performed. The screen must be performed by a licensed risk assessor.

F. Lead Hazard Reduction Methods

1. **Paint Stabilization**: Paint stabilization reduces exposure to lead-based paint by addressing deteriorated paint on exterior and interior surfaces through repairs, safe paint removal, and repainting or abatement.
2. **Interim Controls**: (24 CFR 35.1330) Interim controls are short-term measures (lasting less than twenty years) to reduce human exposure to lead-based paint hazards through repairs, painting, maintenance, special cleaning, occupant protection measures, clearance, and education programs. Ongoing monitoring is necessary in all situations. Interim control methods require safe practices and include:
 - a. **Paint stabilization** – All deteriorated paint on exterior and interior surfaces must be stabilized through repairs, safe paint removal, and repainting.
 - b. **Treatment for friction or impact surfaces** – If lead-based paint is found and exceeds acceptable levels or is presumed to exceed it, the conditions creating friction or impact with surfaces with lead-based paint such as those that rub, bind, or crush must be corrected. Examples of this work include re-hanging binding doors, installing door stops, or reworking windows.
 - c. **Treatment for chewable surfaces** – If a child under six has chewed surfaces known to contain lead-based paint or if lead-based paint is presumed, these surfaces must be enclosed or coated so they are impenetrable.
 - d. **Lead-contaminated dust control** – All horizontal surfaces that are rough, pitted, or porous such as bare floors, stairs, window sills, and window troughs must be covered with a smooth, cleanable covering or coating such as metal coil stock, plastic, polyurethane, or linoleum. Carpeting must be vacuumed or rugs must be removed and vacuumed on both sides. Vacuuming must be done using HEPA vacuums.
 - e. **Lead-contaminated soil control** – If soil is lead-contaminated, interim controls that may be used include impermanent surface coverings such as

gravel, bark, and sod as well as land use controls such as fencing, landscaping, and warning signs.

Interim Controls (including Standard Treatments) (24 CFR 35.1330): the workers should be trained in accordance with the OSHA Hazard Communication Requirements (29 CFR 1926.59) and either be supervised by an individual certified as a lead-based paint abatement supervisor or must have successfully completed one of the following courses:

- LBP abatement worker or supervisor (40 CFR 745.225);
 - Operations and Maintenance (NETA);
 - Remodeler's and Renovator's Lead-Based Paint Training Program developed by HUD and the National Association of the Remodeling Industry; or
 - An equivalent course approved by EPA or HUD.
3. **Abatement**: Abatement mitigates lead-based paint and lead-based paint hazards by either permanently removing lead-based paint and its dust or encapsulating or enclosing the lead-based paint for a period of twenty years or more, replacing components that have lead-based paint, and removing or permanently covering lead-contaminated soil. Limited or no monitoring may be required based upon the action taken. Encapsulation and enclosure require ongoing monitoring and maintenance to check their effectiveness.

Abatement must be conducted by certified abatement workers who have successfully completed a lead-based paint abatement worker course accredited by EPA. These workers must be supervised by a lead-based paint abatement supervisor certified under a State program authorized by EPA or conducted by EPA.

G. Safe Work Practices 24 CFR 35.1350

1. **Prohibited Methods of Paint Removal**: (24 CFR 35.140)

The following methods *shall not be used* to remove paint that is, or may be, lead-based paint:

- a. Open flame burning or torching;
- b. Machine sanding or grinding without a high-efficiency particulate air (HEPA) local exhaust control;
- c. Abrasive blasting or sandblasting without HEPA local exhaust control;
- d. Heat guns operating above 1100 degrees Fahrenheit or charring the paint;
- e. Dry sanding or dry scraping, except dry scraping in conjunction with heat guns or within 1.0 ft. (0.30 m.) of electrical outlets, or when treating defective paint spots totaling no more than 2 sq. ft. (0.2 sq. m.) in any one interior room or space, or totaling no more than 10 sq. ft. (2.0 sq. m.) on exterior surfaces; or

- f. Paint stripping in a poorly ventilated space using a volatile stripper that is a hazardous substance in accordance with regulations of the Consumer Product Safety Commission at 16 CFR 1500.3, and/or a hazardous chemical in accordance with the Occupational Safety and Health Administration regulations at 29 CFR 1910.1200 or 1926.59, as applicable to the work.

2. Occupant Protection: (24 CFR 35.1345)

Occupants shall not be permitted to enter the worksite during hazard reduction activities (unless they are employed in the conduct of these activities at the worksite), until after hazard reduction work has been completed and clearance, if required, has been achieved.

Occupants shall be temporarily relocated before and during hazard reduction activities to a suitable, decent, safe, and similarly accessible dwelling unit that does not have lead-based paint hazards, except if:

- a. Treatment will not disturb lead-based paint, dust-lead hazards or soil-lead hazards;
- b. Only the exterior of the dwelling unit is treated, and windows, doors, ventilation intakes and other openings in or near the worksite are sealed during hazard control work and cleaned afterward, and entry free of dust-lead hazards, soil-lead hazards, and debris is provided;
- c. Treatment of the interior will be completed within one period of eight daytime hours, the worksite is contained so as to prevent the release of leaded dust and debris into other areas, and treatment does not create other safety, health or environmental hazards (e.g., exposed live electrical wiring, release of toxic fumes, or on-site disposal of hazardous waste); or
- d. Treatment of the interior will be completed within five calendar days, the worksite is contained so as to prevent the release of leaded dust and debris into other areas, treatment does not create other safety, health or environmental hazards; and, at the end of work on each day, the worksite and the area within at least 10 feet (3 meters) of the containment area is cleaned to remove any visible dust or debris, and occupants have safe access to sleeping areas, and bathroom and kitchen facilities. (HUD Interpretive Guidance J24 – The term “interior work” refers to work in a single room. See also R18 and R19.)

The dwelling unit and the worksite shall be secured against unauthorized entry, and occupants’ belongings protected from contamination by dust-lead hazards and debris during hazard reduction activities. Occupants’ belongings in the containment area shall be relocated to a safe and secure area outside the containment area, or covered with an impermeable covering with all seams and edges taped or otherwise sealed.

3. Worksite Preparation: (24 CFR 35.1345)

The worksite shall be prepared to prevent the release of leaded dust and contain

lead-based paint chips and other debris from hazard reduction activities within the worksite until they can be safely removed. Practices that minimize the spread of leaded dust, paint chips, soil and debris shall be used during worksite preparation.

A warning sign shall be posted at each entry to a room where hazard reduction activities are conducted when occupants are present, at each main and secondary entryway to a building from which occupants have been relocated, or, for an exterior hazard reduction activity, where it is easily read 20 feet (6 meters) from the edge of the hazard reduction activity worksite. Each warning sign shall be as described in 29 CFR 1926.62(m), except that it shall be posted irrespective of employees' lead exposure and, to the extent practicable, provided in the occupants' primary language.

4. Specialized Cleaning:

After hazard reduction activities have been completed, the worksite shall be cleaned using cleaning methods, products, and devices that are successful in cleaning up dust-lead hazards, such as a HEPA vacuum or other methods of equivalent efficacy, and lead-specific detergents or the equivalent.

5. De Minimis Levels: Safe Work Practices are not required when maintenance or hazard reduction activities do not disturb painted surfaces that total more than:

- a. 10 square feet (2 square meters) on exterior surfaces;
- b. 2 square feet (0.2 square meters) in any one interior room or space; or
- c. 10 percent of the total surface area on an interior or exterior type of component with a small surface area. Examples include window sills, baseboards, and trim.

H. Worker Protection

1. Prior to the start of any stabilization, demolition and / or renovation work that will impact building components with lead-based paint, the contractor performing the work must have a written respiratory protection program in place (*OSHA 29 CFR 1910.134*), documentation indicating that his or her workers have had medical surveillance, are medically cleared to wear a respirator, and have passed a qualitative fit test.
2. In accordance with OSHA 19 CFR 1926.62 (Lead in Construction Standard), an initial employee exposure assessment must be conducted (through personal lead air monitoring) during stabilization, renovation and / or demolition activities that will impact building components with lead-based paint. Respiratory protection will be required for each activity until air monitoring many prove exposures are below the Permissible Exposure Limit (PEL).

I. Lead Hazard Criteria

DUST (EPA and most other states)

Floors	< 40 micrograms per square foot (40 $\mu\text{g}/\text{ft}^2$)
Window Sills (stools)	< 250 $\mu\text{g}/\text{ft}^2$
Window Troughs (wells)	< 400 $\mu\text{g}/\text{ft}^2$ (clearance only)

PAINT (HUD, EPA, Kansas, Missouri, and most other states)

XRF (On-Site Test)	≥ 1.0 milligrams per square centimeter (mg/cm^2)
AAS (Laboratory)	$\geq 0.5\%$ by weight
CPSC (1978 law)	$\geq 0.06\%$ by weight (maximum lead concentration for residential paints only)

AIR (OSHA)

Action Level (AL)	≥ 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
Permissible Exposure Limit (PEL)	$\geq 50 \mu\text{g}/\text{m}^3$

WASTE (EPA – Under RCRA, there are four characteristic tests. The two not shown below are *Ignitability* and *Reactivity*. The two types of characteristic tests shown below are the types that fail most often.)

Toxicity (TCLP)	≥ 5 parts per million (PPM) – 7 other metals also
Corrosivity (pH)	< 2.0 pH units or > 12.5 pH units

WATER (EPA – SDWA)

Drinking Water	< 15 parts per billion (PPB)
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BLOOD

OSHA (Adult)	< 40 micrograms per deciliter ($\mu\text{g}/\text{dl}$) 2 @ $\geq 50 \mu\text{g}/\text{dl}$ - requires medical removal
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CDC Children	< 10 $\mu\text{g}/\text{dl}$
Adults	< 25 $\mu\text{g}/\text{dl}$ (recommendation)

SOIL (EPA and most other states)

Bare Soils	< 400 PPM – high traffic/high contact/play areas < 1200 PPM – all other areas of property
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(reference: Baker Environmental Consulting, Inc.)

J. Resources on Lead Based Paint Regulations

- HUD's Lead-Safety Regulation – 24 CFR Part 35

“Requirements for Notification, Evaluation, and Reduction of Lead-Based Paint Hazards in Federal Owned Residential Property and Housing Receiving Federal Assistance; Final Regulation (September 15, 1999)”

- HUD Interpretive Guidance September 21, 2000
- HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards
- HUD Office of Healthy Homes & Lead Hazard Control
Website: <http://www.hud.gov/offices/lead>
Regulation Hotline: (202) 755-1822 ext 104
E-mail: lead_regulations@HUD.gov
- The National Center for Lead-Safe Housing
Website: www.leadshousing.org
Implementing HUD’s Lead-Safety Regulation
Internet Guide to the Rule, Model Documents and Specifications
- The Lead Listing (for HUD)
Website: www.leadlisting.org
Hotline: 1 (888) LEADLIST
Lists companies providing lead services and training opportunities
- The Environmental Network
Website: <http://www.environmentalnetwork.com/>
Lists companies providing lead services
- EPA
Website: www.epa.gov/opptintr/lead
- National Lead Information Center
Hotline: 1 (800) 424-5323

