1. PHASE I ENVIRONMENTAL SITE ASSESSMENTS

A. General Requirements

Fannie Mae requires a Phase I Environmental Site Assessment (a "Phase I ESA") for each Property securing a Mortgage Loan, except for certain Small Mortgage Loans. The Phase I ESA must assess the entire Property, and must be prepared by an environmental professional as that term is defined at 40 C.F.R. § 312.10 (an "Environmental Professional"). The Phase I ESA must be ordered by the Lender and prepared in accordance with:

- the "All Appropriate Inquiries" ("AAI") rule, promulgated by the EPA (40 C.F.R Part 312), as amended, supplemented, or restated from time to time ("All Appropriate Inquiries"); and
- the American Society of Testing Materials ("ASTM") Standard E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, version E1527~~-13~~ ("ASTM E1527"), as amended, supplemented, or restated from time to time.

The Phase I ESA must identify both Recognized Environmental Conditions and Business Environmental Risks.

B. Date of Phase I ESA

The date of the Phase I ESA must not be more than one hundred eighty days prior to the Mortgage Loan Origination Date, to ensure the Borrower qualifies ~~. This date is required to qualify the Lender and Fannie Mae~~ for the safe harbor protections for an "innocent landowner" under the "All Appropriate Inquiries" rule.

C. Data Requirements

When a Phase I ESA is required by the Guide, in addition to the Phase I ESA Report, the Environmental Professional must deliver structured data to the Lender in accordance with Exhibit A and the ASTM E1527 standard. When a Phase I ESA is not required for a Small Mortgage Loan, the Environmental Professional must deliver structured data to the Lender in accordance with Exhibit A and the ASTM E1528 standard.

D. Reliance

The Phase I ESA must be addressed to, and explicitly authorize reliance by, among other Persons, the Lender, Fannie Mae and their respective successors and assigns.

E. Executive Summary

The Phase I ESA Report must contain a Table of Contents and format as recommended by ASTM 1527, followed by an executive summary that includes, at a minimum, the following conclusions of an Environmental Professional:

- the presence or absence of Recognized Environmental Conditions and Business Environmental Risks and, if present:
- identify and summarize each identified Recognized Environmental Condition, including any Controlled Recognized Environmental Condition (CREC), and Business Environmental Risk;
- identify the source, if possible, including whether on the Property or off-site;
- identify potential risks to the health, safety, and marketability of the Property, and any owner liability for each Recognized Environmental Condition;
- for any Property where radon testing is required per Section 3 of this Form 4251:

- a summary of the radon findings and mitigation recommendations/requirements, including estimated cost for (i) required additional testing, and (ii) potential mitigation per an O&M Plan (as defined herein); and
- details on the testing methods (e.g., canister locations and results) and any required follow-up additional testing requirements;

- for any Property where, per Section 3 of this Form 4251, the Environmental Professional concludes that testing or mitigation is not necessary, the rationale supporting this conclusion. (Note: The Environmental Professional may not use the Environmental Protection Agency Map of Radon Zones as the primary rationale in making this determination.)
- address possible mitigants to address all identified environmental risks;
- provide a conclusion as to the potential impact on tenant safety, and the marketability or value of the Property for each identified Recognized Environmental Condition or Business Environmental Risk (e.g., if soil or groundwater contamination is present, whether vapor intrusion is a potential risk to human health or the environment);~~ and~~
- determine whether a Phase II Environmental Site Assessment or any other assessment, investigation, or further action is required, recommended or has been completed with respect to that Recognized Environmental Condition or Business Environmental Risk;
- the presence of monitoring wells at, or adjacent to, the Property;
- on-going requirements of the Borrower or an Affiliate of the Borrower, including controls and/or Property restrictions;
- the presence or absence of any data gaps and, if present, a summary of such data gaps, and a description of their significance to the ability of the Environmental Professional to identify Recognized Environmental Conditions and Business Environmental Risks on the Property; and
- the regulatory status of the Property (i.e., whether the Property complies with Environmental Laws).

The executive summary should also state if a Historical Recognized Environmental Condition previously existed at the Property and the current regulatory status, if applicable, or Business Environmental Risk previously existed at the Property was fully remediated.

F. Business Environmental Risks

The Phase I ESA must contain an expanded evaluation of:

- any other appropriate Business Environmental Risks, including all matters identified as a "non-scope consideration" under the ASTM E1527 standards; and
- radon per Section 3 of this Form 4251.

G. Additional Requirements

The Phase I ESA~~Environmental Site Assessment~~ must:

- address all Hazardous Substances;
- identify any Brownfield Grants or other EPA Grants awarded or grant funding potentially available to the Property owner by the EPA under CERCLA 42 U.S.C. § 9604 (k)(2)(B), as amended, supplemented, or restated from time to time;

- include within the scope of its investigation, those other substances designated by the Brownfield or EPA Grant or the cooperative agreements, which may include controlled substances as defined in the Controlled Substances Act (21 U.S.C. § 802);
- identify all evidence of subsurface mining activity and oil/gas wells or pipelines as a Recognized Environmental Condition or a Business Environmental Risk and, if determined to be Business Environmental Risk, whether the mining activity or oil/gas wells or pipelines are:
- compliant with mandatory setback requirements established by the regulatory authority; or
- not less than 250 feet below the surface of the Property or within 600 feet from the closest Property boundary line.

The Phase I ESA Report must include a complete copy of any letter or other document from a Federal, state, or local governmental agency regarding the regulatory status of any Recognized Environmental Condition or Business Environmental Risks including, but not limited to, "no further action" or "no further remediation" letters.

If a property adjacent to the Property ~~that~~ is owned by any Person owning a Controlling Interest in the Borrower and has been determined to have (i) a Recognized Environmental Condition, or (ii) had a Phase II Environmental Assessments performed, the Lender and the Environmental Professional preparing the Phase I ESA~~Site Environmental Assessment~~ on the Property must review and evaluate all available Environmental Site Assessments performed on such adjacent property.

2. PHASE II ENVIRONMENTAL SITE ASSESSMENTS

If recommended by the Environmental Professional based on ~~warranted by~~ the results of the Phase I ESA, the lack of data or information concerning the conditions on, at, or adjacent to the Property (e.g., a leaking underground storage tank) or for any other reason, the Lender must obtain and evaluate a Phase II ESA that further identifies and quantifies the scope of any actual or potential Recognized Environmental Conditions or Business Environmental Risks. The Phase II ESA must:

- conform to the ASTM Standard E1903-19~~1~~, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, as that standard may be amended, restated, modified or supplemented from time to time;
- define the scope of work required to comply with all applicable Environmental Laws; and
- provide a reasonable timeline for completion and the cost to perform that scope of work;
- conclude that:
- no contamination above established thresholds exists and therefore no further action is warranted;
- additional testing is warranted; or
- a remediation plan is recommended for the Property; and
- determine whether disclosure of any contamination is required.

The Phase I ESA Report should be updated and revised to incorporate the findings and conclusions from the Phase II ESA~~ must be incorporated into the final Phase I ESA Report~~. A copy of the Phase II ESA Report must be attached as an Appendix to the Phase I ESA Report and ~~include the delivery of~~ the corresponding structured data must be delivered in accordance with Exhibit A and the ASTM E1903 standard.

3. RADON ASSESSMENT

A. Exemptions

Radon testing is required for any Property securing a Mortgage Loan except for:

- Small Mortgage Loans (as defined in the Guide);
- Supplemental Mortgage Loans;
- Cooperative Properties;
- Manufactured Housing Communities;
- Properties with no ground-contact residential units (e.g., ground-contact space is retail only; ground-contact amenities or leasing office; lowest floor residential units are located above a parking garage or over a ventilated crawl space compliant with local building codes);
- Upper-floor residential units;
- Properties that, when newly constructed, incorporated radon-resistant design elements, including a:
- layer of clean gravel or aggregate installed beneath the slab or flooring system;
- layer of plastic sheeting or a vapor retarder installed on top of the gravel layer;
- gas-tight venting pipe installed that runs from the gravel level through the building to the roof; and
- thoroughly sealed and caulked foundation;
- Properties with property-wide radon mitigation systems already in place per an existing O&M Plan;
- Refinances of loans secured by a Property with existing debt to Fannie Mae or Freddie Mac that have undergone previous radon testing per this Form 4251; and
- When the Environmental Professional concludes that testing or mitigation is not necessary and documents reasons supporting this conclusion. (Note: The Environmental Professional may not use the Environmental Protection Agency Map of Radon Zones as the primary rationale in making this determination.)

B. Radon Testing Protocols

For any Property where radon testing is required per Section 3.A., the testing protocol must comply with the requirements of Schedule 1: Fannie Mae Multifamily Radon Testing Requirements, attached hereto. The detailed radon findings for the Property must be attached as an appendix to the Phase I ESA Report.

C. Radon Testing Timing

For any Property where radon testing is required per Section 3.A.:

- The initial radon testing must be completed as part of the Phase I ESA.
- Any required follow-up testing may take place after the Mortgage Loan Origination Date, provided:
    - the Borrower executes the Modifications to Loan Agreement (Radon)(Form 6277);
    - if the results of the first round of testing have been received prior to the Mortgage Loan Origination Date, the Lender must include on the Completion/Repair Schedule to the Multifamily Loan Agreement the cost of:

- the follow-up round of radon testing, based on the actual cost of the first round of testing and the number of buildings having a unit with an elevated radon level on the first round of tests; and
- any potential remediation per Section 4, with escrowed remediation costs based on the results of the initial round of radon testing and consultations with the Environmental Professional; or

- if the results of the first round of testing have not been received prior to the Mortgage Loan Origination Date, the Lender should, after consulting with the Environmental Professional, determine whether it would be appropriate to include on the Completion/Repair Schedule to the Multifamily Loan Agreement the cost of any likely:
  - follow-up round of radon testing, based on the actual cost of the first round testing; and
  - remediation per Section 4.

43. REMEDIATION ACTIONS

A. Remediation Plan

A Property that fails to meet a particular standard may, in some cases, be corrected through remedial actions. The scope of work and cost for any Remediation Plan must be recommended in writing by the Environmental Professional and, if applicable, must have received the written approval of the governmental agency or agencies having jurisdiction over the Property with regard to the Recognized Environmental Condition or Business Environmental Risk.

B. Operations and Maintenance Plans

The Property may have environmental or building conditions that are acceptable, but must be monitored throughout the life of the Mortgage Loan with appropriate ongoing operations and maintenance actions (an "Operations and Maintenance Plan" or an "O&M Plan"). Unless recommended by the Environmental Professional or required by Environmental Laws to be removed, remediated or abated, the presence of any of the following require an O&M Plan.

The following are the minimum O&M requirements. The Environmental Professional may include additional requirements to mitigate risk that might adversely impact human health or the environment.

ANY PROPERTY CONTAINING:	WHEN REQUIRED:
Asbestos-containing materials	If the Improvements were built before 1981 or the Environmental Professional identifies suspect asbestos-containing materials.
Lead-based paint	If the Improvements were built before 1978.
Radon	If recommended by an Environmental Professional. (Note: If a second round of testing is required but will be conducted after the Mortgage Loan Origination Date, the Environmental Professional should prepare a Radon O&M Plan based on the assumption that the second round of testing confirms the results of the first round of testing.)
Underground Storage Tanks	If recommended by an Environmental Professional.
History of Mold	Required at all times.
Known Problematic Building Materials	If recommended by the PCA Consultant.

When an O&M Plan is necessary, the following steps are required.

- An O&M Plan must be developed prior to the Mortgage Loan Origination Date. An Environmental Professional must prepare and submit the O&M Plan, stating that the provisions of the O&M Plan, if carried out with diligence, are sufficient to maintain the Property in accordance with applicable Environmental Laws and sound business practice and to protect human health.
- The O&M Plan must be readily accessible at the Property.
- The Borrower must execute and deliver on the Mortgage Loan Origination Date the appropriate Compliance Agreement for an Operations and Maintenance Plan (Form 6420.Series) to which the applicable O&M Plan is attached as Exhibit A.
- The Lender must include on the Completion/Repair Schedule to the Multifamily Loan Agreement:
  - the costs of any follow-up testing required per the O&M Plan; and
  - all potential remediation costs per the O&M Plan.

- If radon mitigation was required, documentation confirming that post-mitigation radon testing for at least 48 hours confirmed radon concentration of less than 4 pCi/L.

54. APPENDIX TO THE ENVIRONMENTAL DUE DILIGENCE REQUIREMENTS

The following appendix is included with these Requirements to assist in the fulfillment of the data requirements, and for inclusion as a supplements to the ESA Report:

- Exhibit A: Environmental Site Assessment Data Supplement (Form 4251.A).

SCHEDULE 1

FANNIE MAE MULTIFAMILY RADON TESTING REQUIREMENTS

State and Local Law Compliance	The Environmental Professional must comply with all applicable state and local requirements governing radon testing and mitigation. If there is any conflict between state or local laws and these requirements, the Lender should follow the more stringent standard.
Environmental Professional	All radon testing will be managed by the Environmental Professional. If applicable state law requires radon testing be conducted by a state-certified radon professional, the Environmental Professional must be state-certified or engage a state-certified radon professional to conduct the testing. The Environmental Professional is responsible for overseeing the deployment and retrieval of radon testing canisters and, unless expressly prohibited by state law, may direct a Property representative to place or retrieve the radon testing canisters as deemed appropriate by the Environmental Professional. If the Environmental Professional directs a Property representative to place or retrieve the radon testing canisters, proper training and direction must be provided to the Property staff by the Environmental Professional.
Phase I ESA	The initial radon testing will be conducted in connection with the Phase I ESA as a "non-scope" item under the ASTM E1527 standards, and the testing results delivered with the Phase I ESA Report.
Resident Notification	The Environmental Professional or a Property representative must provide notices to staff/tenants, including guidance on maintaining proper closed building conditions. The tenant notices should include: • testing notifications, including dates and times for canister deployment and retrieval; • instructions on how tenants can maintain proper testing environments; • information on how to obtain federal or state radon health guidance; and • contact information for: o the state's radon office or hotline for general radon inquiries, if any; and o the Environmental Professional's contact information for specific inquiries regarding the radon test. Tenants will not be required to sign a non-interference agreement.
Initial Testing Protocols	The Environmental Professional may conclude that testing or mitigation is not necessary provided the rationale supporting this conclusion is documented in the executive summary to the Phase I ESA Report. (Note: The Environmental Professional may not use the Environmental Protection Agency Map of Radon Zones as the primary rationale in making this determination.) The Environmental Professional:

	• must test or oversee testing of at least 25% of all ground-contact units at the Property, to be selected in the Environmental Professional's professional judgment, with no fewer than 1 radon test per each building having ground-contact units; and • may allow for no more than 15% lost or faulty tests; if more than 15% of the tested units are faulty, lost, or not retrievable, the Environmental Professional must determine whether the available results are sufficient to ascertain the radon risks at the Property, or whether testing of additional units is required.
Follow-Up Testing Protocol	After completion of the initial radon testing, if any building at the Property has at least 1 unit with an elevated radon concentration equal to or greater than 4.0 pCi/L, the Environmental Professional must either: • recommend installation of a radon mitigation system in all buildings having a unit with a radon concentration of 4.0 pCi/L or above; or • conduct a follow-up second round of testing within each building having a unit with an initial radon test level at the 4.0 pCi/L threshold or higher, using either short- or long-term testing, and which second round of testing must cover at least 25% of the ground contact units in that building, selected in the Environmental Professional's professional judgment (but must include each unit that tested at 4.0pCi/L or greater during the first round of testing).
Threshold for mitigation	After the follow-up round of testing, the implementation of radon mitigation measures is required for each building having units where the average of the two-short term tests (or the results of the follow-up long-term test) indicated a radon concentration of 4.0 pCi/L or higher.
Mitigation Standards	Any building needing radon mitigation per these Requirements must be mitigated: • in compliance with all applicable laws and regulations; • by a qualified radon mitigation firm that will determine: o the type of appropriate mitigation system required; and o whether the installation of a multi-unit mitigation system is necessary. If the installation of a radon mitigation system is required, post-mitigation testing must confirm a radon concentration of less than 4 pCi/L.
Operations and Maintenance Plan	Any required mitigation system must be managed under an O&M Plan to be prepared by the Environmental Professional. The O&M Plan must include periodic inspections of all system components by a qualified Property representative.
Ongoing Radon Testing	Not required, unless specified under the O&M Plan to confirm on-going performance of the mitigation system.