## Table of Contents

### 7.0 Introduction

### 7.1 Introduction

### 7.2 Procedures

### 7.3 Environmental Review Requirements

#### 7.3.A. Airport Hazards (24 CFR 50.4(k))

#### 7.3.B. Air Quality (40 CFR 6, 51 and 93)

#### 7.3.C. Asbestos

#### 7.3.D. Coastal Barrier Resources (24 CFR 50.4(c)(1))

#### 7.3.E. Coastal Zone Management (24 CFR 50.4(c)(2))

#### 7.3.F. Endangered Species (24 CFR 50.4(e))

#### 7.3.G. Environmental Justice (24 CFR 50.4(l))

#### 7.3.H. Explosive/Flammable Hazards (24 CFR 50.4(k))

#### 7.3.I. Farmlands Protection (24 CFR 50.4(j))

#### 7.3.J. Flood Insurance (24 CFR 50.4(b)(1))

#### 7.3.K. Floodplain Management (24 CFR 50.4(b)(2))

#### 7.3.L. Historic Preservation (24 CFR 50.4(a))

#### 7.3.M. Housing Requirements, Additional Nuisances and Hazards

#### 7.3.N. Lead Based Paint

#### 7.3.O. Noise Analysis (24 CFR Part 50.4(k))

#### 7.3.P. Radon

#### 7.3.Q. Site Contamination Analysis (24 CFR 50.3(i)(1))

#### 7.3.R. Sole Source Aquifiers (24 CFR 50.4(d))

#### 7.3.S. Wetlands Protection (24 CFR 50.4(b)(3))

#### 7.3.T. Wild & Scenic Rivers

### 7.4 Additional Nuisances & Hazards

#### 7.4.A. Fall Hazards

#### 7.4.B. Hydraulic Fracturing (Fracking)

#### 7.4.C. Local Requirements

#### 7.4.D. Oil or Gas Wells/Sour Gas Wells/Slush Pits

#### 7.4.E. Overhead High Voltage Transmission Lines

#### 7.4.F. Pipeline Hazards

#### 7.4.G. Railroad Vibration

#### 7.4.H. Sinkholes/Mine Subsidence

#### 7.4.I. Soil Fill

#### 7.4.J. Water Quality
7.1 Introduction

This chapter outlines for the Lender and HUD staff the policies and procedures that must be followed to meet HUD's environmental review responsibilities. The standards and guidance documents referenced in this chapter may be updated, amended or superseded from time to time. Wherever standards or guidance are cited in this chapter, ORCFHUD requires reliance on the most recent edition or superseding document.

A. Legal Authorities, Handbooks, Guidance, Standards, and Forms

1. All Federal agencies are required to comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) (NEPA), and the implementing procedures issued by the Council on Environmental Quality at 40 CFR Parts 1500-1508. U.S. Department of Housing and Urban Development (HUD) regulations implementing NEPA are contained in 24 CFR Part Parts 50, “Protection and Enhancement of Environmental Quality” and 58, “Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities”. 24 CFR Part 50 applies to the Section 232 Program. Related Federal laws and authorities are listed in 24 CFR 50.4 and 50.3(i). Under Part 50, HUD may not delegate its environmental responsibilities to others; it is required to prepare the final environmental assessment and review, make the appropriate environmental finding, and obtain all required reviews, comments and approvals and make the appropriate environmental finding prior to issuing a Firm Commitment. (See 24 CFR 50.11.)


3. HUD has also established the HUD Environmental Review Online System (HEROS) – Form HUD 4128 to replace the paper HUD-4128 as the prescribed format for all HUD-to document compliance with NEPA and other Federal environmental laws, authorities, Executive Orders, and HUD standards. The use of HEROS to document environmental reviews is required to use HEROS to document all Part 50 environmental reviews, consistent with the requirements under 24 CFR 50.31. Further, as HEROS becomes accessible to the Section 232 lenders, those lenders are expected to use HEROS for inputting 18(a). All required source documentation, including the ASTM Phase I Environmental Site Assessment (Phase I ESA), must be uploaded to the relevant...
environmental data for 232 transactions. HEROS screens. HEROS source documentation, including but not limited to the ASTM Phase I ESA, will be made available to the public for one year after completion of the review.

4. The Lender must submit an environmental report to HUD using the HEROS system for all projects. See Section 7.2.A “Lender’s Responsibilities” below.

5. Aggregation: In accordance with 24 CFR 50.21, activities which are geographically related and are logical parts of a composite of contemplated HUD projects shall be evaluated together. Where a parcel that secures the FHA mortgage is part of a larger site, the project should be defined as the parcel plus the parts of the rest of the site that are directly related to the Section 232 development (access roads, parking, storm water detention systems, open spaces, utilities, etc.). What gets defined as directly related is contextual; it depends on project circumstances and may vary from project to project.

6. Requirements in this chapter may exceed those of many state and federal agencies. One reason for this is if a Borrower defaults on an FHA-insured project, HUD may become the project owner. Under Section 120(h) of the Comprehensive Environmental Response and Liability Act (CERCLA), Federal agencies that own properties are required to take “all remedial action necessary to protect human health and the environment” with respect to known hazardous substances upon disposition of the property. This requirement is beyond any liability releases under State or Federal law and any due diligence requirements under CERCLA.

4. Existing projects to be refinanced or purchased under Section 232/223(f) and many rehabilitation projects are categorically excluded (CE) from NEPA compliance (see exclusions in 24 CFR 50.20(a)). Such projects do not require an environmental assessment under NEPA except in extraordinary circumstances (see 24 CFR 50.20(a) and (b)), but they must comply with the laws and authorities at 24 CFR 50.4. In addition, CE projects must document compliance with parameters related to Nuisances and Hazards such as pipelines, fall hazards, and oil and gas wells, as described below.

7. Local, State, Tribal or Federal Laws (LSTF): The acronym LSTF as used in this chapter refers to “local, state, tribal or Federal”.

a. HUD will not assume any responsibility with respect to inspection, enforcement, interpretation or determination of compliance with such state or local requirements.

b. Where the project is located on a Native American reservation, the tribal authority may need to assume the responsibilities of the state or local environmental protection agencies.

c. This chapter is not a substitute for requirements in the laws, regulations, and Executive Orders regarding environmental analysis and mitigation.
B. Levels of Environmental Review

The level of environmental review varies based on the HUD program and the proposed activity. Projects are categorized by activities into four levels of review under 24 CFR Part 50:

- Categorically Excluded Not Subject to the laws and authorities at 50.4 (CENST)
- Categorically Excluded Subject to the laws and authorities at 50.4 (CEST)
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)

1. Categorically Excluded Not Subject to Related Laws and Authorities (CENST):

Pursuant to 24 CFR 50.19(b)(21), “refinancing of FHA-insured mortgages that will not allow new construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance” are categorically excluded from the environmental assessment (EA) requirements of the National Environmental Policy Act (NEPA), except in extraordinary circumstances, and do not require compliance with the Federal laws and authorities specified at 24 CFR Part 50.4, other than for the flood insurance requirements specified at 24 CFR 50.4(b)(1). Thus, currently FHA-insured Section 223(f) and 223(a)(7) refinancing transactions that meet these criteria do not require an environmental review. However, the flood insurance requirements specified at 24 CFR 50.4(b)(1) are still applicable. Please note, 24 CFR 50.19(b)(21) applies only to projects with existing HUD mortgage insurance.

For environmental review purposes, the term “maintenance” means an activity that slows or halts deterioration of a building and does not materially add to its value or adapt it to new uses. Please refer to HUD Notice CPD-16-02 “Guidance for Categorizing an Activity as Maintenance for Compliance with HUD Environmental Regulations, 24 CFR Parts 50 and 58” or succeeding guidance. Note that this, which is available on the ORCF Environmental Resources page. This definition of maintenance is specifically for environmental review purposes and applies to all HUD programs.

Refinances of currently FHA-insured mortgages under Sections 223(a)(7) and 223(f) require an environmental review utilizing HEROS-Form HUD 4128 do not qualify for CENST level reviews when any of the conditions listed at 7.1.A.6.a., b., or c. immediately below apply. For projects that do not qualify for CENST level reviews, the project. The review process and requirements include submission of a current Phase I Environmental Site Assessment and Vapor Encroachment Screen, HUD’s (VES), consultation with the State Historic Preservation Officer (SHPO), compliance with floodplain management and wetlands regulations and all other applicable environmental requirements when:

a. The facility has completed a building addition without having obtained HUD’s approval;

b. The project will acquire or has acquired land that was not insured under the original mortgage loan and the facility has yet to receive HUD’s approval of the additional land; or

c. The project will involve changes, improvements or repairs that do not qualify as
routine maintenance (Please see HUD Notice CPD-16-02 “Guidance for Categorizing an Activity as Maintenance for Compliance with HUD Environmental Regulations, 24 CFR Parts 50 and 58” or succeeding guidance. Note that this definition of maintenance is specifically for environmental review purposes and applies to all HUD programs.)—)

2. HUD has determined that **Categorically Excluded Subject To Related Laws and Authorities (CEST):**
   a. Pursuant to 24 CFR 50.20(a), existing projects to be refinanced or purchased under Section 232/223(f) refinance and rehabilitation projects described at 24 CFR 50.20(a)(2)(ii) are categorically excluded from NEPA compliance but still subject to the laws and authorities listed at 24 CFR 50.4 and 24 CFR 50.3(i), described in Section 7.3 below. In addition, CEST projects must comply with programmatic Housing Requirements related to Nuisances and Hazards as described in Section 7.4 below.
   b. For 232/223(f) projects that include new construction of accessory structures or ancillary improvements, the level of review remains the same as a traditional 223(f) project (CEST), but because the project will include ground disturbance, there is a greater risk of environmental impact. The project description must include the extent of the ground disturbance and the HEROS review must consider the laws and authorities at 24 CFR 50.4, 24 CFR 50.3(i), and Section 7.3 in the context of new construction, including:
      - Consultation with federally recognized Tribes in addition to the State Historic Preservation Officer (SHPO) under the National Historic Preservation Act.
      - Noise assessment and mitigation as required if the new construction is a noise sensitive use.
      - Above Ground Storage Tank requirements for new construction.
      - Airport clear zone requirements for new construction.
      - The 8-step analysis for construction in a floodplain or wetland.
      - Consideration of Endangered Species, Farmlands, Sole Source Aquifers, Wild and Scenic Rivers, Coastal Zones and Air Quality.
   c. Almost all 232/223(f) projects will be CEST, with two limited exceptions:
      i. Currently HUD-insured Section 223(f) refinancing transactions of non-HUD insured mortgages that will not allow new construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance, and which meet the criteria discussed above for CENST-level review; or
      ii. Categorical Excluded projects having the potential for a significant impact because of extraordinary circumstances may require an Environmental Assessment or Environmental Impact Statement (see 24 CFR 50.20(b)).

3. **Environmental Assessment (EA):** Reviews of all new construction projects and reviews of Section 232 rehabilitation, 241(a) and 223(a)(7) projects that rise above the limits of CEST rehabilitation at 24 CFR 50.20(a)(2)(ii) must include the laws and authorities listed...
4. Environmental Impact Statement (EIS): An EIS is required if the proposal is determined to have “no potential to cause effects” to historic properties, as described in 36 CFR 800.3(a)(1), and therefore have no further obligations under Section 106 of the Historic Preservation Act or 36 CFR Part 800. For such transactions, contact with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) is not required, and HUD staff responsibilities are limited to documenting this determination in HEROS-Form HUD 4128REO or Field Environmental Officer (FEO) if the project is close to 2500 beds or units. REO contact information is accessible from the ORCF Environmental Resource page.

8. Requirements in this chapter may exceed those of many state agencies. One reason for this is if a Borrower defaults on an FHA-insured project, HUD may become the project owner. Under Section 120(h) of the Comprehensive Environmental Response and Liability Act (CERCLA), Federal agencies that own properties are required to take “all remedial action necessary to protect human health and the environment” with respect to known hazardous substances upon disposition of the property. This requirement is beyond any liability releases under State or Federal law and any due diligence requirements under CERCLA.

B. Local, State, Tribal or Federal Laws (LSTF)

1. The acronym LSTF as used in this chapter refers to “local, state, tribal or Federal”.

2. In cases where state or local laws, tribal laws, ordinances, codes or regulations are more restrictive than Federal requirements, the applicant must comply with the stricter standard unless Federal law states otherwise. An application for Firm Commitment does not relieve an owner of responsibility for compliance with state or local requirements.

3. HUD will not assume any responsibility with respect to inspection, enforcement, interpretation or determination of compliance with such state or local requirements.

4. Where the project is located on a Native American reservation, the tribal authority may need to assume the responsibilities of the state or local environmental protection agencies.

This chapter is not a substitute for requirements in the laws, regulations, and Executive Orders regarding environmental analysis and mitigation.
A. Lender’s Responsibilities:

1. The Lender, or its environmental consultant, must submit an environmental report to HUD using the HEROS system for all projects. The HEROS submission must follow the requirements as described in this chapter. The failure to submit a complete environmental report, including applicable supporting documentation, may cause delays in the environmental review process.

   a. The HEROS submission must include a description of the proposed work involved in the project, including all proposed repairs, improvements, construction and alterations. Site work that involves ground disturbance (digging), including grading, must be specifically identified. Site clearing and tree removal must also be identified. The lender must review the HEROS submission to confirm that the work described in HEROS accurately represents the work that is proposed in the mortgage insurance application that is submitted to ORCF.

   b. The Lender must identify any environmental issues to be resolved in the HEROS submission and in the Lender Narrative, including a plan accompanied by a timeframe to resolve identified issues, cost estimates and identification of those responsible for implementing the plan. To the extent possible, all environmental issues should be resolved prior to submission of the application. HUD will not upload the Lender Narrative to HEROS.

   c. The Lender must download the HEROS Environmental Review Record (ERR) and include the ERR as an exhibit in the application submission. The title given to the ERR should clearly identify it as the HEROS Environmental Review Record.

2. All projects (new construction, substantial rehabilitation, refinancing or purchase) submitted under Section 232, Section 232/223(f), Section 241(a), and Section 232/223(a)(7) require various submissions related to site contamination as detailed in Section 7.3, unless the CENST exemption for FHA-insured projects described at Section 7.1.A.5.B.1 applies.

3. In addition to the HEROS report discussed above, the Lender will address NEPA environmental factors and the environmental laws and authorities at 24 CFR 50.4 and 24 CFR 50.3(i) within the Lender Narrative, and will provide supporting documentation in the application submission as applicable.

4. Timing of activities: HUD environmental policy, consistent with requirements in 40 CFR 1506.1, requires that there be a limitation of certain activities or actions by any direct or indirect parties to the transaction, from the time of application submission until HUD has completed the environmental review process. Specifically, no action concerning the proposal shall be taken which would: (1) have an adverse environmental impact, (2) limit the choice of reasonable alternatives or (3) prejudice the ultimate decision on the proposal. Activities that limit the choice of reasonable alternatives...
include an action or commitment to undertake real property acquisition, repair, rehabilitation, construction, demolition, significant ground disturbance, site clearance, or ground disturbing activities beyond minimal soil borings or minimal archaeological tests for site assessment purposes.

a. Certain actions, such as development of plans or designs, or performance of other work necessary to support an application for Federal, state or local permits, do not fall within such limitations.

Other actions

b-a. Actions, such as the acquisition, demolition or modification of a wetland, or actions significantly affecting a historic property, do fall within the limitations described above. Additionally, pursuant to the “anticipatory demolition” requirements of Section 110(k) of the National Historic Preservation Act (16 U.S.C. 470h-2(k)), with guidance provided by the Secretary of Interior at 63 FR 20496, even before application submission takes place, any action by a potential Lender or Borrower, or any action by another party that the Lender or Borrower has the legal power to prevent, that is taken with the intent to avoid Section 106 review and that significantly adversely affects a historic property, could result in eventual rejection of an application.

b. Work that exceeds the level of routine maintenance must not begin until HUD prepares its Environmental Review and approves the action. Therefore, if such work occurred before the application’s submission to HUD, whether the work was complete or still in progress at the time of the application submission, the work is not eligible for inclusion as a project repair; and the associated costs must not be included in the repair costs.

c. If any party is unsure as to whether an action would fall within such limitations, they should seek advice, and possibly approval, from the Office of Residential Care Facilities (ORCF) prior to beginning the activity. These requirements are distinct and separate from any early start of contractually related construction activities.

B. HUD Staff Responsibility:

1. In accordance with 24 CFR 50.32, HUD, not the Lender, is responsible for performing an independent evaluation of the information supplied by the Lender in HEROS, supplementing that information as needed, and making the required findings in HEROS as the environmental review, completing the review in HEROS Form HUD-4128, and determining that the project raises no environmental conditions prohibited by law. HUD will determine whether the proposed project: (a) is out of compliance with applicable laws, Executive Orders or regulation, or that would otherwise endanger residents’ health or safety, or that (b) would put FHA mortgage insurance or the U.S. Government at financial risk or liability due to environmental conditions. The HUD reviewer will obtain interdisciplinary assistance from professional experts and other HUD staff as needed. The Lender/Borrower are expected to provide information needed for the review and, as HEROS becomes available, to input applicable
2. As part of its environmental review responsibilities, HUD may request additional information from the Lender/Borrower. For example, HUD may require additional material such as a Phase II ESA or a Biological Evaluation, even when the Lender might not believe that such additional environmental material is necessary.

2.3. HUD staff must review the Phase I Environmental Site Assessment (ESA) submitted by the Lender and will make a site visit for new construction and substantial rehabilitation projects. Other projects may be visited on a case by case basis. A site visit will help validate the environmental and site information provided in the Phase I ESA Lender Narrative, and it is useful for evaluating other environmental factors. The HUD reviewer will sign in the completed review in HEROS – Form HUD-4128 as the preparer, and the form will be co-signed by a HUD approving official, consistent with the then-current Delegation of Authority Environmental Report.

4. HUD staff must certify the completed environmental review in HEROS as the Preparer, and a HUD approving official, consistent with the then-current Delegation of Authority, must approve and certify the HEROS environmental review prior to HUD’s issuance of a Firm Commitment.

5. HUD staff should refer to the specific directions and guidance contained in Section 7 Regulation 3.Q and 7.3.N as applicable for projects that involve remediation and/or monitoring.

3.6. Regulations at 24 CFR 50.32 require that a NEPA Environmental Assessment-level reviews for a project with more than 200 dwelling units or 200 beds be sent for review and comment to the appropriate Regional or Field Environmental Officer (REO/FEO) in whose jurisdiction the project is located. The REO/FEO must also review and comment on Environmental Assessment-level new construction projects or projects that convert land uses to residential when noise is in the unacceptable noise zone (above 75 DNL (a weighted day-night average sound level)). Neither requirement applies to categorically excluded projects. Projects such as Section 232/223(f), which are deemed categorically excluded from NEPA but require compliance with the Federal laws and authorities cited in 24 CFR 50.4 pursuant to 24 CFR 50.20(a), do not require review and comment from the FEO. However, it is recommended that REO/FEOs be given the option to review and comment when special analysis is required under such laws and authorities listed at §50.4.

4. Completed environmental records must be available for the FEO to review. Up to ten percent (10%) of files may be reviewed in any given year.

7. Housing staff are strongly encouraged to consult with the REO/FEO (regardless of the number of units) for CEST and EA projects that:

a. Are located on or adjacent to a designated Superfund Site or a Formerly Used Defense Site (FUD).
b. Have an unresolved contamination issue with the potential to affect the health and safety of occupants. For example:

- An ASTM Phase I or Phase II Environmental Site Assessment (ESA) indicates a release or threat of release of hazardous substances or petroleum products but does not identify a Recognized Environmental Condition (REC);
- There is current or proposed

5. As part of its environmental review responsibilities, HUD may require additional environmental material from a Lender, such as a Phase II ESA, even when the Lender might not believe that such additional environmental material is necessary.

- HUD staff should refer to the specific directions and guidance contained in Section 7.4 for projects that involve remediation and/or mitigation or monitoring at the site; or
- Issues are raised in the Phase I or Phase II ESA but not addressed in the mitigation plan.

c. Are located on or directly adjacent to a parcel with a floodway.

C. When to Submit Required Exhibits to Resolve Environmental Issues:

1. Lenders are required to submit all the exhibits necessary to resolve any environmental issues with the Firm Commitment application and in the HEROS report.

2. Any environmental problems present at the site will require a discussion of impacts to human health and appropriate mitigation measures. The Lender must provide mitigation plans for those environmental problems/issues when the application for a Firm Commitment is submitted. Remediation of site contamination is discussed in Section 7.3.Q of this chapter, and requires that remediation plans and LSTF approval of those plans be submitted with the application for Firm Commitment. The implementation of mitigation and remediation plans may, with HUD approval, continue throughout the construction period. For projects with initial and final loan closings, HUD will review the Lender’s plan and make it a condition of the Firm Commitment, if HUD considers the plan acceptable. This would include any plans for remediation of site contamination, wetlands impacts, noise impacts, historic preservation, and/or floodplain management issues. See the applicable guidance for each of these topics in Section 7.3 below.

3. Removal or containment of lead-based paint or asbestos may continue beyond initial and final closing if HUD approves.

D. Qualifications of Professionals:
1. The Borrower may select the professionals to be used to prepare the Phase I ESA and the other required environmental information discussed in Sections 7.5, 7.6 and 7.7, but the Lender must verify that the professionals used are qualified for their assigned responsibilities. It is recommended that the professionals have prior HUD experience, since the analyses of some related laws and authorities are unique to HUD.

2. The environmental professional preparing the Phase I ESA must meet all of the qualification requirements of Appendix X2 of ASTM E1527-13 (or similar section of the most recent edition). Additionally, the environmental professional must meet the license/certification, educational, and experiential requirements of Section X.2.1.1. (2)(i), (ii), or (iii), of Appendix X2 of ASTM E1527-13 (or similar section of the most recent edition). The environmental professional must describe how he or she meets these qualifications in the Qualification(s) of Environmental Professional(s) Section of the Phase I ESA. For “relevant experience” such discussion must be specific as to how the requirements of Section X.2.2 of Appendix X2 of ASTM E1527-13 (or similar section of the most recent edition) have been met. The Phase I ESA must clearly indicate that HUD is an authorized user of the report.

3. When a Phase II study is conducted, the “Phase II Assessor” must meet all of the qualification requirements of Section 3.1.33 of ASTM E1903-11 (or similar section of the most recent edition).

4. Other professionals may be required to evaluate technical areas, such as asbestos, radon, noise, fire safety, wetlands, flooding, historic preservation or soil stability conditions. The Lender should verify that these technicians are also qualified. When these professionals are required, the Lender may contract for those services if the Borrower has not done so.

E. Consulting with ORCF: Lenders are encouraged to consult early with ORCF on environmental requirements. Local conditions and interagency relations affecting environmental review requirements differ from state to state. prior to application: For instance, coastal zone management requirements are not applicable in most states, but in states where they are applicable, compliance procedures differ. In some states, a letter from the state coastal zone management agency for projects in the coastal zone is required. In others, alternative review procedures make this unnecessary.

that have obtained an FHA Number, ORCF is available to review answer questions on key environmental issues prior to application submission via its Lean Thinking email box. Lenders may submit questions on unusual site conditions, such as soil contamination, explosive hazards, unacceptable noise levels, fall hazards, etc., to at LeanThinking@HUD.gov. When seeking guidance, provide the project’s FHA Number, street address, type of project (e.g., Section 232 New Construction, 232/223(f), 241(a)) and a description of the project in its current condition and as proposed. Include a site plan/survey when available, and other pertinent documentation, such as a description of proposed construction, repairs, site work and alterations. All communication with Lean Thinking must be included as a clearly identified exhibit in the application submission to ORCF.
When submitting the mortgage insurance application, please include the environmental communication that was sent to Lean Thinking and any Lean Thinking response in the Third-Party Consultant’s Environmental Report (including HEROS), and in the corresponding exhibit in Section 2 of the application (for example: Tribal information, which is currently Application Exhibit 2-6, must also include any Lean Thinking email correspondence regarding Tribal Consultation). The environmental section of the Lender Narrative must also describe any early environmental correspondence with Lean Thinking.

7.3 Contamination Analysis: Phase I and Phase II Environmental Site Assessments and Remediation Review Requirements

The Lender or its environmental consultant must provide information in HEROS regarding compliance with NEPA, the laws and authorities listed at 24 CFR 50.4, 24 CFR 50.3(i), and the HUD-specific requirements described herein, as applicable, as well as any issues that might affect the acceptability of the project, including any issues of compliance with state environmental laws.

The existence of mold in a structure is not a topic that is covered during the environmental review. It is addressed in the Project Capital Needs Assessment (PCNA) as part of the building inspection. Lenders and ORCF underwriters will refer to the PCNA to determine if mold assessment and remediation is required.

The issues discussed below must be analyzed by HUD staff during their preparation of the environmental review in HEROS. Guidance by which the Lender can assist HUD is provided. These brief descriptions are not substitutes for the requirements in the applicable statutes, regulations, Executive Orders, notices and handbooks.

The following environmental issues must be addressed in HEROS and in the Lender Narrative when applicable:

A. Airport Hazards: Runway Clear Zone, Runway Protection Zones, Clear Zone, or Accident Potential Zone (24 CFR 50.4(k)):

1. HUD standards regarding the acceptability of property located in Runway Clear Zones (also known as Runway Protection Zones), Clear Zones, and Accident Potential Zones are found at 24 CFR Part 51 Subpart D. An Accident Potential Zone (Zones I and II) is an area at a military airfield that is beyond the Clear Zone.
2. Construction or major rehabilitation of any property located within a Clear Zone is prohibited. Acquisition, refinance, and minor rehabilitation which do not extend the physical or economic life of projects within Clear Zones are allowed, with notification requirements for acquisition transactions described below. HUD must determine that projects located in Accident Potential Zones are generally consistent with Department of Defense land use compatibility guidelines for Accident Potential Zones.

3. In acquisition transactions, HUD, as part of its environmental review for an existing property, shall advise the Lender, who will inform the Borrower purchasing the property, that the property is in a Runway Protection Zone or Clear Zone. Furthermore, it shall be explained what the implications of such a location are, including the possibility that the airport operator will acquire the parcel. The buyer must sign a statement acknowledging receipt of this information. HUD may reject applications for mortgage insurance on an existing property within a Runway Protection Zone or Clear Zone because of the possibility that the property may be acquired at a later date by the airport operator.

B. Air Quality (40 CFR Parts 6, 51 and 93)

1. The Clean Air Act was implemented to remedy the damaging effects that poor air quality can have on human health and the environment. The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets National Ambient Air Quality Standards (NAAQS). These are limits on certain “criteria” air pollutants, including limits on how much of these pollutants can be in the air anywhere in the United States. Geographic areas that are in compliance with standards are called “attainment areas,” while areas that do not meet standards are called “nonattainment” areas. The location of areas designated by U.S. EPA as polluted under the Clean Air Act is documented in the U.S. EPA’s Nonattainment Areas for Criteria Pollutants (Green Book) (https://www.epa.gov/green-book).

2. In addition to the EPA, the Clean Air Act is administered by state, tribal, and local agencies, which are responsible for developing local solutions to air quality problems. States must develop State Implementation Plans (SIPs) to regulate their state air quality. In order to show compliance with the NAAQS, projects funded by HUD must demonstrate that they conform to the appropriate SIP.

3. For new construction projects located in a nonattainment or maintenance area, HUD must determine if the estimated emission levels exceed de minimis emissions levels for the nonattainment or maintenance level pollutants. If the estimated emissions levels exceed de minimis levels, HUD must determine whether the project can be brought into compliance with the State Implementation Plan through modification or mitigation.

4. The HEROS website includes an FAQ on completing the Clean Air Act Screen in HEROS. This can be found on the HUD Exchange website which can be accessed from the ORCF Environmental Resource page.
5. Additional information about complying with the Clean Air Act can be found on the HUD Exchange website which can be accessed from the ORCF Environmental Resource page.

C. Asbestos

1. While specific uses of asbestos are technically allowed today, several uses of asbestos were banned starting in the early 1970s, and many commercial enterprises stopped installing asbestos products as of the late 1970s. In 1989, the U.S. Environmental Protection Agency instituted a partial ban on the manufacture, import, processing and distribution of some asbestos containing products. Some of the more common examples of asbestos containing materials include insulation, fireproofing, sprayed-on finishes such as acoustical ceiling texture, joint compound, ceiling tiles, vinyl floor tile and the mastic or caulk used to fix the tile in place, siding, and roofing, although they can be found in many construction material types installed before 1989 that are still in use today. These asbestos-containing materials (ACM) can be found in both friable and non-friable states. Friable material is a material that is easily crumbled or powdered by moderate (hand) pressure. For any proposed project site containing structures built before 1989, asbestos must be discussed in the Lender Narrative and HEROS, and an asbestos survey per 7.3.C.4 is required. The Environmental Protection Agency rule at 40 CFR 721.11095(a)(2) prohibits the new use of asbestos building products; this includes new ACM.

2. Asbestos studies and information must be included in the HEROS Environmental Report, in accordance with HUD’s environmental policy articulated at 24 CFR 50.3(i) which states that all properties proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gasses, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property.

3. Knowledge of the location, quantity, type and condition of ACM in the facilities, building, and, if applicable, the surrounding area of the property, is critical for proper management of the hazard. These factors will determine if ACM will need to be selectively removed for maintenance, removed prior to renovation, removed prior to demolition, left in place and encapsulated or enclosed with procedures outlined in the Operation & Maintenance (O&M) Program, or a combination of these strategies.

4. Any structures or ancillary facilities on the site built in whole or in part before 1989 must be assessed as per the ASTM E2356-18 (or most recent version), “Standard Practice for Comprehensive Building Asbestos Surveys” or the city, county, or state requirements if they exceed the ASTM E2356-18 standards. For structures built in 1989 or later, HUD requires projects to report any knowledge of asbestos use at the property and to verify the composition of roofing materials, either through direct documentation (e.g. receipts or labels) or through sampling and analysis.

   a. At minimum, structures built before 1989 must undergo a Baseline Survey, or stricter standard if applicable in the jurisdiction, to determine if ACMs are present or
suspected to be present at the site. In those cases where suspect asbestos is identified, it should either be assumed to be ACM or confirmatory testing should be required.

b. The ASTM E 2356-18 Baseline Survey is a building-wide or facility-wide inspection that provides a general sense of the overall location, type, quantity, and condition of asbestos-containing materials present. It is thorough in that most accessible functional spaces are inspected, and that bulk samples are taken of suspect materials observed. The baseline survey provides information for long-term management of ACM and prioritization of response actions. The presence of asbestos in suspect materials may be assumed or presumed in some cases without bulk samples being taken or analyzed. In a baseline survey, destructive testing is minimized, e.g. concealed spaces are not normally breached.

c. Any structures or ancillary facilities built before 1989 that are planned to be demolished, or planned to undergo alterations or renovations involving demolition, must complete a building asbestos survey by a qualified asbestos inspector performed pursuant to the “Pre-Construction Survey” requirements of ASTM E 2356-18 or stricter standards if applicable in the jurisdiction. At minimum, the survey must include all spaces within the limits of construction, as well as adjacent areas where ACM may be disturbed by construction activities.

The Pre-Construction Survey is performed in anticipation of a demolition or rehabilitation project. It requires destructive testing if concealed spaces are to be breached during construction. The Pre-Construction Survey satisfies the EPA NESHAP requirements for renovation or demolition to “thoroughly inspect the affected facility.”

d. An accredited asbestos professional will determine whether projects that complete a Pre-Construction Survey must also complete a Baseline Survey. The asbestos professional will also determine if the project requires additional surveys beyond the minimum HUD requirements.

e. The practices outlined in the ASTM E 2356-18 apply to all activities (unless following a stricter local, state or tribal standard) and all surveys or sample analysis must be completed by a licensed/accredited professional and laboratory.

i. Asbestos professionals must be accredited by EPA or an EPA approved state program under the Model Accreditation Plan. The professional must also be licensed by the state, city, or local jurisdiction in which the work is being conducted if the jurisdiction has this requirement.

ii. Transmission electron microscopy (TEM) bulk sample analyses may be necessary for samples originating from jurisdictions that require this analysis. Additionally, TEM analyses is commonly used to verify a reported result of no asbestos detected for non-friable organically bound material (NOB) and other non-friable materials by polarized light microscopy (PLM)

f. If prior surveys for ACM have been completed within the building, facilities, and project site by a licensed professional and accredited asbestos laboratory, HUD may accept the earlier documentation. If there is question about its validity, HUD will request a determination by an accredited asbestos professional. The determination of the applicability and usability of prior ACM surveys will be based upon the determination of the current licensed/credentialed asbestos professional or by HUD.
5. If ACM or suspect ACM is identified at a facility, HUD requires a response action to address the risk. Response actions may include complete removal, limited removal/repair, encapsulation, enclosure or management under an Operations and Maintenance (O&M) Program, or a combination of these, as recommended by an accredited asbestos professional. The following are examples for when certain response actions may be appropriate, but they do not encompass all response actions.

a. Removal
   i. Damaged friable materials
   ii. Friable materials in good condition with high potential for disturbance (e.g., accessible pipe or tank insulation, ceiling tiles where air exchanges occur in plenum above, ceiling tiles that are required to be moved to access mechanical equipment or piping on a routine basis, etc.)

b. Limited removal/repair, encapsulation or enclosure
   i. Damaged non-friable materials (limited removal/repair)
   ii. Limited damage to ceiling texture (limited removal/repair)
   iii. More extensive wall and/or ceiling texture damage or highly friable texture
   iv. Pipe insulation with limited damage but with limited potential for disturbance/impact (enclosure or removal)

c. O&M Plan
   i. Non-friable materials in good condition
   ii. Joint compound or wall and ceiling textures in good condition
   iii. Adhesive ceiling tiles with no real potential for disturbance
   iv. Friable pipe insulation materials in mechanical areas in good condition with limited potential for disturbance/impact by routine maintenance activities

6. The asbestos survey(s), and O&M plan when applicable, must be submitted with the application and included in the HEROS Environmental Report. If the survey identifies asbestos or asbestos is assumed, the application must include a plan from an accredited asbestos professional with an appropriate mix of asbestos abatement and an asbestos O&M plan in accordance with EPA guidance (for example, “How to Develop and Maintain a Building Asbestos Operations and Maintenance (O&M) Program” is available on the EPA website), or any applicable LSTF requirements if more protective of health and the environment.

7. The asbestos survey report(s), O&M plans and updated records if materials are removed or identified subsequently, must be maintained by the operator and owner(s) of the property and made available to appropriate staff.

8. Other than for asbestos abatement on a structure that will be completely demolished, the cost of any asbestos abatement activities may be included in the proposed mortgage loan, with HUD approval. If required, appropriate asbestos remediation can be indicated as a required Firm Commitment condition if HUD approves.
9. All asbestos abatement shall be done in accordance with EPA requirements for air pollution prevention pursuant to 40 CFR Part 61 subpart M, especially 40 CFR 61.145, and with OSHA requirements for Worker Protection, pursuant to 29 CFR 1926.1101. Asbestos safety and health regulations for construction. Any LSTF asbestos abatement and worker protection rules also apply. All asbestos abatement must be performed by a qualified asbestos abatement contractor with a supervisor (‘competent person’) trained in accordance with OSHA and, if applicable, EPA standards, and workers trained in accordance with the OSHA standard.

D. Coastal Barrier Resources (24 CFR 50.4(c)(1)): Under the Coastal Barriers Resources Act cited in 24 CFR 50.4(c), HUD is prohibited from insuring a project located within designated coastal barriers of the Atlantic Ocean, Gulf of Mexico, or the Great Lakes, known as Coastal Barrier Resources System (CBRS) units, and shown on associated Fish and Wildlife Service maps (see the Official CBRS Maps webpage at https://www.fws.gov/cbra/maps/index.html for instructions on obtaining an official CBRS map and unit number). A project located within a CBRS unit, or that includes a facility (such as a water main or a utility conduit) leading to a CBRS unit, will not be eligible for application processing. Additional information can be found at: https://www.hudexchange.info/programs/environmental-review/coastal-barrier-resources.

E. Coastal Zone Management (24 CFR 50.4(c)(2)): Projects located within a state’s coastal management zone must be found consistent with the approved state Coastal Zone Management program. In many states, HUD will require a letter from the State Coastal Zone Management Agency confirming consistency with the approved program. Lenders should be aware of the extent of coastal management zones in coastal states and should contact the HUD Field Environmental Officer when examining a proposal in a coastal zone. For additional information, see the ORCF Environmental Resources webpage for access to environmental topics on the HUD Exchange website.

F. Endangered Species (24 CFR 50.4(e)):

1. Under Section 7 of the Endangered Species Act (ESA), HUD must consult with the U.S. Fish and Wildlife Service (FWS) and/or, the National Marine Fisheries Service (NMFS), whenever a proposal may affect an endangered or threatened species or its habitat. The ESA is jointly administered by the Secretaries of the Interior and Commerce. The FWS is responsible for terrestrial and freshwater species and the NMFS is responsible for marine species and anadromous fish, such as salmon. Some projects, especially those in the Pacific Northwest, may need to consult with both agencies.

2. A required consultation should be completed for any site within the critical habitat (as defined in 50 CFR Part 17 and Part 226) of a listed species, but consultation may also be required even if no critical habitat is present. As of 2015, critical habitat had been designated for a little less than 50% of threatened and endangered species. The lack of critical habitat is not an indicator of the presence or lack of presence of a listed species.
3. In areas where impacts on endangered or threatened species are a concern, all appropriate information and the results of research regarding possible impacts of the project should be provided to HUD as early as possible. Lenders are encouraged to contact Lean Thinking ahead of application when Endangered Species review will be required.

4. The information that is provided to HUD and entered in the HEROS Environmental Report should include review of published information, including but not limited to information on the Services’ websites regarding the possible presence and associated critical habitat of any listed species in the vicinity of the proposal (for example, the Information for Planning and Consultation (iPaC) tool is available on the FWS website). Furthermore, if a proposal is in an area of potential impacts on a listed species or its critical habitat, any possible associated impacts caused by the proposal should be discussed in the HEROS Environmental Report. Lenders and third-party consultants can request species lists, prepare Biological Assessments for HUD’s review, and provide the information needed for consultation, but HUD must initiate formal and informal consultation with the Services.

5. If the project involves a type of activity that could affect endangered/threatened species or their habitat, HUD must make a determination of effect, which may be “no effect”, “may affect, not likely to adversely affect” or “may affect, likely to adversely affect”.
   a. HUD must document a “no effect” determination with scientific information or a regional letter or memorandum but does not need to consult with the Services on projects it determines will have no effect. The Services may have a regional letter, memorandum or other document that allows HUD to make a No Effect determination for projects that meet specific criteria.
   b. HUD must seek concurrence of the Services on any “may affect, not likely to adversely affect” determination and associated mitigation measures.
   c. HUD must initiate formal consultation under Section 7 of the Endangered Species Act for a “may affect, likely to adversely affect” determination.

6. For all effect determinations, the Lender may be required to obtain special studies such as habitat assessments, surveys or biological assessments at the Borrower’s cost.

7. Consultation under Section 7 of the Endangered Species Act may result in more stringent conservation measures than would otherwise be imposed.

G. Environmental Justice (24 CFR 50.4(l)):
   1. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that federal actions not result in disproportionately high and adverse health or environmental effects on minority or low-income populations.
   2. When a project impacts a minority or low-income population, or other disadvantaged community (see Executive Order 14008), and there are unmitigated
adverse environmental impacts such as a location in a floodplain or a noise impacted site, HUD will perform the necessary environmental justice analysis before determining the acceptability of the project. A project that will receive a Low-Income Housing Tax Credit and has unmitigated adverse environmental impacts is an example of when environmental justice concerns should be evaluated.

3. HUD will request information to complete this analysis as necessary and will advise the Lender of any Environmental Justice concerns including recommendations on their resolution. In most cases the preferred resolution would be to modify the project to eliminate or at least reduce the adverse effects, when feasible.

4. Additional information on complying with Environmental Justice, including notification and involvement of the impacted community in addressing unmitigated adverse environmental impacts, can be found on the HUD Exchange website.

H. Explosive/Flammable Hazards (24 CFR 50.4(k)): HUD will not insure a property where structures and residents will be exposed to unacceptable risks posed by proximity to explosive or flammable hazards.

1. For new construction projects, rehabilitation projects where residential density is increased, projects where there is a conversion from non-residential to residential use, or projects where a vacant building is made habitable:

   a. Aboveground storage facilities with explosive or flammable material contents must comply with the Acceptable Separation Distance (ASD) standards at 24 CFR Part 51 Subpart C, as amended by the final rule (85 FR4225, January 24, 2020) permitting the application of National Fire Protection Association (NFPA) Code 58, 2017 edition, in lieu of HUD ASD standards for residential propane tanks. Analysis of existing or planned explosive or flammable aboveground hazards within one mile of these types of projects must be submitted by the Lender and reviewed by HUD as part of the HEROS review, as per the guidance on the HUD Exchange, which is accessible from the ORCF Environmental Resources page.

   For propane aboveground storage tanks (ASTs) between 125 gallons and 1,000 gallons water capacity, and meeting the NFPA 58 exemption, lenders must submit documentation that the specific tanks meet NFPA Code 58 (2017 or more recent) requirements, including separation distance. (See Section 7.3.H.5 below for documentation requirements.) Propane ASTs under 125 gallons capacity are exempt from the separation distance if the Lender documents that they meet all other 2017 NFPA Code 58 requirements. Guidance on NFPA 58 compliance and a sample conformance memo are available on the ORCF Environmental Resources Page.

   b. If a plan is agreed upon with HUD before the issuance of a Firm Commitment, these hazards may be mitigated during the construction period prior to the final loan closing, if the work can be done on the subject property. In cases where off-site mitigation is required, the remediation must be completed prior to initial closing.

2. For existing projects to be refinanced or purchased that do not involve an increase in
residential density, HUD will substantively evaluate the risks associated with proximity
to hazardous facilities. HUD reviews of such projects will consider the potential danger
presented by existing and proposed liquid fuel and gas storage tanks based upon available
information, and may require mitigation.

a. Whenever stationary ASTs containing liquid fuel (over 100 gallons in capacity) or
pressurized gas over 125 gallons in water capacity (other than exempt LPG/propane tanks
that do not exceed 1,000 gallons in capacity with documentation of compliance with
NFPA 58 version 2017), exist on site or on an adjacent site that could impact the HUD
project, a conformance letter from the governing Fire Department/District must be
requested. The letter must specifically address the safety of the AST(s). Correspondence
with the fire department must be included in the application submission.

i. In cases where safety letters were requested but cannot be obtained for existing
ASTs, or where new ASTs are being added, an acceptable separation distance
(ASD) calculation must be included in the application.

ii. For propane aboveground storage tanks (ASTs) between 125 gallons and 1,000
gallons water capacity, and meeting the NFPA 58 exemption, lenders must submit
documentation that the specific tanks meet NFPA Code 58 (2017) requirements,
including separation distance. (See Section 7.3.H.5 below for documentation
requirements.) Propane ASTs under 125 gallons capacity are exempt from the
separation distance if the Lender documents that they meet all other 2017 NFPA
Code 58 requirements.

3. A useful tool for calculating ASDs can be found on the ORCF Environmental Resources
Page.

4. If a barrier will be constructed as hazard mitigation, HUD's Barrier Design Guidance
(Guidebook 6600.G) for flammable/explosive hazards mitigation is available on the
ORCF Environmental Resources Page. Only a licensed professional engineer (civil or
structural) should design and oversee the construction of mitigation barriers.

5. Compliance with NFPA 58: Acceptable documentation that a propane AST not
exceeding 1,000 gallons capacity complies with NFPA 58 (2017) and is excluded from
coverage under 24 CFR part 51 Subpart C must be provided. (Note: Propane ASTs under
125 gallons capacity are exempt from ASD requirements if they comply with NFPA 58
(2017));

a. In jurisdictions where NFPA 58 (2017) has been adopted into law, HUD relies on
enforcement by the jurisdiction. Therefore, all propane tanks of 1,000 gallons or less
in those locations are excluded from compliance with HUD’s ASD requirements. In
these jurisdictions, citation to the NFPA website (which is accessible from the ORCF
Environmental Resources page) referencing the applicable state or local code is
sufficient to document that any tank in that jurisdiction containing propane of 1,000
gallons or less water volume is exempted from coverage under 24 CFR part 51, subpart
C.
b. In areas where the jurisdiction has not adopted NFPA 58 (2017) into law, an individual propane tank may still comply with that policy based on inspection and maintenance of the tank by the propane distributor, or another individual qualified to inspect propane tanks*. To document that a propane tank of 1,000 gallons or less capacity is excluded from coverage under 24 CFR 51 Subpart C in those locations, provide documentation that the AST is located at an acceptable setback distance from buildings and property lines (under NFPA 58 2017, tanks between 125 and 500 gallons require a setback of 10 feet from buildings or property lines, while tanks between 501 and 1,000 gallons have a setback of 25 feet) and one of the following:

- The gas supplier or tank owner/operator has policies in place that utilize the 2017 or more recent NFPA Code 58 for inspection and filling (provide records from the gas supplier or tank owner/operator documenting this policy); or
- The local Authority Having Jurisdiction (AHJ) utilizes and specifies current NFPA 58 in tank certification and permitting even though the 2017 version is not formally adopted statewide (provide records or communication from the local AHJ); or
- A qualified person, such as an engineer who is familiar with NFPA 58 requirements or a propane industry professional who has completed training to fill and handle propane tanks per NFPA 58, has inspected the tank for the express purpose of documenting compliance with NFPA 58 (2017) in support of the HUD environmental review. The NFPA requires documented training on propane handling procedures, with refresher training every three years, for anyone who dispenses propane. (Provide documentation of the individual making the determination, their professional qualification, and date of the determination. A sample letter that may be used as a template is available on the ORCF Environmental Resources page).

*Note: State departments of commerce may also be used as sources both to verify current codes and to identify qualified propane inspectors.

I. Farmlands Protection (24 CFR 50.4(j)): The purpose of the Farmland Protection Policy Act is to minimize the effect of Federal programs on the unnecessary and irreversible conversion of important farmland to nonagricultural uses. Important Farmland includes prime farmland, unique farmland, and/or land of statewide or local importance. Farmland subject to Farmland Protection Policy Act requirements does not have to be currently used for cropland.

For new construction, HUD must consider whether the project will impact important farmland. There are a few exemptions to the Farmland Protection Policy Act, including one for land already in or committed to urban development. USDA/NRCS regulations contained at 7 CFR 658.2 define “already in urban development” as land with a density of 30 structures per 40-acre area; lands identified as “urbanized area” (UA) on the Census Bureau Map or as urban area mapped with a “tint overprint” on USGS topographical maps; or as “urban-built-up” on the USDA Important Farmland Maps. Note that land “zoned” for development, i.e. non-agricultural use, does not exempt a project from compliance with the FPPA. This requirement applies only to new construction activities and the acquisition of undeveloped land.
J. **Flood Insurance** (24 CFR 50.4(b)(1)): In accordance with 24 CFR 50.4(b)(1), and as described in Production, Chapter 14, Section 7.H, flood insurance is required when any portion of a structure is located in a 100-year floodplain.

Flood insurance is property insurance that covers damages caused by flooding, ranging from the need for full replacement to repairs such as replacing flooring and walls. This type of insurance is typically not included in a standard property insurance policy. Flooding can cause a great deal of damage. Even if it does not destroy the property, it can fill the property with mud, silt, and other debris, and the moisture from the flooding may lead to rot, mold, mildew, and other problems. Many items may need to be rebuilt or replaced, forcing residents to stay in temporary facilities while repair work is done. Flood insurance helps to mitigate these costs.

1. A project located in the 100-year flood zone, also known as the Special Flood Hazard Area (SFHA), has a 26% chance of flooding over the life of a 30-year mortgage. A project located in the moderate flood hazard zone (500-year floodplain) has a 6% chance of flooding over the life of a 30-year mortgage.

2. All section 232 mortgage insurance applications must include a completed Standard Flood Hazard Determination Form (available on the ORCF Environmental Resources webpage) prepared by a qualified third-party flood-zone determination firm.

3. Any insurable structure that is located within a FEMA mapped SFHA is required to carry flood insurance under the National Flood Insurance Program for the term of the loan. See Production, Chapter 14, Section 7.H for further information and ORCF flood insurance requirements.

4. HUD will also require flood insurance on any building where the Advisory Base Flood Elevations (ABFE) or preliminary FEMA Flood Insurance Rate Map (FIRM) indicates it will be in a Special Flood Hazard Area. Additionally, Housing Approving Officials have the discretion to require flood insurance for buildings located:
   a. In the moderate flood hazard area (FEMA zones B or shaded X),
   b. On a parcel that includes a SFHA (including those considered incidental for floodplain management), in coastal areas not in a SFHA but subject to tidal flooding, tsunami, wave action or storm surge, including Limit of Moderate Wave Action (LiMWA) areas, and where topography or past flooding create a high risk for flood events.

5. **Tenant Notification**: All new and renewal leases for projects where HUD has required flood insurance must contain acknowledgements signed by the residents indicating that they have been advised that the property is in a floodplain and flood insurance is available for their personal property.

6. Because conditions may change over time, the status of a flood zone may change. Life of Loan Monitoring for Flood Insurance is required, in accordance with Section II, Chapter

1. All Section 232 projects are considered “Critical Actions” for Floodplain Management purposes, as defined in 24 CFR 55.2(b)(3). Critical Actions include facilities that are likely to contain occupants who may not be sufficiently mobile to avoid loss of life or injury during flood or storm events. The 500-year floodplain is the minimum floodplain of concern for Critical Actions and is the area subject to inundation from a flood having a 0.2 percent chance of occurring in any given year.

2. Applications for Firm Commitment for mortgage insurance are subject to regulations regarding floodplain management found at 24 CFR Part 55 which implements Executive Order 11988 (Floodplain Management).

3. If any part of the site or integral offsite development (i.e., ingress, egress and/or parking) is located within the 100-year floodplain or within a 500-year floodplain for critical actions, according to the best available data, the project must comply with HUD’s Floodplain Management regulations.

4. Lenders must provide the effective Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) with the subject site(s) clearly marked to determine whether the project is in or near a floodplain. In most areas, FIRMs are available online through the FEMA Map Service Center.

5. In addition, the Lender must provide any FEMA-supplied pending or preliminary FIRMs or studies, or Advisory Base Flood Elevations (ABFE) for the site. During its Floodplain Management review, HUD must use the latest of these sources, or as otherwise required by current standards in 24 CFR part 55. If FEMA information is unavailable or insufficiently detailed, other Federal, state, or local data may be used as the “best available information”. However, a base flood elevation from an interim or preliminary or non-FEMA source cannot be used if it is lower than the current FIRM. An online resource for finding the relevant FIRM and ABFE may be found on the ORCF Environmental Resources page located on the Section 232 Program website. FEMA issues ABFEs after major flood disasters, such as Hurricane Sandy, and disseminates them by region.

6. FEMA maps indicate floodplains as follows:
   a. 100-year floodplains (a.k.a. the Special Flood Hazard Area (SFHA) and the 1% annual chance floodplain) are designated as Zone A1–30, AE, A, AH, AO, AR, or A99.
   b. 500-year floodplains (a.k.a. the moderate flood hazard area and the 0.2% annual chance floodplain) are designated as Zone B or a shaded Zone X.
   c. Floodways are the portion of the floodplain which is effective in carrying the flow of flood waters, where the flood hazard is generally the greatest, and where water depths
and velocities are the highest. Floodways are designated as hatched areas within a 100-year floodplain.

d. Coastal high hazard areas are areas subject to high velocity waters and wave action, and they are designated as Zone V1–30, VE, or V.

e. Limit of Moderate Wave Action (LiMWA) are coastal areas in updated FEMA maps that are outside of the coastal high hazard area, but which are expected to receive between 1.5 and 3 foot breaking waves during a 1% annual chance flood. LiMWAs are designated with an informational line.

f. Areas where FEMA has not completed a detailed study sufficient to identify the flood risk are designated as Zone D. As these areas have the potential for unidentified flood hazards, HUD will rely on best available information to assess risk.

7. Due to the potential for significant wave damage in Limit of Moderate Wave Action (LiMWA) areas, HUD will not approve applications for any new construction, or substantial improvement as defined at 24 CFR 55.2(b)(10), on sites in the LiMWA. HUD strongly discourages approving currently uninsured 232/223(f)s or currently insured CEST or EA level projects in the LiMWA, and will only do so if the work meets the current standards for coastal high hazard areas in FEMA regulations (44 CFR 60.3(e)). HUD will consider approving currently insured CENST level refinance transactions on a case by case basis. (The terms CENST, CEST, and EA are defined in Section 7.1.B).

8. Mortgage insurance shall not be approved for a property located in: (a) a floodway, (b) a coastal high hazard area, or (c) a FEMA identified Special Flood Hazard Area (SFHA) in which the community has been suspended from or does not participate in the National Flood Insurance Program. In addition, the only access to a property must not be through a floodway.

If a stream coursing through a proposed site is designated as being in the 100-year floodplain according to FEMA’s best available data, but there is no designated floodway area (a so-called “regulatory floodway”), development will be prohibited in the channel of the stream.

9. In considering the safety of residents, offsite floodways and other flood hazards will be evaluated in terms of separation distance, elevation differences, and the nature of the hazard in question. Unacceptable proximity to hazards may result in rejection of the application.

10. Exceptions to Part 55 requirements: 24 CFR 55.12(c) lists categories of proposed actions for which the floodplain management requirements in 24 CFR 55 are not applicable. The following exceptions are included in Part 55.12(c):

a. Part 55.12(c)(7) provides an “incidental portion” exception, when only an incidental portion of the project site is in the 100-year or 500-year floodplain, and the following conditions are met:

   i. All construction (including existing improvements) or landscaping
activities (except for minor grubbing, clearing of debris, pruning, sodding, seeding, etc.) must not occupy or modify the relevant floodplain. Due to the constraint that activities must “not occupy or modify” the floodplain, the 100-year or 500-year floodplain cannot be utilized in the development or support of any project activity, except as passive open or green space. Open space is a portion of a development site that is permanently set aside for public or private use and will not be developed. Green space is considered to be undeveloped land or land restored to its natural state. The incidental exception does not apply to sites that plan to bring in fill for a Letter of Map Revision because the fill modifies the floodplain.

ii. Appropriate provision is made for site drainage; and

iii. In accordance with 24 CFR 55.12(c)(7)(iii), a protective covenant or comparable restriction must be placed on the property’s continued use to preserve the 100-year or 500-year floodplain. The covenant or comparable restriction must run with the land to provide for permanent preservation of the floodplain, and must not be dependent on the mortgage instrument. A restriction that is contained in a document that would expire at the conclusion of the HUD-insured mortgage does not meet the requirement for permanent preservation of the floodplain.

A template for a compliant covenant is available online on the ORCF Environmental Resource page.

b. 24 CFR Part 55 requires the completion of a 5-step or 8-step decision making process when a project site is located in a 100-year floodplain, or in a 500-year floodplain for critical actions, according to FEMA’s best available data or as otherwise required by current standards in 24 CFR part 55. However, the requirement for a decision making process does not apply if the project will not impact a wetland and FEMA has issued a Conditional Letter of Map Amendment (CLOMA) or of Map Revision (CLOMR) removing the entire site from the 100-year and 500-year floodplain (see 24 CFR 55.12(c)(8)).

- If the Borrower has a CLOMA or CLOMR, HUD approval for a Firm Commitment will be conditioned on the Borrower: (1) meeting the requirements of the CLOMA or CLOMR; (2) obtaining a Final Letter of Map Amendment (LOMA) or Map Revision (LOMR) removing the entire property from the applicable floodplain prior to Final Endorsement; and, (3) maintaining flood insurance on any building during the construction period until the LOMA or LOMR is issued.

- If any portion of the HUD-insured property remains in the floodplain after the CLOMA/CLOMR, the project will not qualify for this exception and must proceed with a 5- or 8-step decision making process.

11. New Construction and Substantial Improvement Projects:
Section 232 sites for new construction and substantial improvement, as defined at
24 CFR 55. 2(b)(10), in 100-year or 500-year floodplains are strongly discouraged.
Such sites in the applicable floodplain according to the best available data will not
be considered for mortgage insurance unless the following steps are taken:

a. HUD must determine if there may be extraordinary circumstances leading
to the conclusion that there are no practicable alternatives to the project site
being in the floodplain. In order to make this determination, HUD
must conduct an 8-step decision making process that includes publishing
two public notices and taking comments, as summarized in 24 CFR 55.20.
Additional guidance, including an example 8-step process and sample
notices, is available on the HUD Exchange website, which is accessible
from links on the ORCF Environmental Resource page. Prior to issuing the
first public notice, HUD will need detailed information regarding how the
property will be altered and the improvements designed. This information
includes the elevation of the property, the elevation of the floodplain, the
location of life support systems and other data that may be necessary to
assess the safety of the site.

i. For projects involving new construction in a SFHA, the 8-step
process will require as a condition of approval that a CLOMA or
CLOMR be issued for the project buildings prior to initial closing,
and a LOMA or LOMR be issued prior to final closing.

ii. Flood insurance must be maintained on any building in the SFHA
during the construction period until the issuance of a LOMA or
LOMR.

b. The 8-step process shall require that the lowest floor of new construction in
a 100-year or 500-year floodplain be elevated at or above the 100-year
flood level according to FEMA’s best available data, plus two feet of
freeboard. Such elevation would also apply to driveways, walkways,
parking areas and any exterior mechanical equipment and supportive
services (e.g. generator pad, aboveground fuel storage tank, etc.). If higher
elevations are required by locally adopted code or standards, those higher
standards apply.

c. Substantial rehabilitation projects must elevate or mitigate following
National Flood Insurance program requirements (as instituted by state and
local codes).

d. All critical actions must comply with the requirements of 24 CFR 55.20(e),
also known as Step 5 of the decision making process. See 7.3.K.12 below
for a list of exhibits that must be submitted with the mortgage insurance
application to document compliance with Step 5.

e. The 8-step process shall be completed before issuance of the Firm
Commitment.

f. HUD must approve the two notices but the costs of publication will be
borne by the Borrower.

g. The 8-step process shall consider three alternatives: the action as proposed,
modifications within the aggregated project site, or no action; i.e., rejection
of the application.
h. Projects that are converting from a non-residential use to a residential use are considered the same as “new construction” for floodplain management purposes.

12. As required by 24 CFR 55.20(e), all critical actions in the 100-year or 500-year floodplain according to FEMA’s best available data or as otherwise required by current standards in 24 CFR part 55 shall include:
   a. Preparation of and participation in an early warning system. To document compliance with this requirement, the application must indicate the specific method(s) used to monitor weather conditions and flooding alerts.
   b. An emergency evacuation and relocation plan. The application must provide names and addresses of like facilities (i.e., similar residential healthcare facilities) that have agreements or contracts with the subject to serve as temporary relocation sites for the subject’s residents.
   c. Identification of evacuation route(s) out of the 500-year floodplain. For documentation, include road maps and the flood zone designations of the relocation sites. The relocation sites must be located outside the 500-year floodplain.
   d. Identification marks of past or estimated flood levels on all structures. The markings need to be permanent, and located in a public area to “enhance public awareness of and knowledge about flood hazards”. A metal plaque which is permanently installed on the exterior of the building will be acceptable. The application exhibit should include the information/calculation used to determine the estimated flood level.

While 100-year flood levels can often be found on the FIRM, 500-year flood levels are not typically shown on the maps. Methods that can be used to estimate the 500-year flood level include the following:
   i. The 500-year flood level may be available in the Flood Insurance Study (FIS) which is accessible on the FEMA website, or by contacting the Community’s Floodplain Manager, municipal planning office or building official.
   ii. By multiplying the nearby Base Flood Elevation - BFE (i.e., 100-year flood level) by a factor of 1.25 (applicable in low-lying areas, coastal regions).
   iii. By using the elevation that results from using the freeboard value. For critical actions this is reached by adding an additional 3 feet to the nearby 100-year BFE.

e. Exception to flood level marks: If it has been determined that identification marks cannot be placed on the building(s) because of items i and ii below, then the application must include the results of research into these issues and a description of why flood level identification marks on the building cannot be provided. The description must address both i and ii below.
   i. There are no indications or evidence that the building has experienced past floods; and
There are no estimated flood levels available. For example:

1. the building is located outside the 100-year and 500-year floodplains; or
2. the building is located in a 100-year or 500-year floodplain and FEMA has not established a flood elevation that allows a reasonable estimate to be made for the subject building, such as when there is no 100-year BFE in the vicinity at a reasonably comparable elevation.


For Section 232/223(f) purchase or refinancing actions described in 24 CFR 55.12(a)(2), or non-substantial repair, rehabilitation, modernization, weatherization or improvement actions described in 24 CFR 55.12(a)(3), a 5-step decision making process pursuant to 24 CFR 55.12(a) may be used by HUD to determine their acceptability. The abbreviated process eliminates the two public notices and the alternatives analysis required by the full 8-step process. Detailed information about the proposed actions, and about any plans for mitigation, must be submitted with the application. HUD will evaluate risks and mitigation measures in making its decision but it discourages these actions if either the lowest floor, or the life support facilities, or egress and ingress of the existing building, are below the 100-year base flood elevation.

- Compliance with 24 CFR 55.20(e) is required as part of the 5-step process for Section 232 projects. See 7.3.K.12 above for a list of exhibits that must be submitted with the mortgage insurance application to document compliance with Section 55.20(e).
- The abbreviated review process shall be completed by HUD before issuance of the Firm Commitment.

14. Where a site does not appear to be located in the floodplain on official FEMA maps, but shows evidence of flooding, HUD is not precluded from qualitatively evaluating the acceptability of the site.

15. Lenders will be required to provide extensive data to aid HUD in evaluating floodplain sites.

16. The cost of floodplain mitigation may be included in the proposed mortgage loan.

17. Section 232/223(a)(7) and FHA-insured Section 232/223(f) refinances: Pursuant to 24 CFR 50.19(b)(21), refinances of currently FHA-insured mortgages are exempt from the 8-step decision making process when the refinance will not result in any physical impacts or changes except for routine maintenance (CENST). Guidance for clarifying the difference between routine maintenance and repair is available on the ORCF Environmental Resources page. In particular, the following are required for all Section 232 applications when the project site is located in a 100-year or 500-year floodplain. (See Section 7.3.K.12 for additional
information regarding these items.)

1. Preparation of and participation in an early warning system;
2. An emergency evacuation and relocation plan;
3. Identification of evacuation route(s) out of the 500-year floodplain.

L. Historic Preservation (24 CFR 50.4(a)):

1. HUD must comply with the National Historic Preservation Act (54 U.S.C. § 300101 et seq.) and its implementing regulations at 36 CFR Part 800. Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, consult with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer as appropriate, and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The process is known as Section 106 review.

2. The Section 106 review must be completed before HUD approves and/or commits funds to a project. Additional guidance on historic consultation is available on the ORCF Environmental Resource page.

3. Pursuant to the “anticipatory demolition” requirements of Section 110(k) of the NHPA, even before the application submission takes place, any action by a potential Lender or Borrower, or any action by another party that the Lender or Borrower has the legal power to prevent, which is taken with the intent to circumvent Section 106 review and that significantly adversely affects a historic property, could result in rejection of an application.

4. Applications for Firm Commitment for HUD mortgage insurance are considered “federal undertakings” that require HUD to make a determination of no historic properties affected, no adverse effect, or adverse effect upon historic properties. There are three exceptions, listed below. If applicable, a statement identifying the exception and supporting documentation must be included in the application.

Exceptions:

a. Categorical exclusions not subject to related laws and authorities (CENST) under 24 CFR 50.19(b)(21).
b. Projects that will not involve new construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance, have No Potential to Cause Effects under 36 CFR 800.3(a)(1), and HUD has no further obligations under Section 106 or 36 CFR Part 800. To determine if a project qualifies for this exception, please see HUD Notice CPD-16-02 “Guidance for Categorizing an Activity as Maintenance for Compliance with HUD Environmental Regulations, 24 CFR Parts 50 and 58” (or succeeding guidance), which is available on the ORCF Environmental Resource page. For such transactions there is no obligation to contact the SHPO, and historic preservation responsibilities are limited to documenting this determination in HEROS by marking “No Potential to Cause Effects” on the Historic Preservation Screen and uploading a copy of relevant documentation.
c. Some states have a Programmatic Agreement (PA) with HUD, and the proposal may be part of a class of actions that do not require Section 106 consultation under the PA. HUD’s historic preservation responsibilities are limited to documenting this determination in HEROS by marking the Programmatic Agreement selection on the Historic Preservation screen, uploading the PA into HEROS, and copying the applicable part of the PA agreement into HEROS. Information about states with Part 50 Programmatic Agreements is available on the ORCF Environmental Resource page.

5. If an exception does not apply, HUD must conduct a Section 106 review and make a finding of effect. HUD has determined that Lenders and their authorized representatives may act on behalf of HUD to consult with SHPOs and other consulting parties to initiate the Section 106 review process, identify and evaluate historic properties, and assess effects. A link to the Delegation Memorandum for Section 106 Consultation is available on the ORCF Environmental Resource page.

- Lenders that do not use the delegated process must still provide HUD the information required in 7.3.L.5.c below.

- This delegation does not extend to consultation with Tribes. HUD must initiate and conduct tribal consultation.

a. A historic property means any prehistoric or historic district, site, building, structure, object, or traditional property or landscape included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. HUD must also consider the area of potential effect (APE), which is often the site boundary, but may be the block on which the site is located or the immediate site environs.

b. After the APE is defined, and historic properties within it are identified, the potential impacts to those historic properties may be evaluated. Because of the technical nature of historic property identification, evaluation and treatment, it may be appropriate to retain a qualified historic preservation professional to prepare the findings. Such consultant should meet the Secretary of the Interior’s Professional Qualifications (36 CFR Part 61) and have experience in Section 106 reviews.

c. The material provided to the SHPO should include a narrative explaining the proposal, including a description of the project as is, and the proposed project activities, construction and/or alterations and repairs; a map identifying the site location and proposed Area of Potential Effect (APE); a list of potential interested consulting parties that have been or will be invited to consult; a description of identified historic properties (listed and eligible); digital photos of buildings and setting; a description of direct or indirect effects on the historic properties; and a determination of No Historic Properties Affected, No Adverse Effect, or Adverse Effect. The information must be submitted to the SHPO following the procedures.
d. Lenders and their authorized representatives using the delegated process must include a copy of HUD’s delegation Memorandum with each submission to the SHPO. The submission must include the information discussed in 7.3.L.5.c above, plus the HUD program followed by the section of the National Housing Act and an appropriate contact person at both the Lender’s organization and the authorized representative hired to coordinate the review.

e. For Lenders and their authorized representatives using the delegation, if a project involves demolition of a building over 45 years old, new construction in or adjacent to a historic district, substantial ground disturbance, or exterior rehabilitation of a building more than 45 years old, Lenders must retain a Qualified Historic Preservation Professional in the discipline relevant to the project activities to prepare submissions to the SHPO, manage consultation with interested parties and the public, and coordinate with HUD on HUD’s tribal consultation.

A Qualified Historic Preservation Professional is one who meets the Secretary of the Interior’s Professional Qualifications Standards for Archeology, History, Architectural History, Architecture, or Historic Architecture and has substantial experience in conducting Section 106 reviews of historic properties. Detailed information can be found at https://www.nps.gov/history/local-law/arch_stnds_9.htm.

f. All submission materials, a copy of the letter to the SHPO and a copy of the response must be included in the HEROS Environmental Report along with any comments received from consulting parties and the public. HUD remains legally responsible for all findings and determinations, regardless of who initiates the Section 106 review. HUD will independently review and confirm the APE, the determination of effect finding and the SHPO’s response and may request additional information if needed. Only HUD staff can complete the HEROS Historic Preservation screen by documenting whether compliance steps or mitigation are required.

g. The SHPO has 30 calendar days to respond from receipt of an adequately documented submission. If the submission is inadequate, the SHPO may request additional information and the 30-day clock resets to the date that SHPO receives it.

6. Because of the technical nature of historic property identification, evaluation and treatment, it may be appropriate to retain a Qualified Historic Preservation Professional to prepare the initial consultation and supporting documentation even for projects where HUD is conducting the consultation directly or for delegated projects that do not otherwise require it. Such consultant should meet the Secretary of the Interior’s Professional Qualifications Standards (36 CFR Part 61) and have experience in Section 106 reviews. Examples of when retention of a qualified historic preservation professional may be appropriate include when National Register eligibility of a property is unclear, when adverse effects are expected.
when the property contains archeological sites, and/or when the project is controversial.

7. For a No Historic Properties Affected or No Adverse Effect determination, after a SHPO concurrence has been received and/or 30 calendar days after the SHPO’s receipt of an adequately documented finding have elapsed without objection from the SHPO or consulting parties, obligations under Section 106 are fulfilled.
   a. No Historic Properties Affected is appropriate when there are no historic properties or there are no direct or indirect effects on historic properties.
   b. No Adverse Effect is used when there is an historic property that is affected by the project, but the effects are not adverse.

8. HUD will participate in and complete the Section 106 process when: an undertaking may adversely affect a historic property or historic district; there is a disagreement between the applicant or their authorized representative and the SHPO regarding identification and evaluation or historic properties and/or assessment of effects; there is potential for a foreclosure situation per 36 CFR 800.9(b) or anticipatory demolition as specified in Section 110(k) of the National Historic Preservation Act; there is an objection from Tribes, consulting parties or the public regarding their involvement in the review process, recommended Section 106 findings and determinations, or the implementation of agreed upon provisions; or HUD deems the consultation record inadequate. This process may result in a design change, research and preservation, salvage, or in rare cases, rejection of the application for Firm Commitment. Consultation to resolve adverse effects may take considerable time and must be completed generally through execution of a Memorandum of Agreement (MOA) before a commitment can be issued.

9. Tribal Consultation:
   a. When Section 106 consultation is required, consultation with federally recognized Indian tribes and Native Hawaiian Organizations may be required as part of the Section 106 process. Not all projects that require Section 106 review require consultation with Indian tribes. Consultation with federally recognized tribes is only required when a project includes activities that have the potential to affect historic properties of religious and cultural significance to tribes. These types of activities include:
      • ground disturbance (digging),
      • new construction in undeveloped natural areas,
      • introduction of incongruent visual, audible, or atmospheric changes,
      • work on a building or structure with significant tribal association, or
      • transfer, lease or sale of historic properties of religious and cultural significance.
   b. When tribal consultation is required, the Lender will utilize the HUD Tribal Directory.

Further guidance on Tribal Consultation is provided in HUD Memorandum, “Section 106 Tribal Consultation in Projects Reviewed Under 24 CFR Part 50”, which can be accessed from the ORCF Environmental Resources page.
Assessment Tool (TDAT) (see the ORCF Environmental Resources Page) to determine if the site is located in an area where a Tribe has indicated interest or significance, and will present this information to HUD.

c. When tribal consultation is required, the Lender must submit the same information discussed in Section 7.3.L.5.c to HUD in the form of draft letters to each Tribe, with photos, maps and exhibits attached. HUD will review the information, prepare the letters on HUD letterhead, and mail or email the letters, as appropriate for each Tribe.

d. Only HUD can consult with the Tribes.

e. The tribal consultation requirement applies to properties off tribal lands as well as on tribal lands. Properties with religious and cultural significance to native people may include ancestral archaeological sites and natural areas where traditional practices or ceremonies have been carried out as well as more familiar historic properties. Some traditionally used places have very strong religious associations, and it may be difficult or even inappropriate for native people to talk about their significance. If this situation arises, hiring a qualified professional with experience in tribal consultation may be required.

10. Project Construction/Ground Disturbance: Any contractor must stop construction if there are (actual or suspected) archeological site conditions, human remains or cultural resources found. HUD must be notified in such instances. Construction must not resume without Tribal/Historic clearance. Therefore, when a project involves ground disturbance, the environmental review and Firm Commitment will include the following requirement:

- Archaeological Site, Human Remains, or Cultural Resources of Tribal or Historic Interest:
  If an archaeological site, human remains, or cultural resources of historic or tribal interest are revealed during the project's construction, the project manager must immediately stop work in the area of the discovery and notify HUD within 48 hours. HUD will contact the State Historic Preservation Officer (SHPO), participating tribes and other consulting parties and continue Section 106 consultation. If ground disturbance is to occur after the loan closing, the closing package must contain a certification of this condition from the borrower.

11. For projects receiving federal and/or state historic tax credits (HTC) the HTC process does not replace HUD’s obligations under Section 106. Projects with HTC must still consult with the SHPO, Tribes, other consulting Tribes and the public as appropriate. The materials used in the HTC application (Parts 1 and 2) should be useful in the Section 106 consultation.

12. The cost of historic preservation mitigation may be included in the proposed mortgage loan.
M. Housing Requirements – Additional Nuisances and Hazards:
   - See Section 7.4 Additional Nuisances and Hazards

N. Lead Based Paint:
   1. Lead-based paint (LBP) may be present in buildings built prior to 1978. During any proposed repair work, the removal and disposal of the LBP must be performed in accordance with regulations as published and enforced by the State and the Department of Labor - Occupational Safety and Health Administration (OSHA). If required, appropriate lead paint remediation can be a required Firm Commitment condition on the HEROS Form HUD-4128. LSTF lead based paint requirements must be complied with.

   2. HUD’s lead-based paint requirements at 24 CFR Part 35 are applicable to housing built before 1978, but do not apply to housing designated exclusively for the elderly or persons with disabilities or any 0-bedroom dwelling, unless a child of less than 6 years of age resides or is expected to reside in such housing. With the exception of Section this 7.3.N., HUD’s lead-based paint requirements are not applicable to rehabilitation, refinancing or purchase of health care facilities under Section 232.

O. Noise Analysis (24 CFR 50.4(k)):
   1. New Construction/Conversion Projects: HUD standards regarding the acceptability of noise impacts on residential property are found at 24 CFR Part 51, Subpart B; these standards must be met for new construction and conversion from nonresidential to residential projects. Where a project is within the criteria on distance from noise generators, a noise analysis utilizing the methodology in the most current version of HUD’s Noise Guidebook will be performed as part of HUD’s environmental assessment. HUD’s automated Day/Night Noise Level electronic assessment tool is available on the ORCF Environmental Resource Page.

      a. Standards: The degree of acceptability of the noise environment at a site is determined by the sound levels external to buildings or other facilities containing noise sensitive uses. The standards shall usually apply at a location 2 meters (6.5 feet) from the building housing noise sensitive activities, in the direction of the predominant noise source. Where the building location is undetermined, the standards shall apply 2 meters (6.5 feet) from the building setback line nearest to the predominant noise source. The standards shall also apply at other locations where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site.

         i. For new construction and conversions from non-residential to residential located above the noise threshold criteria, projects shall incorporate noise attenuation features as required by HUD environmental criteria and standards at 24 CFR 51.104. The interior standard is 45 dB (decibels).

         ii. Sites with a day-night average exterior noise level of 65 DNL (Day Night Level) and below are acceptable.

         iii. HUD assistance for the construction of new noise sensitive uses is discouraged for projects with normally unacceptable noise exposure.
iv. New construction or conversions of existing structures to residential housing in the Unacceptable Noise Zone, where outdoor noise levels are above 75 dB, are generally prohibited. **If ORCF wants to consider such a proposal, it must:**

- Prepare an Environmental Impact Statement (EIS). If ORCF believes that the proposal is acceptable based on the EIS, it must then obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary for Community Planning and Development but must also obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary.

- If ORCF determines that noise is the only environmental issue and no outdoor noise sensitive activity that is not mitigated to below HUD’s 65-decibel standard will take place on the site, it may request a waiver of the EIS Requirement by the Assistant Secretary for Community Planning and Development but must also obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary.

b. Projections of Noise Exposure: In addition to assessing existing exposure, future conditions should be projected. To the extent possible, noise exposure shall be projected to be representative of conditions that are expected to exist at a time at least 10 years beyond the project application date.

c. HUD should be consulted prior to designing mitigation measures.

2. Existing and Rehabilitation Projects: For rehabilitation and refinancing, noise exposure will be considered as a marketability factor. For rehabilitation projects, HUD will encourage appropriate noise attenuation measures for inclusion in the alterations. Projects at the CEST level of review are not required to complete a noise calculation but must complete preliminary noise screening of distance from noise sources. The preliminary screening must include distance from the project to each noise source.

For rehabilitation projects that require an Environmental Assessment level of review, HUD will actively seek noise mitigation for projects in the “Normally Unacceptable” or “Unacceptable” noise zones. For projects in the “Unacceptable” zone where HUD policy strongly encourages conversion of noise exposed sites to land uses compatible with the high noise levels, HUD will also critically evaluate the application to determine the project’s compatibility with HUD’s interior noise goal of a day-night average of 45 decibels, and to determine the noise level’s effect on marketability.
3. The HUD noise regulation allows flexibility for non-acoustic benefits in limited situations. The project must meet all of the conditions at 24 CFR 51.105 and receive the approval of a Regional or Field Environmental Officer.

4. Railroad Noise, and Location:
   a. For new construction applications, a noise study for the railroad should be projected out 10 years to cover increased usage of the railway tracks.
   b. A rail line may not bisect a property, nor should a rail line’s right-of-way generally encroach upon the site. Whenever rail lines are less than 100 feet from a facility, approval should be obtained prior to the application submission.
   c. Railyards (areas of multiple track sections used for assembling and disassembling trains) have been determined to create loud, impulsive sounds. For projects within 3,000 ft of actively operating rail yards, HUD may require up to 8 dB additional noise attenuation to be incorporated in the project. In determining whether this is necessary, HUD will consider the impact of existing or proposed barriers, topography, and nature of the rail yard operations.

P. Radon

Background. One common constituent of soil and rock is the unstable element uranium. One of the decay products of uranium is radon, a colorless, odorless gas. Under certain natural conditions, the radon gas can enter surface soils and become part of the “soil gas” environment, which then can enter the air, including air inside of buildings. When soil gas that contains radon enters a building, radon and its decay products are either directly inhaled, or attached to dust on walls, floors and in the air, which then can be inhaled. These decay products then undergo further decay, resulting in the release of subatomic alpha particles. This alpha particle radiation can cause mutations in lung tissue which can lead to lung cancer. The risk of contracting lung cancer from radon increases with an increase in the concentration of radon in the air that is breathed by building occupants. EPA recommends mitigation for residences with radon concentrations at or above 4 picocuries per liter of air (pCi/L).

General Requirements:

1. Radon Report
   a. The radon report is required for all mortgage insurance applications, unless an exception listed in Section 7.3.P.3 applies.
   b. The radon report shall be included in the application, as applicable. For new construction, or substantial rehabilitations or conversions where early testing is not feasible, the radon report must be submitted to HUD after construction is complete but prior to HUD’s final inspection. Applications (including those for which early testing is not feasible) must include the radon mitigation system in the architectural plans, as HUD relies on the Project Architect to design and incorporate any required radon mitigation system consistent with the relevant standard. HUD encourages the Architect to seek technical advice from a radon professional should
the Architect believe it to be necessary in their professional judgment or if it is required by the relevant mitigation standard.

c. The radon report shall follow the protocols and reporting requirements set forth in the American Association of Radon Scientists and Technologists, Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings (ANSI/AARST MALB-2014 with 1/2021 REVISIONS, or most recent edition). The report shall include the results of any testing performed, the sampling strategy as applicable, the details of any mitigation deemed necessary, and the timing of any such mitigation. The radon report must be signed and certified as to its compliance with the requirements of this section by a Radon Professional and must include copies of appropriate certifications and/or licenses.

2. Radon Professional

a. All testing of existing properties, post-construction testing, and any mitigation must be performed by, or under, the direct supervision of a Radon Professional, in accordance with the protocols referenced in this section.

b. Radon Certification/License of the Radon Professional is required as follows:
   i. Certification from either the American Association of Radon Scientists and Technologists (AARST) National Radon Proficiency Program (NRPP) or the National Radon Safety Board (NRSB); and
   ii. Certification/License from the state in which the testing or mitigation work is being conducted, if the state has this requirement.

3. Exceptions to Radon Report

a. A Radon Professional may conclude that testing or mitigation is not necessary based on exemptions laid out in the relevant state or ANSI/AARST radon standard. Any such justifications as to why testing or mitigation is not necessary must be provided in the application, in the form of a signed letter from the radon professional that references the appropriate standard. Housing staff will determine whether to grant the exception.

b. A radon report is not required for applications that are categorically excluded not subject to the laws and authorities at 50.4 (CENST) as per 24 CFR 50.19(b)(21) (see 7.1.B.1, above).

c. Applicants are encouraged to test for radon even if a radon report is not required per the exceptions above. Any such testing must follow the testing protocols and resident notification protocols below, and must then be incorporated within a radon report as described within this section. If the results of such testing indicate levels of radon above the threshold for unacceptability, mitigation as described in this section is required, with the mitigation requirements for Section 223(a)(7) projects the same as those for 223(f) projects.

4. Testing Protocols

a. Radon testing must follow the protocols set by ANSI/AARST MALB, most recent edition. This includes testing 100% of ground floor areas and 10% of upper floor areas in all buildings included in the project.
b. Threshold for unacceptability: 4.0 picocuries per liter (4.0 pCi/L) based on initial and any follow-up testing, if performed.

5. Occupant Notification
   a. Testing. Occupants of all new applications for ORCF mortgage insurance programs shall be informed of forthcoming testing in the manner described in ANSI/AARST MALB.
   b. Mitigation. Occupants shall be informed both prior to and after mitigation activities. In the case of new construction, incoming occupants shall be informed of radon mitigation activities.

6. Mitigation Standards. Radon resistant construction is required for all new construction, and radon mitigation is required for existing construction where testing has revealed that radon levels meet or exceed the threshold for unacceptability. The radon resistant construction or radon mitigation, when required, must conform to the following standards, which include post-mitigation testing requirements.
   a. Existing buildings:
      i. ANSI/AARST RMS-LB-2018 (or most recent version), Radon Mitigation Standards for Schools and Large Buildings.
      ii. A small number of cases may include 1-family, 2-family, or townhouse type structures. Mitigation in those types of structures reference ANSI/AARST Standard SGM-SF (most recent version), Soil Gas Mitigation Standards for Existing Homes.
   b. New construction:
      i. ANSI/AARST CC-1000-2018 (or most recent version), Soil Gas Control Systems in New Construction of Buildings is the construction standard for large buildings.
      ii. ANSI/AARST CCAH (most recent version), Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses may be appropriate for a small number of Section 232 projects. An example would be a large main building (which must comply with CC-1000) with several duplex residences (which must comply with CCAH) around the main building.

7. Mitigation Timing.
   a. For new construction and substantial rehabilitation properties, all mitigation, including follow-up testing, must be complete and all reports submitted prior to HUD’s final inspection.
   b. Radon mitigation included as part of a Section 232/223(f) or 223(a)(7) project’s repairs must be completed as quickly as practicable, and in any event, no later than 12 months after the Loan Closing. The mitigation budget must be determined prior to the issuance of the Firm Commitment and the amount must be included in the project’s costs.

8. Certificate of Completion. A certificate of completion from the Radon Professional must be submitted and appended to the radon report once radon testing and/or mitigation is completed.
9. Operation and Maintenance Plans: An operation and maintenance plan (called an operation, maintenance and monitoring (OM&M) plan under the ANSI/AARST standards) must be administered in accordance with the applicable mitigation standard for any mitigation project. A condition shall be attached to the Firm Commitment requiring that the Borrower operate and maintain the property consistent with the referenced OM&M plan for the duration of the insured mortgage. The project must submit the final OM&M plan to HUD after the radon mitigation system is installed. Given the ongoing risk associated with radon, the OM&M requirement for maintaining mitigation systems must be implemented when a mitigation system is present on the property.

10. Existing Mitigation Systems: All existing mitigation systems installed at the property must be evaluated to ensure that they function properly, and if applicable, corrective action must be taken by a qualified radon professional.

11. Cost estimates. It is the responsibility of the Lender to provide the cost estimate for radon remediation to be included into the overall construction or repair costs. The cost estimate must include ongoing OM&M costs. Estimates must be based on the locality of the project as well as the proposed time of installation.

12. Section 223(f) and Non-Excepted Section 223(a)(7).
   a. All Section 223(f) and non-excepted 223(a)(7) projects must be tested for radon in accordance with 7.3.P.4 Testing Protocols, above.
   b. Testing must be performed no earlier than 1 year prior to application submission.
   c. Mitigation. See requirements at 7.3.P.6 Mitigation Standards which include post mitigation testing. If estimated costs exceed the allowable cost for the Section 223(f) program, the application cannot be approved but may be considered under the substantial rehabilitation program.

13. Substantial Rehabilitation and Conversions.
   a. All substantial rehabilitation and conversion projects must be tested for radon.
   b. Early testing not feasible: For some proposals, such as a conversion of an existing building from non-residential to residential, the building envelope may change to such an extent that early testing would not be appropriate and in some cases not possible. If this is the case, proceed directly to mitigation as discussed at Section 7.3.P.6. Radon reports are required with the post-construction testing prior to HUD’s Final Inspection.
   c. Early testing when feasible
      i. Must be performed no earlier than 1 year prior to application submission in accordance with 7.3.P.4 Testing Protocols
      ii. If test results are below the threshold, no mitigation is required.
      iii. If test results are at or above the threshold, mitigation must be built into the project design per Section 7.3.P.6, identify any contamination on a site.
   d. When mitigation is built into project design, it must be conducted in accordance with the requirements at 7.3.P.6 which require post mitigation testing.
   e. If mitigation is not built into project design, radon testing and a radon report must be submitted to HUD after construction is complete but prior to HUD’s Final Inspection.
If testing results are above the threshold, retrofit mitigation pursuant to the requirements at 7.3.P.6. is required.

14. New Construction: All new construction projects must follow radon resistant construction requirements.

a. ANSI/AARST CC-1000 (most recent version) is the construction standard for large buildings.

b. ANSI/AARST CCAH (most recent version) is the construction standard for single family buildings (1-family, 2-family, townhouses). This standard may be appropriate for a small number of Section 232 projects. An example would be a large main building (which must comply with CC-1000) with several duplex residences (which must comply with CCAH) around the main building. Radon resistant construction is required for all radon zones.

c. Radon reports are required with the post-construction testing prior to HUD’s Final Inspection. If post-construction testing results are above the threshold, the project must be brought into compliance by activating the mitigation system or through retrofit mitigation.

d. All testing and mitigation required as a result of this testing must be performed by, or under the direct supervision of a Radon Professional, in accordance with the protocols referenced in this section.

Q. Site Contamination and Toxic Substances (24 CFR 50.3(i)):

1. Phase I Environmental Site Assessment (Phase I ESA)
2. Phase II Environmental Site Assessment
3. Remediation Plans – General
4. Remediation Plans – Complete Removal of Contamination
5. Remediation Plans – Incomplete Removal of Contamination
6. Monitoring Wells, Flushing Wells, or Testing Wells
7. Off-site Contamination
8. Escrow
9. Waivers
10. LSTF Approvals and Reviews
11. Superfund Sites
12. Unacceptable Sites

The purpose of this section is to identify contamination on or affecting a site, other than contamination from in-place building components such as asbestos containing materials (see Section 7.3.C) or lead-based paint (see Section 7.3.N), and second, to ensure that any
contamination so identified is mitigated to the point where it would be unlikely to “affect the health and safety of occupants or conflict with the intended utilization of the property” as stated in HUD-wide policy at 24 CFR 50.3(i)(1).

Any potential contamination issues should be discussed with HUD as soon as possible. It is recommended that lenders consult with HUD before a Phase II ESA Environmental Site Assessment (ESA) is prepared.

**0.1. Phase I Environmental Site Assessment (Phase I ESA):**

**Submission:** The Lender shall submit a complete and final Phase I ESA with the mortgage insurance application. A summary or “draft” submission is not acceptable. The Lender and/or the Borrower must inform the ESA preparer of all of the following Phase I ESA requirements:

- **a.** **Purpose:** The Phase I ESA will make an initial determination as to the presence of “hazardous substances” as defined by CERCLA, and of petroleum and petroleum products. In addition, a purpose of the Phase I ESA The Phase I ESA can meet EPA’s All Appropriate Inquiry requirements for CERCLA liability protection for the property owner. However, HUD’s purpose is to document compliance with 24 CFR 50.3(i), which states HUD’s policy that all properties for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property. This purpose must be described in the “Purpose” subsection of the required “Introduction” Section of the Phase I ESA. To meet this purpose, in addition to the standard Phase 1 determination of whether Recognized Environmental Conditions (RECs) have been identified in connection with the site, the Evaluation section’s discussions on Findings, Opinions and Conclusions should state whether further investigations or corrective actions are recommended to meet 24 CFR 50.3(i).

- **b.** **Format:** The Phase I ESA must be prepared in accordance with the requirements of ASTM E1527-13, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” (or most recent edition), using. The Phase I ESA must utilize the table of contents and report format specified in Appendix X4 therein. The Phase I ESA must incorporate a vapor encroachment screen performed in accordance with ASTM E 2600-1015 (or most recent edition). The Phase I must clearly indicate that HUD is an authorized user of the report.

- **c.** The Phase I ESA will be posted in HEROS and will be available to the public for one year after the completion of HUD’s environmental review.

- **d.** **Timing:** The Phase I ESA must be conducted (meaning the earliest of the date of the site visit, records review, or interviews) within one year of the mortgage
insurance application’s submission date to HUD. However, a Phase I ESA that
was conducted more than 180 days prior to the submission date to HUD, but
within the allowable one-year period, must be updated pursuant to Section 4.6 of
ASTM E1527-13 (or similar section of the most recent edition). A Phase I ESA
originally prepared more than one year prior to submission to HUD, even if
updated within 180 days of submission to HUD, is not acceptable. The ESA
timing requirements cannot be waived.

Preparers’ Qualifications: The Qualifications of Environmental Professionals section
of the Phase I ESA must describe the preparer’s qualifications. The Environmental
Professional preparing the Phase I ESA must meet all of the qualification requirements
of Appendix X2 of ASTM E1527 (most recent edition).

Vapor Encroachment Screen: (VES): The Phase I ESA must incorporate an
initial vapor (a.k.a. gas) encroachment screen following ASTM E2600 (most
recent edition) to determine if there is a potential for vapors to occur in the
subsurface below existing and/or proposed on-site structures. Those hazardous
substances may be petroleum and petroleum products that consist of volatile
organic compounds (VOC), semi-volatile organic compounds (SVOC) and
inorganic volatile compounds. The vapor encroachment screen shall be performed
using Tier 1 “non-invasive” screening pursuant to ASTM E2600-10 “Standard
Guide for Vapor Encroachment Screening on Property Involved in Real Estate
Transactions,” Section 8 (or similar section of the most recent edition). If the Tier
1 vapor encroachment screen determines that, as indicated in ASTM E2600-10
Section 8.7.1 (or similar section of the most recent edition), there is a “vapor
encroachment condition” (VEC), which is the “presence or likely presence” of
such vapors in the subsurface below existing and/or proposed on-site structures, a
likely VEC, or that a VEC “cannot be ruled out”, it shall also be deemed to be a
REC for purposes of must be reviewed under the Phase I ESA. Analyses regarding
the VES must be determined if it is a REC as per ASTM E1527. The Vapor
Encroachment Screen analyses must be included in their own section in the Phase I
ESA report, and also integrated within the various findings, opinions and
conclusions sections of the Phase I ESA.

Underground Storage Tanks (USTs):
When an underground storage tank (UST) containing, or previously containing,
hazardous waste or petroleum products exists on the project site, HUD will require
information to evaluate the environmental risk that the UST presents. The Phase I
ESA must determine if the UST is considered a REC, and if so, the REC must be
satisfactorily addressed before the application is submitted. This means the REC
must be addressed in accordance with Handbook Requirements. See 7.3.Q.2
through 7.3.Q.5.

- When an onsite UST is regulated by the State, including testing and
  inspection protocols, provide documentation that confirms compliance with
Active UST: When a UST is not subject to State testing and inspection protocols, the UST and its service lines must pass an integrity test prior to the submission of an application for Mortgage Insurance. The test must occur no earlier than one year prior to the application’s submission to HUD. In addition, an operations & maintenance plan must be submitted that includes periodic testing of the tank and its service lines, as well as repair, maintenance, and emergency response procedures. The implementation of the plan will be a condition of approval. The owner must certify that all applicable personnel are trained and familiar with the plan.

Out of Service UST: Any UST that is no longer in service, or that is planned to be taken out of service, must be removed or closed in place in accordance with LSTF requirements. Removal of a UST must occur prior to the application submission. This is due to the potential for contamination to be encountered during, or following, the UST removal.

When a UST was previously removed from the property or abandoned in place, HUD will require information to evaluate the environmental impact that the UST may have on the site. Include information such as removal/closure documentation and Phase II study results in the Phase I ESA. The Phase I ESA must determine if the former UST is considered a REC, and if so, the REC must be satisfactorily addressed before the application is submitted.

Findings Section: The Findings section of the Phase I ESA must list all known or suspect Recognized Environmental Conditions (REC), Controlled Recognized Environmental Conditions (CREC), Historical Recognized Environmental Conditions (HREC), and de minimis conditions (such as minor soil staining). The Findings section must also list VECs, likely VECs, and circumstances in which a VEC cannot be ruled out.

Opinions Section: The Opinions section, pursuant to section 12.6 of ASTM E1527-13 (or similar section of the most recent edition), must discuss the impact on the property of conditions identified in the Findings section, and provide rationale for concluding that a condition is or is not currently a REC. The justification for any Finding deemed not to be a REC must be included in the Opinions section. If the Phase I ESA preparer cannot make a statement as to whether a condition is or is not a REC, the Opinions section must state what information or further investigation—e.g. gaining access to a building (a so called “data gap” per section 12.7), but not including a Phase II ESA—would be deemed necessary to make such a determination. The ESA preparer must also identify any data gaps and state whether the data gaps are significant.
When previous remediation has been performed or is ongoing, i.e., not yet an HREC at the proposed site, the Phase I ESA must fully discuss the extent of such remediation in the Opinions section, including any involvement of LSTF Authorities. The Phase I ESA preparer must justify whether such ongoing remediation should resolve any RECs or undecided issues identified in the ESA.

Note: Even if the preparing the Phase I ESA determines that a Finding does not rise to the level of a REC, HUD may nevertheless determine that there is a business environmental risk that requires testing and/or remediation. The finding warrants Phase II investigation based on HUD’s toxics policy at §50.3(i).

j. Conclusions Section: The Conclusions Section must make a determination of whether a REC, including a CREC, exists on the site in accordance with one of the two statements at Section 12.8 of ASTM E1527-13 (or similar section of the most recent edition), i.e.:

- “We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of [insert address or legal description], the property. Any exceptions to, or deletions from, this practice are described in Section [ ] of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property,” or

- “We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of [insert address or legal description], the property. Any exceptions to, or deletions from, this practice are described in Section [ ] of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following: (list).”

k. Evaluation Section: In addition to the standard Phase I determination of whether RECs have been identified in connection with the site, the Evaluation section’s discussion of Findings and Conclusions should state whether further investigation or corrective action is recommended to meet 24 CFR 50.3(i).

- User Provided Information Section: The Borrower and the current property owner, if different from the Borrower, shall complete the User Questionnaire(s) according to Appendix X3 of ASTM E1527-13 (or similar section of the most recent edition). The User Questionnaire(s) must be included in the “User Provided Information Section” of the Phase I ESA, and the preparer must take into account any information provided in the User Questionnaire(s) in the preparation of the Phase I ESA.

- Testing Not Required: The Phase I ESA does not require sampling and testing.
which will be performed during the course of a Phase II ESA or as part of a remediation plan. However, if required, would include sampling and testing (see Section 7.3.Q.2 below). If a Phase II ESA had been previously completed at the property, the Phase I ESA may reference and discuss any prior Phase II ESA performed in general accordance with ASTM E1903-11 (or most recent edition), including whether a condition is a REC.

Lead-based Paint (LBP) Chips: During any proposed repair work, the removal and disposal of LBP must be performed in accordance with regulations as published and enforced by the State and the Department of Labor - Occupational Safety and Health Administration (OSHA), and, if the property is covered by HUD’s Lead Safe Housing Rule (24 CFR Part 35, subparts B – R), as described at Section 7.N above, by that HUD regulation.

LBP chips that are not inside or part of a structure may be deemed to be a hazardous substance under CERCLA (see EPA document referenced at Section 7.3.C.1.c.(5) below). Therefore, if there is or was a structure on the site that was built prior to 1978 (when the use of LBP was discontinued), any evidence of paint chips not inside or part of any current structures must be discussed in the “Site Reconnaissance” section of the Phase I ESA, must be listed in the Findings Section, and must be discussed further as to whether the paint chips are either a REC or a de minimis condition in the Opinions section.

Previous Remediation: When previous remediation has been performed, or remediation is currently taking place, the Phase I ESA must fully document the status of such remediation, including any involvement from local, state, tribal, or Federal (LSTF) authorities. No Further Action (NFA) letters as discussed in Section 7.3.Q.5.d.iii below, and narrative descriptions of any on-going remediation work and monitoring. The Phase I ESA must discuss whether the previous or ongoing remediation is consistent with current applicable LSTF standards.

Evaluation of the Phase I ESA: The Phase I ESA will be evaluated by HUD. HUD may require additional information or a Phase II ESA based on Findings that indicate an unacceptable business environmental risk. Any Phase I ESA that identifies a Recognized Environmental Condition requires a Phase II ESA, unless it can be determined from the Phase I ESA that corrective action is not feasible. If no corrective action is feasible, HUD may reject the property.

Phase II ESA:

Purpose: The purpose of the Phase II ESA is to ascertain by chemical testing of samples and within the requirements of ASTM E1903-11, “Environmental Site Assessments: Phase II Environmental Site Assessment Process,” (or most recent edition) whether the RECs and/or business environmental risks identified from the Phase I ESA have resulted in the presence of “hazardous substances” as defined by CERCLA, and/or of petroleum and petroleum products at levels that would exceed the Statewide, non-site specific criteria (de minimis levels).
2. **Timing:** The Phase II ESA shall be submitted at the same time as the Phase I ESA. For new construction or substantial rehabilitation using the initial stage of processing, the Phase II ESA, if required, must be submitted by the Lender at the initial stage of submission.

   - **When Required:** A Phase II ESA is required if:
     
     a. The Phase I ESA indicates that there is a REC and corrective action is potentially feasible;
     b. The Phase I ESA comes to no definite conclusion regarding the presence of a REC, or
     c. HUD requires a Phase II ESA for business environmental risk reasons that are described to the Lender.

4. **Exception to the Phase II Submission Requirement:** In cases where it is obvious that remediation will be required, with HUD’s permission, a separate Phase II ESA may be bypassed and instead incorporated within the “site characterization” segment of the remediation plan referenced in Section 7.3.C.1 below.

5. **Standards to Use:** The Phase II ESA is to be performed pursuant to the logic model of ASTM E1903-11, Section 7 (or similar section of the most recent edition), including developing the conceptual model and validation.

6. **Report Format:** The Phase II ESA must be prepared in accordance with the requirements of ASTM E1903-11, using the table of contents and report format specified in Appendix X3.2 as amended by X3.3 (or similar section of the most recent edition). Some of the steps that a Phase II assessor might perform may be intuitive in nature, but they nevertheless must be included in the report so as to ensure its scientific validity.

   - **Historical Recognized Environmental Conditions (HREC):** If the Phase I ESA indicates that there is a HREC as described in ASTM E1527-13 (or most recent edition), i.e., a hazard has been remedied and an LSTF Authority has issued a No Further Action (NFA) letter or similar approval, HUD may either deem the NFA letter as the completion of the remediation or it may require a Phase II ESA and/or further remediation.

   - **Evaluation of the Phase I ESA:** The Phase I ESA will be evaluated by HUD to determine if the property is acceptable for the hazards reviewed. HUD may require additional information or a Phase II ESA based on Findings that indicate an unacceptable risk under HUD’s toxics policy at §50.3(i), or an unacceptable business risk. Any Phase I ESA that identifies a REC requires a Phase II ESA, unless it can be determined from the Phase I ESA that corrective action is not feasible. If no corrective action is feasible, HUD may reject the property.

2. **Phase II Environmental Site Assessment:**
a. **Purpose:** The purpose of the Phase II ESA is to determine if the RECs and/or risks related to HUD’s toxics policy identified in the Phase I ESA have resulted in the presence of hazardous substances or petroleum products at levels that exceed unrestricted use criteria (de minimis levels).

b. **Timing:** The Phase II ESA shall be submitted at the same time as the Phase I ESA (see 7.3.Q.1 above).

c. **When Required:** A Phase II ESA is required if:
   - The Phase I ESA indicates that there is a REC; or
   - HUD requires a Phase II ESA for reasons that are described to the Lender, including that the Phase I indicates an unacceptable risk under HUD’s toxics policy at §50.3(i).

d. **Standard to Use:** The Phase II ESA must be prepared in accordance with ASTM E1903-19, “Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process”, Section 7 (or similar section of the most recent edition), including developing the conceptual model and validation.

e. **Report Format:** The Phase II ESA must be prepared in accordance with the requirements of ASTM E1903, using the table of contents and report format specified in Appendix X3.2 as amended by X3.3 (or similar section of the most recent edition). Some of the steps that a Phase II assessor might perform may be intuitive in nature, but they nevertheless must be included in the report to demonstrate its scientific validity.

f. **Exception to Separate Submission Requirement:** In cases where it is obvious that remediation will be required, with HUD’s approval, the Phase II ESA report may be incorporated within the “site characterization” segment of the remediation plan referenced in Section 7.3.Q.3.a below.

-g. **Nature and Extent of the Study:** The Phase II ESA need not necessarily be a complete site characterization (total nature and distribution) of contamination, but must proceed to a point where it indicates the location of greatest concentration and risk, taking into consideration all of the Recognized Environmental Conditions (RECs) identified in the Phase I ESA or other hazards that affect the health and safety or occupants or conflict with the intended utilization of the property. However, when the existence of elevated levels of contaminants is confirmed, a complete “site characterization” will be required as a first step in remediation per Section 7.3.C.4.Q.3.a below.

-h. **Vapor Encroachment/Vapor Intrusion:** If it is determined that there is a potential for vapors to occur in the subsurface below existing and/or proposed on-site structures, either identified from the Phase I ESA as a REC or from this or a prior Phase II ESA, the Phase II ESA shall include either a Tier 2 vapor encroachment...
screen (per ASTM E2600-10, Section 9 (or similar section of the most recent edition)), a vapor intrusion assessment (VIA) pursuant to LSTF policy and/or procedure (as discussed in ASTM E2600-10, Appendix X7.1 (or similar section of the most recent edition)), or go directly to a Tier 4 “mitigation” (per ASTM E2600-10, Appendix X7.1 or X7.2 (or similar section of the most recent edition)).

- If a Tier 2 screen was performed and it determined that there was a VEC, a likely VEC, or that a VEC could not be ruled out, either a VIA pursuant to LSTF policy and/or procedure or Tier 4 “mitigation” (per ASTM E2600-10, Appendix X7.1 or X7.2 (or similar section of the most recent edition)) is required.

- If a VIA was performed, any mitigation (or remediation) deemed necessary must follow LSTF policy and/or procedures, or go through a Tier 4 “mitigation” (per ASTM E2600-15, Appendix X7 (or similar section of the most recent edition)).

### Phase II Conclusion:

- There are “hazardous substances” as defined by CERCLA, and/or petroleum and/or petroleum products and/or other hazards that HUD considers an environmental risk under §50.3(i), at levels that exceed the Statewide, non-site specific LSTF unrestricted criteria and list any chemicals so found, or

- No hazardous substances, petroleum or petroleum products or environmental risks under §50.3(i) have been identified above de minimis levels LSTF unrestricted criteria.

### Off-Site Contamination Conclusion:

- There is no known or perceived off-site contamination in the vicinity of the proposed site;

- It is unlikely that any known or perceived off-site contamination will migrate on to the site; or

- It is likely that known or perceived off-site contamination will migrate on to the site.

### Off-Site Contamination Remediation:

If there is known or perceived off-site contamination in the vicinity of the project site, the preparer must describe any remediation underway for the off-site contamination, and whether the remediation has effectively brought migration under control.

### Conformance to LSTF Requirements:

The Phase II ESA written report must describe how it conforms to any applicable LSTF requirements and must include a detailed, common language summary.

### Exception of Requirement for Phase II preparation and submission:

A Phase II...
ESA is not required when remediation is ongoing to the point of not yet being an HREC (see Section 7.3.A.1.f., above), if, the Phase I ESA preparer states that such remediation should resolve any RECs and undecided Phase I ESA issues (see "Opinions Section" 7.3.AQ.1.gl, above), and if the remediation plan preparer indicates that all of the Phase II ESA requirements have been met.

2.3 Remediation Plans – General:
Remediation plans are required if the Phase II ESA cannot make the determinations required by Section concludes that hazardous waste or petroleum products are present at levels that exceed LSTF unrestricted (de minimis) criteria 7.3.B.10.b, and B.11.a or B.11.b—or that it is likely that known or expected off-site contamination will migrate on to the site.

The following requirements apply to all remediation plans:

Complete site characterization.

- Anytime a site has been identified from a Phase I or Phase II ESA as having contamination (or contamination exposure pathways), be it vapor (gas), liquid, solid, dissolved, or non-aqueous phase liquid (NAPL), above LSTF residential/unrestricted criteria (de minimis levels), a complete site characterization (sometimes known as a special site assessment report, a remedial investigation report, a detailed Phase II ESA, or a Phase III ESA) must be prepared as the initial step of any remediation plan.

- Such a report must determine the total horizontal nature and vertical extent distribution of such contamination, exposure pathways, and potential receptors (a.k.a., a conceptual site model). However, if the remediation plan preparer determines that the Phase II ESA preparer has already determined the total nature and distribution of such contamination, exposure pathways and potential receptors, then such determination shall be so indicated and the Phase II ESA shall be made a part of the remediation plan.

- The report must also be based on LSTF requirements, or on the appropriate combination of the following ASTM Practices and Guides (or similar section of the most recent edition), as amended, as determined by the remediator’s environmental investigator. Lesser degrees of site assessments or non-conformance are not acceptable. For lead contaminated sites, refer to the listed EPA Handbook:

  i. D6235-04, “Practice for Expedited Site Characterization of Vadose Zone and Groundwater Contamination at Hazardous Waste Contaminated Sites”


  iv. E1912-98, “Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases”

d. All of the requirements of Sections 7.3.C.2, 3, and 4 below must be met.
e. The report must discuss how it complies with the listed Practices or Guides and/or the appropriate LSTF procedures.
f. The report must indicate how it meets the requirements of any applicable LSTF regulatory procedures.

b. Any remediation studies and plans must be in the form of a report that includes a detailed, common language summary and discusses how it meets the listed Practices or Guides and/or the appropriate LSTF procedures.

c. Timing of Submissions:
   i. Any remediation studies and plans, including the “site characterization” as described in Section 7.3.C.1.Q.3.a above, must be presented to HUD with the Firm Commitment application; i.e., at the same time as the Phase I ESA and, if applicable, the Phase II ESA.
   
   ii. Evidence of approval of the remediation plan by the LSTF Authority must be submitted with the application submission.
   
   iii. For new construction or substantial rehabilitation projects using the initial stage of Firm Commitment processing, the remediation plan and evidence of approval of the plan by the LSTF Authority must be submitted with the initial submission.

k. The remediation plan preparer’s qualifications must be discussed in any remediation reports.

   i. Evidence of approval of the remediation plan by the LSTF Authority must be submitted with the application submission.

   e. The remediation plan must cover all relevant contaminant phases: vapor (gas), liquid, solid, dissolved, and NAPL.

f. The remediation plan must require either the:
   i. The removal of contamination (bringing the contamination to de minimis levels) LSTF unrestricted criteria pursuant to Section 7.3.D.Q.4 (Remediation Plans – Complete Removal of Contamination); or incomplete
   
   ii. Incomplete removal of contamination in the form of a Risk-Based Corrective Action to meet residential use criteria, pursuant to Section 7.3.E.Q.5 (Remediation Plans – Incomplete Removal of Contamination).

   g. Remediation Timing –:
   i. Uncertain Determination of Cost and/or Effectiveness of Remediation: If HUD determines that it is uncertain whether implementation of the remediation plan will meet
the requirements of either 7.3.DQ.4 or 7.3.EQ.5, the remedial work must be completed, including clearance testing, and the remediation itself must be approved by the LSTF authority, including issuance of any clearance and closure documents, prior to the issuance of the Firm Commitment.

Remediation Timing—ii. Definitive Determination of Cost and Effectiveness of Remediation: If the extent of contamination can be definitively determined and the cost of removing that contamination can be specified pursuant to a contract for remediation (see Monitoring, Flushing or Testing Wells Section 7.43.Q.6), HUD may allow a remediation plan that has been approved by the LSTF authority that:

- permits the remediation including site testing, any clearance and closure documents, and the approval by the LSTF, prior to initial closing, or
- if

- If the applicant can show cause why it would be impractical to complete the remediation prior to initial closing, permits the remediation including site testing, any clearance and closure documents, and final approval by the LSTF, prior to both final closing and initial occupancy. Note that for projects with a single loan closing, such as 232/223(f) projects, the remediation and approvals must be complete prior to the single loan closing.

e.h. Disclosure protection during the course of remediation activities. All persons living or regularly working on site while remediation is taking place shall be duly informed and protected from contamination. This requirement must be a part of the remediation plan.

e.i. Remediation contract insurance. Unless HUD determines otherwise, the remediation contract shall require cost cap and reopener insurance coverages, copies of which are to be included in the remediation plan.

e.j. Ongoing Remediation. If remediation is taking place, or has been completed but has yet to receive final approval by the LSTF at the time of submission of the Phase I ESA, the remediation plan and all remediation studies shall be submitted, along with a detailed common language summary, at the same time as the Phase I ESA.

3.4 Remediation Plans – Complete Removal of Contamination:

- a. General Requirements: Except for those situations where Section 7.3.EQ.5 (Remediation Plans – Incomplete Removal of Contamination) below applies, the Lender must submit a remediation plan designed to bring the contamination identified by the complete “site characterization” per Section 7.3.C.1.Q.3.a to de minimis LSTF unrestricted criteria levels or eliminated to the extent necessary to meet the LSTF authority standards, with no active or passive remediation. There must not be any need for engineering controls, institutional controls, or monitoring wells.

- b. All of the requirements of Section 7.3.EQ.3 (Remediation Plans) must be met.
Mitigation: A remediation plan that involves control of off-site contamination and/or vapor intrusion is not permitted under this section but may be allowed under Section 7.3.F.5, “Remediation Plans – Incomplete Removal of Contamination,” below.

3.5 Remediation Plans – Incomplete Removal of Contamination:

- Justification: If the costs are deemed to be exorbitant and/or the feasibility is deemed impractical for remediation of on-site contamination to de minimis levels, or if there is known or expected offsite contamination that poses a risk to the project site, the remediation plan may allow for incomplete removal, as described below. Justification for such incomplete removal must be submitted along with the remediation plan. Such justification must include documentation that shows that the costs of the incomplete removal of contamination, including any life cycle costs for Operation and Maintenance, and any applicable enforcement requirements of LSTF authorities, are sufficiently below the costs of complete contamination removal. The extent of the contamination must be fully understood, including possible exposure pathways, as part of a Risk-Based Correction Action (RBCA).

2. All of the requirements of Section 7.3.C must be met.

3. The corrective action must be a Risk Based Corrective Action (RBCA) based on the appropriate combination of:
   a. The following ASTM Guides and Practices (or their most recent edition), as amended, as determined by the remediator’s environmental investigator: (For lead contaminated sites, refer to the listed EPA Handbook.)
      - E2600-10, “Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions”
b. LSTF regulatory procedures may be followed in lieu of the ASTM Guides and
Practices listed above, when the remediator’s environmental investigator
determines their equivalence or greater stringency.

c. The RBCA report or other accepted cleanup program report(s) must:
- Meet all of the requirements for Section 7.3.CQ.3,
- Discuss how the remediation plan meets or complies with the applicable
ASTM Guides and Practices and LSTF regulatory procedures as listed/discussed
in Section 7.3.E3 and 7.3.E4 above,
- Discuss how the remediation plan meets or will meet all of the
requirements of Section 7.3.Q.5.d below, and
e. Discuss how it meets or will meet all of the requirements of Section 7.3.EQ.6;
and
- Discuss how it meets or will meet all of the requirements of Section 7.3.F through
J10 below.

d. Risk-Based Corrective Action (The RBCA): The corrective action or other accepted
cleanup program(s) must be a RBCA supported by the applicable combination of:

a. Engineering and Institutional Controls (EC/IC).
   i. An Engineering Control is a physical measure that reduces or
eliminates exposure to contamination. An Institutional Control is a
non-engineered instrument, such as administrative and legal control.
ICs typically limit land and/or resource use or provide information that
helps modify or guide human behavior at a site. An appropriate mix of
engineering controls ECs, such as capping and slurry walls, and
institutional controls ICs such as protective covenants and access
restrictions are, and employee notification, is usually required for all
RBCAs, and shall follow the guidance in ASTMs E2435-05 and
E2091-05 (or most recent editions). The RBCA must indicate how it
met these Guides.
   
   i. LSTF regulatory provisions may be followed in lieu of these ASTM Guides, or
other accepted cleanup programs as amended, when approved by the remediator’s
environmental professional determines their equivalence. LSTF authority. EC/IC
may include:

a) Hard/Soft Cap Engineering Control: A hard cap EC, such as concrete,
generally is required if any contamination will remain on the site after final
closing. Unless the applicant can justify why a lesser depth to contamination
would be protective of the health and safety of occupants, the depth of any
remaining contamination should be greater than the deepest of the following:
   - the depth of the foundations of any existing or proposed structures
   including sumps.
the depth of any existing or proposed utilities on site, or
five feet below the surface.

In certain situations, HUD may allow for a soft cap (e.g. dirt) if other engineering controls such as an impenetrable geotextile fabric are included. Even if ECs are not required for a soft cap, ICs are still required.

b) Slurry Wall or Equivalent Engineering Control: A slurry wall or equivalent type EC may be required to prevent offsite contamination from migrating onsite, or to prevent onsite contamination from migrating onsite or offsite. If the Phase I and/or Phase II ESA determines that the likely existence of off-site contamination presents a risk to the site, such a slurry wall or equivalent type EC will be required.

c) Monitored Natural Attenuation and Enhanced Passive Remediation (MNA/EPR): MNA/EPR such as by bio-augmentation where no additional active input is required and passive engineering controls such as a slurry wall may be allowed as part of the RBCA. In such cases the LSTF authority must issue a conditional No Further Action (NFA) Letter or similar approval. Monitoring wells pursuant to the above RBCA and meeting the requirements of Section 7.3 Q.6 will be required to monitor the progress of the remediation. When MNA/EPR is part of the RBCA or other accepted cleanup program, the remediation may continue beyond initial endorsement for projects with an initial and final closing, provided that the LSTF authority has determined in writing that such undertakings would present no threat to health, safety or the environment. Note that for projects with a single loan closing, such as 232/223(f) projects, the remediation and approvals must be complete prior to the single loan closing.

d) Vapor Encroachment/Vapor Intrusion Mitigation: If a VEC is present, as per an ASTM E2600 Tier 1 Vapor Encroachment Screen, then mitigation as discussed in ASTM E2600, Appendix X7 is required, unless a vapor intrusion assessment (VIA) has been, or will be, performed pursuant to LSTF policy and/or procedure. When remediation goes directly from a Tier 1 screen or a Tier 2 screen, such controls shall, where feasible, consist of a poured-on vapor barrier to be used in conjunction with the active and passive venting systems.

e) Institutional Controls (IC) regarding groundwater contamination, if applicable, must be put in place.

f) HUD may require ICs beyond LSTF requirements in order to support the ECs and ensure protection of the residents throughout the term of the mortgage.

iii Operations and Maintenance Plan (O&M) Plan: Any time there is an EC, there must also be an O&M plan which itself is an IC. The O&M plan must be approved by the LSTF authority, and must discuss any associated enforcement required by LSTF authorities. An O&M plan must be in place for management of all
contamination remaining on the site and any controls thereof. If HUD determines that the Borrower does not have sufficient capacity to manage the O&M plan, the Borrower must contract with an appropriate servicer to do so. (See Section 7.4, for costing) The O&M Plan must ensure maintenance of any engineering controls and assign responsibility for that maintenance. (See Section 7.6 for guidance on costing determination.)

iii. Hard/Soft Cap Engineering Control: A hard cap EC, such as concrete, generally is required if any contamination will remain on the site after final closing. Unless the applicant can justify why a lesser depth to contamination would be protective of the health and safety of occupants, the depth of any remaining contamination should be greater than:

- the depth of the foundations of any existing or proposed structures including sumps,
- the depth of any existing or proposed utilities on site, and
- five feet below the surface.

In certain situations, HUD may allow for a soft cap (e.g. dirt) if other engineering controls such as an impenetrable geotextile fabric are included. Even if engineering controls are not required for such RBCAs, institutional controls (IC) are still required.

iv. Slurry Wall or Equivalent Engineering Control: A slurry wall or equivalent type EC may be required to prevent offsite contamination from migrating onsite, or to prevent onsite contamination from migrating onsite or offsite. If the Phase I and/or Phase II ESA determines that the likely existence of off-site contamination presents a risk to the site, such a slurry wall or equivalent type EC will be required.

v. Monitored Natural Attenuation and Enhanced Passive Remediation (MNA/EPR): MNA/EPR such as by bio-augmentation where no additional active input is required and passive engineering controls such as a slurry wall may be allowed as part of the RBCA. In such cases the LSTF authority must issue a conditional No Further Action (NFA) Letter or similar approval. Monitoring wells pursuant to the above RBCAs and meeting the requirements of Section 7.3.F will be required to monitor the progress of the remediation. When MNA/EPR is part of the RBCA, the remediation may continue beyond initial endorsement provided that the LSTF authority has determined in writing that such undertakings would present no threat to health, safety or the environment.

Vapor Encroachment/Vapor Intrusion Mitigation: If a VEC is present, a VEC is likely present, or a VEC cannot be ruled out, then mitigation as discussed in ASTM E2600-10, Section 7.2 (or similar section of the most recent edition) is required, unless a VIA performed pursuant to LSTF policy and/or procedure and in accordance with ASTM E2600-10, Appendix X7.1 (or similar section of the most recent edition) has determined that it is in compliance with such policy, or
would be in compliance after instituting mitigation. When remediation goes directly from a Tier 1 screen or a Tier 2 screen, such controls shall, where feasible, consist of a poured-on vapor barrier to be used in conjunction with the active and passive venting systems.

vii. Institutional Controls (IC) regarding groundwater contamination, if applicable, must be put in place.

iii. No Further Action Letter (NFA): The LSTF authority must issue an NFA, or similar approval, except that a conditional NFA may be allowed pursuant to MNA/EPR (see Section 7.3.E.6.a.5 above). The NFA or conditional NFA must be issued pursuant to the timelines stated earlier in Section 7.3.C.8 and 9. Additionally, the LSTF authority must indicate in the NFA approval that the remediation that has taken place, or will take place, is protective of the health and safety of occupants and does not conflict with the intended utilization of the property. The remediation must meet LSTF residential use standards. The NFA must be submitted to HUD pursuant to the timelines specified in Section 7.3.O.3.c.i or ii.

iv. Groundwater Requirement: A site that is/will be otherwise acceptable may be approved if contamination exists in the groundwater after completion of remediation, if:

a) Institutional controls (ICs) regarding the groundwater are/will be put in place, along with an O&M plan, approval by the LSTF authority, and any applicable enforcement requirements of LSTF authorities. Municipal restrictions on groundwater may substitute for LSTF approval if the restrictions are included as an IC on the property deed. The ICs must prohibit any and all uses of the groundwater; and

b) The highest anticipated levels of groundwater based on high groundwater and/or100 year flooding events, are below the levels of any construction or potentially anticipated utility work, unless it can be shown how such high groundwater levels will not modify the naturehorizontal and distributionvertical extent of contamination to such a degree that it could affect the health and safety of residents and workers; and

c) Any vapors from groundwater and/or soils are shown not to present a significant risk pursuant to Tier 1 vapor encroachment assessment, Tier 2 vapor encroachment assessment, or vapor intrusion assessment, or mitigation.

iv. Safety of and Disclosure to Residents and Workers: Any time contamination above de minimis levels is allowed to remain on site after initial occupancy and final closing, all construction maintenance workers who might perform activities that could compromise the EC and/or IC, as well as construction workers, facility staff, and building residents and their representatives, etc. are to be informed of the general naturetype and distributionextent of contamination and the protective measures that have been taken.
iv. Hazardous Substance Quantification: If any RBCA or other accepted remediation plan identifies hazardous substances listed in 40 CFR 302.4 that will remain on the property after final closing, such plan shall determine the quantity of such hazardous substances and whether it equals or exceeds the levels indicated at 40 CFR 373.2. (This is a requirement that HUD is required to report under CERCLA that would apply to HUD at any time in the event that HUD might own the property or take over its management.)

4.6 Monitoring Wells, Flushing Wells, or Testing Wells:

a. General Requirements: The presence of a testing or monitoring well on the property does not bar the property from consideration for mortgage insurance. If a monitoring well is required or exists to confirm that contaminants have been removed to intended levels or to determine that an MNA/EPR is working properly, EC/IC will be required until such time as contaminants are reduced to de minimis levels and a Final NFA letter is issued by the LSTF Authority.

a.b. Monitoring Well Protocols: Monitoring protocols must be specified in the RBCA or other accepted program report, and monitoring must proceed to the point that indicates that contaminants have been removed to intended levels or it is determined that passive MNA/EPR is working properly.

a.c. Off-site Contamination—Acceptability: If a monitoring well is required or exists to determine if existing or assumed off-site contamination has migrated or might migrate on-site, the site is generally not acceptable unless associated EC/IC are put in place pursuant to an acceptable RBCA or other acceptable program, or unless the LSTF authority provides a statement that such off-site contamination would not present a risk to the health of the project’s occupants if it were to migrate on-site.

a.d. Flushing Wells—Unacceptable: In no case may final closing or initial occupancy take place when a flushing well is in operation or will be required.

a.e. Testing or Monitoring Wells Ordered by LSTF: A testing or monitoring well may also be placed on the property by order of the LSTF. The well may test or monitor contamination on the site or from a neighboring site. If a monitoring well would be required or exists solely to monitor the general health of an aquifer used as a water supply or potential water supply, but not in relation to an existing or potentially hazardous condition, it is not a bar to environmental approval. However, the Lender must notify HUD if there is any current or intended placement of a monitoring or testing well on the site.

a.f. Non-operating Wells: Non-operating wells are not a barrier to environmental approval, but must be capped over and closed out by pursuant to the appropriate LSTF authority.
4.7. **Off-site Contamination**: If the Phase I and/or Phase II ESA determines that the existence of off-site contamination presents a risk to the site or the residents of the project and the Borrower has no management control over the off-site locations of the contamination, the site is not acceptable unless such off-site contamination is subject to a RBCA or other accepted program meeting all of the requirements of Sections 7.3.CQ.3 and E7.3.Q.5.

4.8. **Escrow**: An escrow account must be set up and held by the Lender for the maintenance of any monitoring wells and engineering controls, such as caps or slurry walls, may warrant an escrow account to be established by the Lender at Initial Endorsement to offset the cost of any ongoing maintenance. See Section 7.6.A.4 (Underwriting) for further discussion.

4.9. **Waivers**: If ORCF intends to waive any of the requirements in this Section 7.3.Q (Site Contamination Analysis) that are not regulatory in nature, the advice of the Housing Environmental Clearance Officer shall or the applicable REO/FEO in whose district the project is located, will be obtained before the waiver is granted to ensure that such waiver is in compliance with the environmental requirements of 24 CFR 50.3(i).

4.10. **LSTF Approvals and Reviews**: Any approvals by an LSTF authority must be given directly by that authority and may not be given by a third party approved by that authority to act in lieu of the authority itself. Approvals by local authorities are only acceptable when such authority is acting under delegation from the State.

11. **Superfund Sites**: Consultation with the REO/FEO for projects that are located on or adjacent to a designated Superfund Site is strongly encouraged.

A site located on an existing or proposed Superfund site requires consultation with EPA. In addition, sites adjacent or proximate to a Superfund site may require consultation with EPA to confirm that the contamination will not impact the HUD site.

a. **Superfund National Priority List (NPL) Sites**: The first step is to determine the extent to which EPA has completed a site characterization at the NPL site.

i. In some cases EPA has conducted a remedial investigation or other characterization work that allows for an assessment of the area that includes the property of HUD interest, and EPA’s site characterization work may be so detailed and thorough that it can substitute for HUD requirements regarding an ASTM Phase II and/or a site characterization report. HUD would make the determination on the adequacy of available information to substitute for HUD requirements in conjunction with EPA and relevant state regulatory agencies.

ii. In other cases EPA has conducted a remedial investigation or other characterization work at the site that shows the NPL site related contamination does not extend to the property that HUD may want to support. Examples include ground water at depth...
with no potential for vapor intrusion at levels of concern, or a very large site with uncontaminated areas within the boundary of the overall site.

iii Sometimes EPA has not yet completed a remedial investigation or other site characterization work for the area that includes the property of HUD interest. Generally, this will include sites that are newly listed to the NPL or very large sites. These sites generally undergo at least some characterization to ensure that there are no unacceptable risks that require immediate action.

iv Projects on existing or proposed NPL sites need written documentation from EPA (and sometimes also from the relevant LSTF authority) that the project is suitable for residential use. This written documentation can take four forms:

- Where EPA has deleted the site from the NPL and published a deletion notice in the Federal Register. Because a site could be deleted from the NPL for a planned nonresidential use, HUD must confirm that the site is suitable for residential use.

- Where EPA has issued a Site Wide Ready for Anticipated Use (SWRAU) status for the site. This indicates that the entire site is safe for the intended use and institutional and engineering controls are in place. Because a site could achieve SWRAU status for a planned nonresidential use, HUD must confirm that the SWRAU is for residential use.

- Where EPA has issued a Ready for Reuse (RfR) Determination for the site. The RfR determination can apply to all of the site or to a part of the site where clean up or EC/IC has been implemented. HUD must consult with EPA to determine if the RfR determination applies to the proposed project site and that cleanup is to residential standards.

- Where a site has not yet reached SWRAU or RfR status. In this case, HUD will need written documentation from EPA that an NPL site is suitable for residential use.

b. **Superfund Sites Not on the NPL:** Superfund sites that are not on the NPL will only be acceptable if the site is cleaned up to residential levels and HUD receives written documentation from EPA that the site is suitable for residential use.

c. **EC/IC Put in Place by EPA:** HUD must incorporate any EC/IC put in place by EPA into its environmental conditions and subsequent program commitments. HUD may impose additional ICs to ensure long term safety at the site. HUD must conduct its own due diligence at Superfund sites and may determine that the property is unacceptable for FHA mortgage insurance or other HUD assistance.

4-12. **Unacceptable Sites:** A site over a former solid waste landfill/dump and/or Superfund (National Priorities List (NPL)) site generally is not acceptable for development unless the hazardous substances, petroleum, and petroleum products are completely removed, the
site is delisted, or for an NPL site only, the Federal Agency or remediated to restricted residential standards and the LSTF with management authority over the site gives approval of the site for residential usage.

R. Sole Source Aquifers:

1. Some aquifers are drinking water systems that may be impacted by development. The Safe Drinking Water Act of 1974 requires protection of drinking water systems that are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.

2. New construction and Environmental Assessment level rehabilitation projects located within the boundaries of a sole source aquifer or the recharge area of a designated sole source aquifer must be reviewed by EPA for the potential to contaminate the sole source aquifer.

3. Additional information about sole source aquifers, including a national map of sole source aquifer locations, can be found at on the HUD Exchange website which can be accessed from the ORCF Environmental Resource page.

4. Some HUD regions have established MOUs or other agreements for HUD projects which can be found at on the HUD Exchange website which can be accessed from the ORCF Environmental Resource page.

S. Wetlands Protection (24 CFR 50.4(b)(3)):

1. Applications for mortgage insurance are subject to regulations regarding wetlands at 24 CFR Part 55 which implement Executive Order (EO) 11990 “Protection of Wetlands”. EO 11990 prohibits the development or disturbance of wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to the wetland. Proposals impacting wetlands must be reviewed by HUD under the 8 step process in Part 55 to determine consistency with requirements of EO 11990.

2. The process for identifying wetlands is set out in Part 55. The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. This definition includes both wetlands subject to and those not subject to section 404 of the Clean Water Act (i.e. jurisdictional and non-jurisdictional wetlands). Manmade retention/detention ponds are not considered wetlands unless they have the characteristics of a wetland as noted above.

3. Lenders shall use the Fish and Wildlife Service’s National Wetlands Inventory (NWI) as a primary screening tool and must also identify observed or known wetlands not
indicated on NWI maps. HUD must consider onsite and off-site impacts that result in draining, impounding, or destroying wetlands.

4. If an NWI map indicates the presence of wetlands, FWS staff, if available, must find that no wetland is present in order for the action to proceed without further processing. Where FWS staff is unavailable to resolve any NWI map ambiguity or controversy, an appropriate wetlands professional must find that no wetland is present in order for an action to proceed without further processing.

5. Projects that develop or disturb onsite or offsite wetlands (also known as new construction in a wetland) will be considered only after HUD conducts an eight-step decision-making process as described in 24 CFR 55.20 and includes consultation, issuing two public notices and taking public comment. Developing or disturbing onsite or offsite wetlands includes draining, dredging, channelizing, filling, diking, impounding and related activities. See 24 CFR 55.2(b)(8) for the definition of new construction in a wetland.

6. Wetlands under local or state jurisdiction are subject to state or local review as appropriate. However, compliance with state or local requirements is not a substitute for the 8-step process.

7. Use of individual permits under section 404 of the Clean Water Act:
   The first five steps of the 8-step process are not required if,
   a. The project involves new construction in a wetland on a property located outside the 100-year floodplain and 500-year floodplain,
   b. The applicant has submitted, with its application to HUD, an individual Section 404 permit (including approval conditions) issued by the U.S. Army Corps of Engineers, or by a State or Tribal government under Section 404(h) of the Clean Water Act for the proposed project, and
   c. All wetlands adversely affected by the project are covered by the permit (see 24 CFR 55.28).

   Note: Processing under all of §55.20 is required for new construction in wetlands that are not subject to section 404 of the Clean Water Act and for new construction for which the USACE (or a State or Tribal government under section 404(h) of the Clean Water Act) issues a general permit under Section 404.

   The Lender must provide extensive data to aid HUD in evaluating wetland impacts. The Lender should consult early with HUD when a site could potentially impact a wetland.

8. a. HUD may require that the Lender submit a wetlands delineation performed by a qualified professional to evaluate the direct and/or indirect wetland impacts of the project.
b. Appropriate and practicable compensatory mitigation is recommended for unavoidable adverse impacts to more than one acre of wetlands. Compensatory mitigation is defined at 24 CFR 55.2(b)(2) and includes but is not limited to: permittee-responsible mitigation, mitigation banking, in-lieu fee mitigation, the use of preservation easements or protective covenants, and any form of mitigation promoted by state or Federal agencies.

c. The 8-step process shall consider three alternatives: the action as proposed, modifications within the site controlled by the applicant, or no action, i.e., rejection of the application.

9. When wetlands exist at a project site, HUD will require assurance from the Borrower that no activities that may impact a wetland will be undertaken during the term of the insured mortgage without prior approval from HUD. This assurance is required when future activities at the project site could impact on-site, adjacent and/or other off-site wetlands. To ensure that any work during the term of the insured mortgage that could impact a wetland will undergo the applicable reviews and approvals before the work begins, the below statement is to appear in official project documents as determined by ORCF, such as a rider to the Borrower Regulatory Agreement or in accordance with current ORCF requirements. This restriction will end with the termination of the insured mortgage:

WETLANDS RESTRICTION. While any mortgage insured by HUD is in effect, Borrower shall not perform construction activities on the Mortgaged Property that impact any area that qualifies as a wetland by the U.S. Army Corps of Engineers 1989 delineation procedures or the U.S. Fish and Wildlife Service "Classification of Wetlands and Deepwater Habitats of the United States" without first obtaining the consent of HUD and any applicable federal, state, or local permits. Please note that this definition includes wetlands that are not defined as jurisdictional under Section 404 of the Clean Water Act and is to be interpreted consistent with 24 CFR Part 55.

T. Wild & Scenic Rivers:

1. The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic, and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS).

2. For new construction and rehabilitation, HUD must consider whether projects in proximity to a wild and scenic river could impact the designated river segment or be inconsistent with the management and land use plan for the designated river area.

3. Additional information about the Wild and Scenic Rivers Act and compliance requirements can be found on the HUD Exchange website which can be accessed from the ORCF Environmental Resources page.
7.4 Additional Nuisances and Hazards

These requirements are applicable to all transaction types except those that are excluded from an environmental review (CENST), as discussed at Section 7.1.B.1 above.

A. Fall Hazards
B. Hydraulic Fracturing (Fracking) Activities
C. Local Requirements
D. Oil or Gas Wells, Sour Gas Wells, and Slush Pits
E. Overhead High Voltage Electric Transmission Lines
F. Pipeline Hazards
G. Railroad Vibration
H. Sinkhole/Mine Subsidence
I. Soil Fill
J. Water Quality
K. Zoning

A. Fall Hazards: HUD recognizes that certain free-standing structures may pose a hazard to properties and their occupants through structural failure or other causes. Fall hazards considered under this part include support structures for high voltage transmission lines, free-standing radio/TV/cell towers, wind turbines, and other like free-standing structures. Exclusions from this definition include items affixed to the building (such as a radio/TV antenna, satellite dishes, cellphone towers, and similar features), unless specifically identified as a hazard during the review. Additional exclusions include local service electric lines and poles.

1. For all projects located within the vicinity of a fall hazard, the fall zone of the free-standing structure must be determined.
   a. For initial analysis, the fall distance may be equal to the height of the tower.
   b. If any of the property’s buildings, ancillary facilities or common areas are located within the initial fall zone based on the height of the tower, the Lender must submit an engineering report to evaluate the engineered fall distance of the structure. The engineered fall distance must be calculated by a registered professional engineer.
   c. For monopoles with no seams, welds, connections or weak points where a sustained load could cause failure to the pole length, HUD will accept certifications by a licensed structural engineer that the monopole and base are in good condition and comply with all structural requirements in lieu of a specified fall distance.

2. No structures, ancillary facilities or common areas may be constructed or located within the fall zone.
   a. For existing healthcare facilities that do not increase residential density that are within the fall zone, the Lender may submit a report from a registered professional engineer that includes the condition of the tower, the tower specifications, the date of
the last tower maintenance, pictures of the tower including the foundation, an
assessment of the hazard to the HUD project, and a discussion of any mitigation
measures that could minimize this risk. HUD staff will determine whether to grant
an exception to the prohibition on being within the engineered fall distance.

3. If the fall zone does not include any buildings, ancillary facilities, structures, or common
areas, document this in the environmental review in HEROS.

B. Hydraulic Fracturing (Fracking) Activities:

1. No residential structure may be within 300 feet of the boundary of an existing or
planned fracking well pad.

2. If fracking well pads are greater than 300 feet but within 1000 feet of a project,
HUD requires a hazard analysis from a qualified party such as a geologist or a
geotechnical engineer evidencing that lateral fracking would not negatively affect
soil stability, cause petroleum releases, or create other risks to the HUD property
and/or residents. etc. The analysis should include information about extraction
wells and other fracking operations within 1000 feet of the project site and an
assessment of risks from these operations. The report should include information
regarding the status of each horizontal well and future plans for new drilling at or
adjacent to the site.

a. ORCF requirements related to pressurized pipelines that are above 200 psi
(see Section 7.4.F.1) apply to fracturing operations.

b. If issues are identified, HUD requires mitigation to address the issues and
may reject the project if no mitigation is possible.

C. Local Requirements: HUD may adopt additional requirements to address unique local
concerns in specific geographic areas, but if any local requirement is mandated, ORCF must
inform the Housing Program Environmental Clearance Officer of the requirement.

D. Oil or Gas Wells, Sour Gas Wells, and Slush Pits:

1. Operating or planned drilling site: No residential structures may be within 300 feet from
the boundary of the drilling site.

2. Operating well: No residential structures may be within 75 feet of an operating well
unless the following mitigating measures are taken:
   a. Maintenance of nuisance controls,
   b. Controls of noise levels caused by pumping, and
   c. Spill controls to reduce risk of contamination.

3. Abandoned well:
   a. Confirmation by the State government that the well is safely and permanently
abandoned. No residential structures may be located within 10 feet of an abandoned well.

b. If there is no confirmation letter, no residential structures may be within 300 feet of an abandoned well.

4. Sour gas (hydrogen sulfide bi-product) wells: Separation distance must be determined by a petroleum engineer, with concurrence by State government.

5. Slush pits (used for drilling mud mixes for well lubrication):
   a. If located on-site, a hazards analysis is required to be performed pursuant to Section 7.3.Q, Site Contamination. Mitigation activities must include, and are not limited to, removal of all drilling mud from the site and backfilling with clean compacted material.
   b. If offsite, an analysis must be performed pursuant to Section 7.3.Q regarding offsite hazards.

E. Overhead High Voltage Electric Transmission Lines: No structure shall be located within the easement of any overhead high voltage transmission line. A high voltage transmission line is a power line that carries high voltage between a generating plant and a substation. High voltage lines do not include local distribution and service lines.

F. Pipeline Hazards:
   1. All parts of any structure must be at least 10 feet from the outer boundary of the easement for any high pressure pipeline transferring flammable or combustible liquids or gases that exceed 200 psi operating pressure. This does not apply to distribution lines supplying only the facility itself.

   a. The analysis must identify all buried and aboveground high pressure pipelines within a one (1) mile radius of the property. HUD’s primary reference for the one-mile radius assessment is the National Pipeline Mapping System (NPMS) Pipeline Information Management and Mapping Application (PIMMA). Preparers must evaluate all pipelines within the search area that are identified in the NPMS (public viewer) in the pipeline analysis. While other data sources may be helpful and are welcome, preparers are not required to analyze lines not identified in the NPMS, except as noted in Section 7.4.F.4 below for fracking operations. A link to the PIMMA mapping tool is available on the ORCF Environmental Resource Page.

   b. When the PIMMA tool identifies a high pressure pipeline within the one mile radius, an analysis is required to determine if the pipeline poses a safety hazard
that requires mitigation. For assistance with this analysis, the reviewer should contact the HUD Field or Regional environmental officer for the location where the pipeline is being assessed. A link to the contact information for HUD Environmental Officers by Region/State is available on the ORCF Environmental Resources Page.

3. If a pipeline poses a safety hazard, HUD requires mitigation to address the issues and may reject the project if no mitigation is possible. Mitigation can include modifying the building design using heat retardant and high tensile strength materials; rearranging the site plan and exterior building shapes; or constructing a barrier designed by a licensed professional structural or civil engineer.

4. For projects near fracking sites, the requirement at 7.4.B.2 to analyze hazards from fracking operations within 1000 feet of the property includes pipelines that are above 200 psi. Section 7.4.F.1 above applies to these pipelines. Such pipelines may not be shown on the NPMS map but may be identified through the agency that regulates the oil and gas industry in the jurisdiction (in Texas, for example, The Railroad Commission of Texas may provide the applicable data).

G. Railroad Vibration:

Buildings closer than 100 feet to a railroad track are often subject to excessive vibration transmitted through the ground. New construction at such sites is discouraged. For existing properties, the structure must be examined for damage caused by vibrations. A railroad vibration study may be required.

H. Sinkhole/Mine Subsidence:

Sinkhole/Mine Subsidence insurance is required for properties in areas prone to these geological phenomena; see Production, Chapter 14.7.F.

I. Soil Fill:

If any part of a site appears to be developed on filled ground, HUD may require that all grading be properly controlled to prevent differential earth movement, sliding, erosion, and/or other occurrences which might damage dwellings, streets or other improvements. Excessive slopes, soil compatibility, and potential for erosion are important site planning factors that impact the cost of development and the ultimate success of the project.

J. Water Quality:

Documentation confirming that the facility’s potable water supply meets local, state, and federal safe drinking water standards must be included in the mortgage insurance application; or, in cases where the drinking water supply does not meet the

...
applicable safety standards, the mortgage insurance application must identify corrective measures. The implementation of corrective measures must be completed and compliance with the applicable water quality standards must be confirmed prior to the loan closing.

1. **Public Water Supply:** The water service’s most recent Consumer Confidence Report (CCR) should be included in the application. The U.S. Environmental Protection Agency (EPA) requires every community water supplier to provide a CCR to its customers.

2. **Private Water Supply/Private Well:** When a private water supply is utilized for drinking water, the facility’s water supply must meet the requirements of the health authority with jurisdiction. If there are no local or state water quality standards, then the water quality must meet the EPA Primary Drinking Water Standards.

**K. Zoning:** If an existing property has a legal non-conforming use/structure, and the current zoning regulations will not allow the property to be rebuilt to the current density, then the owners are required to purchase Ordinance or Law insurance coverage with their property insurance; see Production, Chapter 14.5.B Ordinance or Law Coverage.

### 7.5 Environmental Assessment Factors

An Environmental Assessment (EA) level review requires compliance with NEPA in addition to the laws and authorities listed at Chapter 7.3 above and the additional Housing Specific requirements described in 7.3 and 7.4 above. When conducting an EA level of review, HUD will require and analyze information to determine if the project results in any significant impact and if an Environmental Impact Statement is needed.

The following are EA requirements that must be included in the HEROS submission:

**A. Purpose and Need:** HUD’s EA review requires a project justification that outlines the objectives of the environmental review. The purpose and need statement provides a framework for environmental decision-making.

**B. Existing Conditions and Trends:** HUD’s EA review must determine existing physical conditions of the project area and also describe the character, features and resources of the project area and its surrounding. This section should identify the trends that are likely to continue in the absence of the project.

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1 Additional details and examples of the EA requirements provided at [https://www.hudexchange.info/programs/environmental-review/housing/#faq](https://www.hudexchange.info/programs/environmental-review/housing/#faq). The HEROS Partner EA form also gives a good overview of EA requirements, which can be found at [https://files.hudexchange.info/resources/documents/Environmental-Assessment-Factors-and-Analysis-Partner-Worksheet.docx](https://files.hudexchange.info/resources/documents/Environmental-Assessment-Factors-and-Analysis-Partner-Worksheet.docx).
C. Effects Analysis: HUD’s EA review must consider any changes to the human environment that are reasonably foreseeable and have a reasonably close causal relationship to the HUD project. Consistent with 40 CFR 1508.1(g), HUD’s EAs must discuss both effects that occur at the same time and place as the proposed project and any effects that are farther removed in time or distance from the project area (e.g. potential changes to the land use and development patterns of the surrounding community). This analysis must include the full aggregated project site.

D. Alternatives: Projects must always consider the No Action alternative. HUD staff are considering an application for FHA at a particular site and therefore are limited to considering three alternatives: the action as proposed, modifications within the site controlled by the applicant, or no action, i.e., rejection of the application.

E. Environmental Assessment Factors: The EA must analyze the project’s impacts on land development, socioeconomic factors, community facilities and services, and natural features. The analysis will vary from project to project. For example, a project designed to house families will focus on access to schools, parks and recreation while a project designed to house seniors would instead focus on healthcare and social services. Some EA factors are listed below. For a full list with suggested resources, see footnotes in this section.

1. Conformance with comprehensive plans, zoning compatibility, site safety, energy consumption, and urban impact.
2. Availability of services like educational facilities, commercial facilities, health care and social services.
3. Availability of supporting infrastructure such as solid waste, wastewater, storm water, and access to municipal water supply, public safety (Police, Fire, and Emergency Medical Services), open space and recreation, cultural facilities, and transportation.

7.6 HUD and Lender Responsibilities in Cases Requiring Remediation

A. General Responsibilities

The Department assumes greater risk anytime that a Firm Commitment is issued on a contaminated site. The risk is even greater when a loan is closed on a site where complete removal of contamination is not possible, requiring monitoring possibly with continuous remediation techniques such as Monitored Natural Attenuation and Enhanced Passive Remediation (MNA/EPR). Therefore, HUD staff must exercise great care in the review process to assure that all reasonable measures are taken to mitigate HUD’s exposure and that an accurate determination is made of any remediation costs that are included in the FHA-insured mortgage. Any special site assessment reports, Phase II or Phase III ESAs should be reviewed so that the extent of the contamination is fully understood. Although the Lender is

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responsible for assuring that environmental remediation contractors are qualified and experienced, HUD staff must still review references and qualifications, and are strongly encouraged to consult with an Environmental Officer REO/FEO at the start of any remediation discussion.

Complete 1. In cases requiring remediation, the lender must provide the plan and the cost estimate from a qualified contractor who will perform the mitigation work.

B—2. Removal of Site Contamination Valuation

The HUD staff preparing the environmental review in HEROS—Form 4128 is generally responsible for reviewing and documenting the adequacy of the proposed remediation plan. Any estimates of value or rents should be made as if the project is unaffected by contamination and conditioned on successful removal. The appraisal must address any effect on marketability that may be present due to the prior environmental history.

If an environmental issue involves areas of special engineering expertise, environmental science, or State and local procedures, the HUD reviewer may request technical assistance from the Field Environmental Officer (REO or FEO) assigned in that jurisdiction, and defer to their guidance and judgment in the matter. HUD reviewers may also request the attention of HUD Regional Environmental Officers (REO) or the Program Environmental Clearance Officers and/or Specialists when unusual or controversial issues arise.

Underwriting: The ORCF Underwriter is responsible for determining if

Architecture/Engineering and Cost: Engineering staff or a Cost Analyst should review the cost estimate of the remediation plan to determine whether it is reasonable and if the remediation and removal contractor is appropriately bonded and qualified. The ORCF Underwriter may consult with HUD Architectural/Engineering and Cost staff, and with local environmental remediation professionals about costs for similar work. Cost data for remediation is not as plentiful as with more routine construction tasks. “Environmental Remediation Estimating Methods” might be helpful in some cases and is available through RS Means (Please see ORCF Environmental Resource Page located on the Section 232 Program website). HUD staff may consult with local environmental remediation professionals about costs for similar work.

4. Underwriting: The amount of escrow or bond ORCF Underwriter shall be based on the estimated cost to determine escrow, performance and bond payment requirements. The cost of the mitigation work based upon the estimated cost from the contractor—may be included in the insured loan.

The amount of escrow or bond should be for 150% of the total estimated cost, or in an escrow established for of the same amount mitigation work. Higher escrow or bonding
requirements will be necessary if HUD staff determines that there is a greater than average risk that unforeseen problems may arise, resulting in increased cost. This determination should be based on previous experience with similar work and/or research through local environmental remediation contractors about their experience in containing the cost within their stated estimate.

5. Account Executive: The Account Executive shall administer the escrow, performance, and bond payment requirements. The cash requirements for the escrow or bond, and the Lender and Account Executive’s procedures for administering the escrow, shall be in accordance with existing instructions in the Office of General Counsel’s Closing Guide.

B. Incomplete Removal of Site Contamination:

1. All disciplines should follow the guidance in Section 7.4.B6.A above regarding initial remediation costs.

2. A HUD Staff Appraiser must assure that the annual operating expenses concluded by the Contract Appraiser and the Lender includes the cost of any requirement for continuous monitoring and/or ongoing mitigation. It may be categorized as a maintenance expense, and would include fees charged by service providers who are engaged to perform monitoring. If an expense is for actual or anticipated replacement of a component such as a pump, it should be added to the Reserves for Replacement. The basis for the expense or additional replacement reserve will be obtained from a qualified engineer and/or contractor. The engineer/contractor’s estimate should be sufficiently detailed and supported to allow review by HUD staff.

Any effect on marketability, income or value related to the need for continuous monitoring/mitigation must be quantified and thoroughly discussed in the appraisal.

C. Management, Coordination and Communication:

The Department assumes greater risk in cases involving environmental mitigation that will occur after Initial Closing, especially when mortgage proceeds are used to fund the cost of remediation. Extra attention must be given to the need for frequent communication between technical disciplines, preferably with written documentation, relating to levels of contamination, cost estimates, and the certainty of the effectiveness of mitigation.

D. Insurance/Guarantee Requirements:

Borrowers are required to obtain separate insurance for environmental hazards from an insurer acceptable to HUD if remediation work will be done on the site during the insured loan period, if such coverage is available. The insurance typically covers liability and cost of completion.

The environmental remediation contractor will almost always be different from the project's general contractor. Aside from the contractor qualifications and bonding requirements...
addressed above, the remediation contractor must also provide HUD a separate guarantee of completion for their work.

### Environmental Information for the Lender Narrative

In addition to the reports and submission requirements discussed above, ORCF requires the Lender to provide a Lender Narrative with environmental issues discussed, along with any available supporting documentation for the project in the application submission. Supporting documentation may be included in the Phase I ESA report or it may be submitted separately within the application to HUD.

The following important environmental issues must be discussed in the Lender Narrative when applicable:

- **A.** Coastal Zone Management (24 CFR 50.4(c)(2))
- **B.** Coastal Barrier Resources (24 CFR 50.4(c)(1))
- **C.** Floodplain Management (24 CFR 50.4(b)(2))
- **D.** Historic Preservation (24 CFR 50.4(a))
- **E.** Noise Analysis (24 CFR Part 50.4(k))
- **F.** Explosive/Flammable Hazards (24 CFR 50.4(k))
- **G.** Airport Clear Zones (24 CFR 50.4(k))
- **H.** Wetlands Protection (24 CFR 50.4(b)(3))
- **I.** Toxic Chemicals and Radioactive Materials (24 CFR 50.3(i))
- **J.** Other Applicable Federal Laws
  - **a.** Endangered Species (24 CFR 50.4(e))
  - **b.** Sole Source Aquifers (24 CFR 50.4(d))
  - **c.** Farmlands Protection (24 CFR 50.4(j))
  - **d.** Flood Insurance (24 CFR 50.4(b)(1))
  - **e.** Environmental Justice (24 CFR 50.4(l))
- Additional Hazards and Nuisances (radon, pipelines, vibrations, fall hazards, etc.)

The existence of mold in a structure is not a topic that is covered during the environmental review. It is addressed in the Project Capital Needs Assessment (PCNA) as part of the building inspection. Lenders and ORCF underwriters will refer to the PCNA to determine if mold assessment and remediation is required.

The issues discussed below must be analyzed by HUD staff during their preparation of the environmental review in HEROS—Form HUD-4128 and provide guidance by which the Lender can assist HUD. These brief descriptions are not substitutes for the requirements in the statutes, regulations, Executive Orders, notices and handbooks.
I. Coastal Zone Management (24 CFR 50.4(c)(2)): Projects located within a state’s coastal management zone must be found consistent with the approved state Coastal Zone Management program. In many states, HUD will require a letter from the State Coastal Zone Management Agency confirming consistency with the approved program. Lenders should be aware of the extent of coastal management zones in coastal states and contact HUD early when examining a proposal in a coastal zone.

J. Coastal Barriers (24 CFR 50.4(c)(1)): Under the Coastal Barriers Resources Act cited in 24 CFR 50.4(c), HUD is prohibited from insuring a project located within designated coastal barriers of the Atlantic Ocean, Gulf of Mexico, or the Great Lakes, known as Coastal Barrier Resource System (CBRS) units, and shown on associated Fish and Wildlife Service maps. A project located within a CBRS unit, or that includes a facility (such as a water main) to a CBRS unit, will not be eligible for application processing.

K. Floodplain Management (24 CFR 50.4(b)(2)):

1. Applications for Firm Commitment for mortgage insurance are subject to regulations regarding floodplain management found at 24 CFR Part 55 which implements Executive Order 11988 (Floodplain Management).

2. All Section 232 projects are considered “critical actions” as defined in 24 CFR 55.2(b)(3).

3. The Lender must utilize the Federal Emergency Management Agency’s best available data to comply with Floodplain Management requirements, which is the latest Advisory Base Flood Elevations (ABFEs), Preliminary Flood Insurance Rate Maps (P-FIRMs), or Flood Insurance Rate Maps (FIRMs). However, base flood elevations from an advisory or preliminary map may not be used if the elevations are lower than the elevations on the current FIRM used for ratemaking purposes. An online resource for finding the relevant FIRM and ABFE may be found on the ORCF Environmental Resource Page located on the Section 232 Program website. If any part of the site or integral offsite development is located within the 500-year floodplain (0.2% chance of annual flood) according to the best available data, the project must comply with HUD’s floodplain management regulations. Note: the 500-year floodplain includes the 100-year floodplain (1% chance or greater chance of flood in any given year, known as the Special Flood Hazard area). The project will need to comply with current standards in 24 CFR part 55 if they are more restrictive than this handbook. Visit the ORCF Environmental Resource Page for the latest guidance.

4. Mortgage insurance shall not be approved for a property located in (a) a floodway, (b) a coastal high hazard area, or (c) a FEMA identified Special Flood Hazard Area (SFHA) in which the community has been suspended from or does not participate in the National Flood Insurance Program. The terms “coastal high hazard area”, “floodway”, and “functionally dependent use” are defined in 24 CFR 55.2.
a. Exceptions: 24 CFR 55.12 lists categories of proposed actions to which the floodplain management requirements in 24 CFR 55 are not applicable. As such, the floodway and coastal high hazard area prohibitions do not apply to Section 232 projects if only an incidental portion of the project site is in the 100-year or 500-year floodplain, and the following conditions are met:

All construction (including existing improvements) or landscaping activities (except for minor grubbing, clearing of debris, pruning, sodding, seeding, etc.) must not occupy or modify the relevant floodplain. Due to the constraint that activities must “not occupy or modify” the floodplain, the 100-year or 500-year floodplain cannot be utilized in the development or support of any project activity, except as passive open or green space. Open space is a portion of a development site that is permanently set aside for public or private use and will not be developed. Green space is considered to be undeveloped land or land restored to its natural state.

ii. Appropriate provision is made for site drainage; and

c. In accordance with 24 CFR 55.12(c)(7)(iii), a protective covenant or comparable restriction must be placed on the property’s continued use to preserve the 100-year or 500-year floodplain. The covenant or comparable restriction must run with the land to provide for permanent preservation of the floodplain, and must not be dependent on the mortgage instrument.

5. If a stream coursing through a proposed site is designated as being in the 100-year floodplain according to FEMA’s best available data, but there is no designated floodway area (a so-called “regulatory floodway”), development will be prohibited in the channel of the stream.

6. HUD strongly discourages new construction projects in mapped 100-year floodplains. This flood buffer zone is extended to the 500-year floodplain for Section 232 projects. Section 232 project sites for new construction, and for rehabilitation activities not meeting the criteria at 24 CFR 55.12(a)(3), which are in the 100-year or 500-year floodplain according to the FEMA Flood Insurance Rate Map, Advisory Base Flood Elevation Map, Preliminary FIRM, or any of their official FEMA digitized equivalents, will not be considered for mortgage insurance unless one of the following steps is taken:

A Conditional Letter of Map Amendment (CLOMA) or Conditional Letter of Map Revision (CLOMR) removing the entire site from the floodplain (100-year and 500-year) has been obtained from FEMA prior to the initial submission or, in the absence of an initial submission, prior to submission of the application for Firm Commitment. In cases where the applicant has a CLOMA or CLOMR, HUD approval for a Firm Commitment will be conditioned on the Borrower: (1) meeting the requirements of the CLOMA or CLOMR; (2) obtaining a Final Letter of Map Amendment (FLOMA) or Final Letter of Map Revision (FLORMR) removing the entire site from the applicable floodplain prior to final endorsement; and (3) maintaining flood insurance on any building in the 100-year floodplain during the construction period until the FLOMA or FLOMR is issued; or

b. If Section 7.5.C.6.a does not apply, HUD must determine if there may
be extraordinary circumstances leading to the conclusion that there are no practicable alternatives to the project site being in the floodplain. In order to make this determination, HUD must conduct an 8-step decision making process that includes publishing two public notices and taking comments, as summarized in 24 CFR 55.20. In such instances, prior to issuing the first public notice, HUD will need detailed information regarding how the property will be altered and the improvements designed. This information includes the elevation of the property, the elevation of the floodplain, and the location of life support systems.

Except in circumstances where it would not be practicable, in order to minimize adverse impacts, the 8-step process shall require as a condition of any project approval that a CLOMA or CLOMR be issued prior to initial closing, and a FLOMA or FLOMR be issued prior to final closing.

The 8-step process shall require that new construction in a floodplain be elevated to the 100-year floodplain according to FEMA’s best available data. If higher elevations are required by locally adopted code or standards, those higher standards would apply. The 8-step process shall also require that any new construction in Coastal A zones must utilize Zone VE construction practices in accordance with the FEMA Coastal Construction Manual, as recommended by FEMA. Information on those construction practices can be found on the ORCF Environmental Resource Page.

The 8-step process shall be completed before issuance of the Firm Commitment. HUD must develop the two notices but the costs of publication will be borne by the Borrower. HUD approval for a Firm Commitment will be conditioned on the Borrower maintaining flood insurance on any building located in the 100-year floodplain until the issuance of the FLOMA or FLOMR.

7. As required by 24 CFR 55.20(e), all critical actions in the 100-year or 500-year floodplain shall be designed and built at or above the 100-year floodplain (in the case of new construction) according to FEMA’s best available data or as otherwise required by current standards in 24 CFR part 55, and modified to include:
   a. Preparation of and participation in an early warning system;
   b. An emergency evacuation and relocation plan;
   c. Identification of evacuation route(s) out of the 500-year floodplain; and
   d. Identification marks of past or estimated flood levels on all structures.

   a. Projects that are converting from a non-residential use to a residential use are considered the same as “new construction” for floodplain management
purposes.

9. For Section 223(f) purchase or refinancing actions described in 24 CFR 55.12(a)(2), or repair, rehabilitation, modernization, weatherization or improvement actions described in 24 CFR 55.12(a)(3), an abbreviated decision-making process pursuant to 24 CFR 55.12(a) may be used by HUD to determine their acceptability. The Department will evaluate risks and mitigation measures in making its decision but it discourages these actions if either the lowest floor, or the life support facilities, or egress and ingress of the existing building, are below the 100-year floodplain line.

10. Where a site does not appear to be located in the floodplain on official FEMA maps, but shows evidence of flooding, HUD is not precluded from qualitatively evaluating the acceptability of the site. Lenders will be required to provide extensive data to aid HUD in evaluating floodplain sites.

11. At the time of the application for Firm Commitment, the Lender must submit a completed Standard Flood Hazard Determination Form (FEMA Form 086-0-32).

12. Any building accepted for mortgage insurance that is located within a FEMA mapped 100-year floodplain is required to carry flood insurance. General flood insurance requirements as well as required insurance coverage amounts are set forth in Production, Chapter 14.7.H. When the facility’s contents such as major movables are part of the mortgage security, the maximum available coverage amount consists of the total available for both the building and contents. Whenever flood insurance is required for a project, proof that the Borrower has a commitment for flood insurance effective as of the loan closing must be submitted with the mortgage insurance application.

13. All new and renewal leases must contain acknowledgements signed by the residents indicating that they have been advised that the property is in a floodplain and flood insurance is available for their personal property. This applies to all Section 232 properties within the 100-year and 500-year floodplains.

14. Section 232/223(a)(7) and FHA-insured Section 232/223(f) refinances:
Pursuant to 24 CFR 50.19(b) (21), refinances of currently FHA-insured mortgages are exempt from the 8-step decision making process when the refinance will not result in any physical impacts or changes except for routine maintenance. Guidance for clarifying the difference between routine maintenance and repair is available on the ORCF Environmental Resource Page. All other requirements discussed in this section are being extended by HUD to such §50.19 Categorical Exclusions. In particular, the following are required for all Section 232 applications when the project is located in a 100-year or 500-year floodplain.
a. Preparation of and participation in an early warning system;

b. An emergency evacuation and relocation plan;

c. Identification of evacuation route(s) out of the 500-year floodplain; and

d. Identification marks of past or estimated flood levels on all structures.

15. In considering the safety of residents, offsite floodways and other flood hazards will be evaluated in terms of separation distance, elevation differences, and the nature of the hazard in question. Unacceptable proximity to hazards may result in rejection of the application. Pre-submission guidance can be requested through LEANThinking@hud.gov.

L. Flood Insurance: In accordance with 24 CFR 50.4(b)(1), and as described in Section 7.5.C.12 above, flood insurance is required when any portion of a structure is located in a 100-year floodplain.

K. Historic Preservation (24 CFR 50.4(a)):

HUD must follow the procedures implementing the National Historic Preservation Act (54 U.S.C. § 300101 et seq.) with regulations found at 36 CFR Part 800. Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. All applications for Firm Commitment for HUD mortgage insurance, whether new construction, rehabilitation, refinancing or conversion from non-residential to residential property, except those categorically excluded under 24 CFR 50.19(b)(21), are considered “federal undertakings” that require HUD to make a determination of no historic properties affected, no adverse effect, or adverse effect upon historic properties. A historic property means any prehistoric or historic district, site, building, structure, object, or traditional cultural property or landscape included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior.

1. Defining the Area of Potential Effects (APE): HUD must consider the Area of Potential Effects (APE). Establishing a project’s APE is part of a “reasonable and good faith effort” to identify historic properties that may be affected by the project.

The APE defines where to look for historic properties, based on where direct and indirect impacts of the project are anticipated. Sometimes the APE is simply the project parcel, and other times, it is a larger area, neighborhood, or historic district. The APE should be based on project activities, without regard to whether there actually are historic properties in the area. Identification of historic properties in the APE comes later. Establishing the APE requires consideration of the effects a project might have on and beyond its site. The effects of an interior rehabilitation project will likely be limited to the building footprint itself. The APE for a simple exterior rehabilitation would likely be the property parcel, including the building and its immediate setting. Substantial earthmoving on a site may indicate the need for a vertical dimension to the APE. Direct effects may also occur outside a project site. A new construction project might have new roads and utility lines leading to the site and they might be included within the APE. In major infrastructure projects that require
large amounts of fill, the source of the fill ("borrow area") may be included in the APE. Determination of the APE also needs to take into account possible indirect effects that might negatively alter the character or use of adjacent properties. For example, the review should consider whether the project will significantly increase traffic or change traffic patterns in the vicinity of the project, whether the project will introduce excessive light or noise in the area, and whether the project will have visual ramifications on the surrounding area through its relatively massive scale or height. If potential effects extend beyond the project site, the Section 106 documentation should delineate the larger APE on a map.

2. After the APE is defined, and historic properties within it are identified, the potential impacts to those historic properties may be evaluated. Because of the technical nature of historic property identification, evaluation and treatment, it may be appropriate to retain a qualified historic preservation professional to prepare the findings. Such consultant should meet the Secretary of the Interior’s Professional Qualifications (36 CFR Part 61) and have experience in Section 106 reviews.

3. The Section 106 review must be completed before HUD approves and/or commits funds to a project.

4. All Section 232 new construction and substantial rehabilitation projects, and all non-excepted Section 232/223(f), 223(a)(7) and 241(a) applications require consultation with the State Historic Preservation Officer (SHPO) and with any applicable Tribal Historic Preservation Officer (THPO) and affected tribes.

Exceptions:

i. Projects that will not involve new construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance, have “no potential to cause effects” to historic properties, as described in 36 CFR 800.3(a)(1), and therefore HUD has no further obligations under Section 106 of the NHPA or 36 CFR Part 800. For such transactions there is no obligation to contact the SHPO or THPO/affect tribes, and HUD staff’s historic preservation responsibilities are limited to documenting this determination in HEROS Form HUD 4128). Guidance for clarifying the difference between routine maintenance (Please reference HUD Notice CPD-16-02 “Guidance for Categorizing an Activity as Maintenance for Compliance with HUD Environmental Regulations, 24 CFR Parts 50 and 58” or succeeding guidance. Note that this definition of maintenance is specifically for environmental review purposes and applies to all HUD programs.) and a repair is available on the ORCF Environmental Resource Page.

ii. Some states may have a Programmatic Agreement (PA) with HUD and the proposal may be part of a class of actions that do not require Section 106 consultation under the MOA or PA.

5. To assist HUD in making its historic preservation determination, the Borrower or Lender may submit a letter to the appropriate State Historic Preservation Officer.
(SHPO). Doing so may greatly expedite the Section 106 consultation process. The letter must consist of a narrative explaining the proposal, and should follow the procedures outlined by the individual state. The letter also should include a map identifying the site location, the APE, and an opinion as to whether the proposal would have any effect on historic properties. The letter to the SHPO, and the SHPO response, if any, must be included in the application submission. Lenders may obtain from HUD a sample letter as well as the name and address of the SHPO who has the right to comment on the proposal. If a response from the SHPO is not received within 30 days, the lender must alert HUD of this fact in their application. Some SHPOS will only respond to federal agencies. Note: HUD, not the Lender, is responsible for contacting the THPO and any affected tribes. The information contained in the letter that was submitted to the SHPO as described above will assist HUD in carrying out its tribal and THPO consultations.

6. The request from the Borrower or Lender to the SHPO should be made as early as possible in the application process. The response from the SHPO need not be received by HUD prior to the application submission, but must be received by HUD before a Firm Commitment is issued. Additional guidance on historic consultation is available on the ORCF Environmental Resource Page.

7. The SHPO/THPO is allowed 30 days from the receipt of sufficient information to reply to requests for consultation. If there is no reply within that time, and if there is no reason to anticipate an objection to the proposal, HUD may make a determination of no effect, and a Firm Commitment may be issued. Where an undertaking (such as HUD mortgage insurance) affects a historic property or historic district, the result of the consultation may be design change, research and preservation, salvage, or in rare cases, rejection of the application for Firm Commitment. Consultation for these procedures may take considerable time before a Firm Commitment can be issued. Note that a review of published historic listings does not provide a conclusive determination of a property’s historic significance. The Section 106 review gives equal consideration to properties that have already been included on the National Register as well as those that have not been so included, but that meet the National Register criteria. A project whose historic significance is not initially apparent may still affect a historic property. While age and integrity are considerations for historic listing eligibility, additional criteria include significance in American history, architecture, archeology, engineering, and culture, which can apply to more modern properties. Therefore, SHPO consultation is required for all transactions other than the exceptions listed at Section 7.5.D.3.a above.

0.1. Tribal Consultation:

a. When Section 106 consultation is required, consultation with federally recognized Indian tribes and Native Hawaiian Organizations may be required as part of the Section 106 process. Not all projects that require Section 106 review require consultation with Indian tribes. Consultation with federally recognized tribes is only required when a project includes activities that have the potential to affect historic
properties of religious and cultural significance to tribes. These types of activities include:

- ground disturbance (digging),
- new construction in undeveloped natural areas,
- introduction of incongruent visual, audible, or atmospheric changes,
- work on a building or structure with significant tribal association, or
- transfer, lease or sale of historic properties of religious and cultural significance.

Further guidance may be found in HUD’s Notice on Tribal Consultation can be found on the ORCF Environmental Resource Page.

When tribal consultation is required, the HUD reviewer will utilize the HUD Tribal Directory Assessment Tool (TDAT) (see the ORCR Environmental Resource Page) during the environmental review process to determine if the site is located in an area of tribal significance. The tribal consultation requirement applies to properties off tribal lands as well as on tribal lands. Properties with religious and cultural significance to native people may include ancestral archaeological sites and natural areas where traditional practices or ceremonies have been carried out as well as more familiar historic properties. Some traditionally used places have very strong religious associations, and it may be difficult or even inappropriate for native people to talk about their significance. If this situation arises, hiring a qualified professional with experience in tribal consultation may be required. The cost of such an interpreter shall be paid by the Borrower.

Pursuant to the “anticipatory demolition” requirements of Section 110(k) of the National Historic Preservation Act (54 U.S.C. 306113), even before the concept meeting or application submission takes place, any action by a potential lender or borrower, or any action by another party that the lender or borrower has the legal power to prevent, that is taken with the intent to circumvent Section 106 review and that significantly adversely affects a historic property, could result in rejection of an application.

The Section 106 review must be completed before HUD approves and/or commits funds to a project. Additional guidance on historic consultation is available on the ORCF Environmental Resource Page.

N. Noise (24 CFR 50.4(k)):

New Construction/Conversion Projects: HUD standards regarding the acceptability of noise impacts on residential property are found at 24 CFR Part 51, Subpart B., which standards must be met for new construction and conversion from nonresidential to residential projects. Where a project is within the criteria on distance from noise generators, a noise analysis utilizing the methodology in the most current version of HUD’s Noise Guidebook will be performed as part of HUD’s environmental assessment. HUD’s automated Day/Night Noise Level electronic assessment tool is available on the ORCF Environmental Resource Page.

a. Standards: The degree of acceptability of the noise environment at a site is determined by the sound levels external to buildings or other facilities.
containing noise sensitive uses. The standards shall usually apply at a location 2 meters (6.5 feet) from the building housing noise sensitive activities, in the direction of the predominant noise source. Where the building location is undetermined, the standards shall apply 2 meters (6.5 feet) from the building setback line nearest to the predominant noise source. The standards shall also apply at other locations where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site.

i. Sites with a day-night average exterior noise level of 65 DNL (Day Night Level) and below are acceptable.

ii. HUD assistance for the construction of new noise sensitive uses is discouraged for projects with normally unacceptable noise exposure (above 65 DNL but not exceeding 75 DNL) and is prohibited generally for projects with unacceptable noise exposures above 75 DNL.

iii. New construction or conversions of existing structures to residential housing in the Unacceptable Noise Zone, where outdoor noise levels are above 75 dB, are generally prohibited. If the Regional Office wants to consider such a proposal, it must:

- Prepare an Environmental Impact Statement (EIS). If ORCF believes that the proposal is acceptable based on the EIS, it must then obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary for Community Planning and Development but must also obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary.

- If ORCF determines that noise is the only environmental issue and no outdoor noise sensitive activity that is not mitigated to below HUD’s 65 decibel standard will take place on the site, it may request a waiver of the EIS Requirement by the Assistant Secretary for Community Planning and Development but must also obtain project approval, including approval of noise mitigation measures, from the Assistant Secretary.

a. Projections of Noise Exposure: In addition to assessing existing exposure, future conditions should be projected. To the extent possible, noise exposure shall be projected to be representative of conditions that are expected to exist at a time at least 10 years beyond the project application date.

a. HUD should be consulted prior to designing mitigation measures.

2. Existing and Rehabilitation Projects: For rehabilitation and refinancing, noise exposure will be considered as a marketability factor. For rehabilitation projects, HUD will encourage appropriate noise attenuation measures for inclusion in the alterations.

A. Railroad Vibration, Noise, and Location:

1. Buildings closer than 100 feet to a railroad track are often subject to excessive vibration transmitted through the ground. New construction at such sites is
For existing properties, the structure should be examined for damage caused by vibrations. A railroad vibration study may be required.

For new construction applications, a noise study for the railroad should be projected out 10 years to cover increased usage of the railway tracks.

e.a. A rail line may not bisect a property, nor should a rail line’s right-of-way generally encroach upon the site. Whenever rail lines are less than 100 feet from a facility, approval should be obtained prior to the application submission.

d. Railyards (areas of multiple track sections used for assembling and disassembling trains) have been determined to create loud, impulsive sounds. Projects adjacent or with a direct line of sight to railyards must add 8 decibels to the noise exposure.

A. Explosive/Flammable Hazards (24 CFR 50.4(k)): HUD will not insure a property where structures and residents will be exposed to unacceptable risks posed by proximity to explosive or flammable hazards.

1. For new construction projects, rehabilitation projects where residential density is increased, projects where there is a conversion from non-residential to residential use, or projects where a vacant building is made habitable:

   Aboveground storage facilities with explosive or flammable material contents must comply with the Acceptable Separation Distance (ASD) standards at 24 CFR Part 51 Subpart C. Analysis of sites near or in the vicinity of these types of facilities must be performed by HUD as part of the NEPA environmental assessment in accordance with the HUD guidebook: “Siting of HUD-Assisted Projects Near Hazardous Facilities (Form HUD-1060-CPD)”.

   b.a. If a plan is agreed upon with HUD before the issuance of a Firm Commitment, these hazards may be mitigated during the construction period, if the work can be done on the subject property. In cases where off-site mitigation is required, the remediation must be completed prior to initial closing.

2. A useful tool for calculating ASDs can be found on the ORCF Environmental Resource Page.

3. If a barrier will be constructed as hazard mitigation, HUD’s Barrier Design Guidance (Guidebook 6600.G) for flammable/explosive hazards mitigation is available on the ORCF Environmental Resource Page.

   As stated in the guidebook, only a licensed professional engineer (civil or structural) should design and oversee the construction of mitigation barriers.

For existing projects to be refinanced or purchased that do not involve an increase in residential density, HUD will substantively evaluate the risks associated with proximity to hazardous facilities. HUD reviews of existing projects will consider the potential danger presented by existing and proposed liquid fuel and gas storage tanks, and may require mitigation.
a. Whenever aboveground tanks (ASTs) exist on site, whether containing liquid fuel (over 100 gallons in size), or containing pressurized gas (stationary tanks of any size), a conformance letter from the governing Fire Department/District is required. The letter must specifically address the safety of the AST(s).

b. In cases where safety letters cannot be obtained for existing ASTs, where new ASTs are being added, or where off-site tanks are in close proximity to the existing subject building, an acceptable separation distance (ASD) calculation must be included in the application, and mitigation may be required.

P. A. Runway Clear Zone, Runway Protection Zones, Clear Zone, or Accident Potential Zone (24 CFR 50.4(k));

1. HUD standards regarding the acceptability of property located in Runway Clear Zones (also known as Runway Protection Zones), Clear Zones, and Accident Potential Zones are found at 24 CFR Part 51 Subpart D. An Accident Potential Zone is an area at a military airfield that is beyond the Clear Zone.

0.1. Construction or major rehabilitation of any property located within a Clear Zone is prohibited. Acquisition, refinance, and minor rehabilitation which do not extend the physical or economic life of projects within Clear Zones are allowed. HUD must determine that projects located in Accident Potential Zones are generally consistent with Department of Defense land use compatibility guidelines for Accident Potential Zones.

0.1. In acquisition transactions, HUD, as part of its environmental review for an existing property, shall advise the Lender, who will inform the Borrower purchasing the property, that the property is in a Runway Protection Zone or Clear Zone. Furthermore, it shall be explained that the implications of such a location are an increased likelihood of airplane crashes on the property and the possibility that the airport operator will acquire the parcel. The buyer must sign a statement acknowledging receipt of this information. HUD may reject applications for mortgage insurance on an existing property within a Runway Protection Zone or Clear Zone because of the possibility that the property may be acquired at a later date by the airport operator.

Q. Wetlands Protection (24 CFR 50.4(b)(3));

0.1. Applications for mortgage insurance for new construction as defined in Executive Order 11990 (Protection of Wetlands) are subject to regulations regarding wetlands in 24 CFR Part 55 that implement EO11990. EO 11990 prohibits the development or disturbance of wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to the wetland. Proposals impacting wetlands must be reviewed by HUD under the 8 step process in Part 55 to determine consistency with requirements of EO 11990.

The process for identifying wetlands is set out in Part 55. As primary screening, HUD
will verify whether the project area is located in proximity to wetlands identified on the National Wetlands Inventory maintained by the U.S. Fish and Wildlife Service (FWS); if so, HUD will attempt to consult with FWS. Construction projects that will result in new construction as defined in EO 11990 in a wetland will be considered only after HUD conducts an eight-step decision-making process, which is the same as the decision-making process used for floodplains and includes consultation, issuing two public notices and taking public comment. However, the first five steps are not required if the project involves new construction outside the 100-year floodplain or 500-year floodplain and the applicant has submitted with its application to HUD an individual Section 404 permit (including approval conditions) issued by the U.S. Army Corps of Engineers, or by a State or Tribal government under Section 404(h) of the Clean Water Act, and all wetlands adversely affected by the project are covered by the permit. Wetlands under local or state jurisdiction are subject to state or local review as appropriate. However, compliance with state or local requirements is not a substitute for the eight-step process.

3. **The Lender must provide extensive data to aid HUD in evaluating wetland impacts.**

5. **When on-site wetlands exist, HUD will require assurance from the Borrower that no activities that may impact a wetland will be undertaken without prior approval from HUD.**

R. **Other Applicable Federal Laws (24 CFR 50.4):**

1. **Endangered Species:** Under Section 7 of the Endangered Species Act, HUD must consult with the U.S. Fish and Wildlife Service (FWS) and/or, the National Marine Fisheries Service (NMFS), whenever a proposal may affect an endangered or threatened species or its habitat. A required consultation should be completed for any site within the critical habitat of a listed species, but consultation may also be required even if no critical habitat is. In areas where impacts on endangered or threatened species are a concern, all appropriate information and the results of research regarding possible impacts of the project should be included in the application submission. Lenders should not contact FWS or NMFS directly. Consultation under Section 7 may result in more stringent conservation measures than would otherwise be imposed.

2. **Sole Source Aquifers:** An aquifer is an underground body of water usually kept in place by rock, gravel, or sand. New construction and some rehabilitation projects located within the boundaries of the recharge area of a designated sole source aquifer must be reviewed by EPA for their potential to contaminate the sole source aquifer.

Farmlands Protection: If the site of a proposed new construction project has not been previously developed, the project must conform to the Farmland Protection Policy Act. The
environmental review must determine if the proposed HUD assisted project site is located in an area committed to urban uses and if not, whether it includes Important Farmland as identified by the Natural Resources and Conservation Service (NRCS), Department of Agriculture. If the proposed project site includes Important Farmland, the environmental review must include an evaluation of the land using form AD 1006, “Farmland Conversion Impact Rating.” This requirement applies only to new construction activities and the acquisition of undeveloped land.

4. Environmental Justice: HUD will also determine whether or not Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” is applicable to the project. This EO requires that federal actions not result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. When a project impacts a minority or low-income population, or when siting of a project raises questions of discrimination, HUD will perform the necessary analysis before determining acceptability of the project. Whenever possible, the Environmental Justice review should reflect input from affected minority and low-income communities. For more information, see HUD’s website at: https://www.hudexchange.info/environmental-review/environmental-justice.

HUD will advise the Lender of any Environmental Justice concerns including recommendations for their resolution. In most cases the preferred resolution would be to modify the project to eliminate or at least reduce the adverse effects, when feasible.

5. Applications for Firm Commitment for mortgage insurance are also subject to provisions of other Federal authorities, including the Wild and Scenic Rivers Act, and regulations implementing the Clean Air Act. There are state regulations implementing air quality requirements. HUD may require mitigation of a variety of nuisances and hazards on the property that would affect the health and safety of residents and the security of the collateral.

S. Commonly Found or Observed Additional Nuisances and Hazards:

The following requirements apply to existing projects as well as to new construction and substantial rehabilitation activities.

A. All parts of any structure must be at least 10 feet from the outer boundary of the easement for any high pressure gas or liquid petroleum transportation pipeline.

B. No structure shall be located within the easement of any overhead high voltage transmission line. In addition, all structures shall be located outside the engineered fall distance of any support structure for high voltage transmission lines, radio antennae, satellite towers, cellular towers, etc. This does not apply to local service electric lines and poles. This policy does not apply to water towers.
Compliance with HUD requirements regarding operating and/or abandoned oil or gas wells, sour gas wells, and slush pits is recorded.

1. Operating or planned drilling site: No residential structures may be within 300 feet from the boundary of the drilling site.

1. Operating well: No residential structures may be within 75 feet of an operating well unless the following mitigating measures are taken:
   a. Maintenance of nuisance controls,
      b) Controls of noise levels caused by pumping,
      c) Restrictions on hours of operation,
      d) Limits on supporting truck traffic, and
   a. Spill controls to reduce risk of contamination.
   c. Abandoned well
      a) Confirmation by the State government that the well is safely and permanently abandoned and that no residential structures are within 10 feet must be obtained.
      a) If there is no confirmation letter, no residential structures may be within 300 feet of an abandoned well.

1. Sour gas (hydrogen sulfide by-product) wells: Separation distance must be determined by a petroleum engineer, with concurrence by State government.

   e. Slush pits (used for drilling mud mixes for well lubrication):
      i. If on-site, hazards analysis is required to be performed pursuant to Section 7.3 above. Mitigation must include, but not necessarily be limited to, removal of all drilling mud from the site and backfilling with clean compacted material.
      ii. If offsite, an analysis must be performed pursuant to Section 7.3 regarding offsite hazards.

D. If any part of a site appears to be developed on filled ground, HUD may require that all grading be properly controlled to prevent differential earth movement, sliding, erosion, and/or other occurrences which might damage dwellings, streets or other improvements. Soil boring samples from filled areas must be submitted, as well as any other documentation regarding soil fill composition and compaction, to satisfy HUD as to its stability in place, re-grading or re-use.

E. If an existing property has a legal non-conforming use/structure, and the current zoning regulations will not allow the property to be rebuilt to the current density, then the owners are required to purchase Ordinance and Law insurance coverage with their property insurance; see Production, Chapter 14.5.B.

F. HUD may adopt additional requirements to address unique local concerns in specific geographic areas, but if any local requirement is mandated, ORCF must inform the HUD Headquarters Housing Environmental Clearance Officer of the requirement.
7.6 Lead-Based Paint
HUD Responsibilities in Reviewing Cases Requiring Remediation

1. Lead-based paint (LBP) may be present in buildings built prior to 1978. During any proposed repair work, the removal and disposal of the LBP must be performed in accordance with regulations as published and enforced by the State and the Department of Labor – Occupational Safety and Health Administration (OSHA). If required, appropriate lead paint remediation can be a required Firm Commitment condition on the HEROS Form HUD-4128. LSTF lead-based paint requirements must be complied with.

B. HUD’s lead-based paint requirements at 24 CFR Part 35 are applicable to housing built before 1978, but do not apply to housing designated exclusively for the elderly or persons with disabilities, unless a child of less than 6 years of age resides or is expected to reside in such housing. In addition, the requirements do not apply to 0-bedroom dwelling units. With the exception of Section 7.6.A, the requirements are not applicable to rehabilitation, refinancing or purchase of health care facilities under Section 232.

7.7 Asbestos

A. While many uses of asbestos are technically allowed today, several uses of asbestos were banned starting in the early 1970s, and many commercial enterprises have stopped installing asbestos products as of the late 1970s. Some of the more common examples of asbestos-containing materials include insulation, sprayed-on finishes, ceilings, vinyl floor tile and the adhesive to fix the tile in place, siding, and roofing. For any proposed project site containing structures built before 1978, asbestos should be discussed in the Lender Narrative, and an asbestos survey per 7.7.B or C. is required.

B. For any structures on the site built before 1978 that are to be demolished, a comprehensive building asbestos survey by a qualified asbestos inspector is required. It must be based on a thorough inspection to identify the location and condition of asbestos throughout any structures and performed pursuant to the “pre-construction survey” requirements of ASTM E2356-10 “Standard Practice for Comprehensive Building Asbestos Surveys” (or the most recent edition). The survey must be completed prior to HUD issuance of a Firm Commitment.

C. Other than for structures to be demolished per 7.7.B, a qualified asbestos inspector must perform a comprehensive building asbestos survey on any building that was in whole or part constructed prior to 1978, based on a thorough inspection, to identify the location and condition of any asbestos throughout any structures pursuant to the “baseline survey” requirements of ASTM E2356-10 (or the most recent edition). The survey must be completed prior to HUD issuance of a Firm Commitment. In those cases, where suspect asbestos is found, it should either be assumed to be asbestos or confirmatory testing should
be required. If the asbestos survey indicates the presence of asbestos or the presence of asbestos is assumed, and if the application for Firm Commitment is approved, HUD will condition the approval on an appropriate mix of asbestos abatement and an asbestos operations and maintenance plan (O&M plan). O&M programs which establish management protocols for asbestos containing materials should be accompanied with evidence of hazard awareness training for maintenance staff. Training is to include Local, State and Federal regulations, as applicable.

D. If Asbestos Containing Materials (ACMs) or suspect ACMs are identified at a facility, HUD requires that a response action be appropriate to address the hazard. Response actions may include complete removal, limited removal/repair, encapsulation, enclosure or management under an O&M Program, as recommended by an accredited professional. The following are examples for when certain response actions may be appropriate.

Removal

i. Damaged friable materials
   ii. Friable materials in good condition with high potential for disturbance (e.g., accessible pipe or tank insulation, ceiling tiles where air exchanges occur in plenum above, ceiling tiles that are required to be moved to access mechanical equipment or piping on a routine basis, etc.)
   
   a. Limited removal/repair, encapsulation or enclosure
      i. Damaged non-friable materials (limited removal/repair)
      ii. Limited damage to ceiling texture (limited removal/repair)
      iii. More extensive wall and/or ceiling texture damage or highly friable texture
      iv. Pipe insulation with limited damage but with limited potential for disturbance/impact (enclosure or removal)

O&M

- Non-friable materials in good condition
   i. Joint compound or wall and ceiling textures in good condition
   ii. Adhesive ceiling tiles with no real potential for disturbance
   - Friable pipe insulation materials in mechanical areas in good condition with limited potential for disturbance/impact by routine maintenance activities.

0.1. Other than for asbestos abatement on a structure that will be completely demolished, the cost of any asbestos abatement activities may be included in the proposed mortgage loan, with HUD approval. If required, appropriate asbestos remediation can be indicated as a required Firm Commitment condition if HUD approves.

F. All asbestos abatement shall be done in accordance with EPA requirements for air pollution prevention pursuant to 40 CFR subpart M, especially 40 CFR 61.145, and with OSHA requirements for Worker Protection, pursuant to 29 CFR 1926.1101. Any LSTF asbestos abatement and worker protection rules also apply. All asbestos abatement must be performed by a qualified asbestos abatement contractor.
A. Background. One common constituent of soil and rock is the unstable element uranium. One of the decay products of uranium is radon, a colorless, odorless gas. Under certain natural conditions, the radon gas can enter surface soils and become part of the "soil gas" environment, which then can enter the air, including air inside of buildings. When soil gas that contains radon enters a building, radon and its decay products are either directly inhaled, or attached to dust on walls, floors and in the air, which then can be inhaled. These decay products then undergo further decay, resulting in the release of subatomic alpha particles. This alpha particle radiation can cause mutations in lung tissue which can lead to lung cancer. The risk of contracting lung cancer from radon increases with an increase in the concentration of radon in the air that is breathed by building occupants. EPA recommends mitigation for residences with radon concentrations at or above 4 picocuries per liter of air (pCi/L). Please see EPA Radon Map on the Environmental Resource Page located on the Section 232 Program website.

B. General Requirements

   a. The radon report is required for all mortgage insurance applications, unless an exception listed in Section 7.8.B.3 applies.
   b. The radon report shall be included in the application, as applicable. For New Construction, please see Production, Chapter 7.8.E.
   c. Contents. The radon report shall include the results of any testing performed, the details of any recommended mitigation, and the timing of any such mitigation. An amended radon report must be issued if the testing and/or mitigation must occur after application submittal according to the requirements below. The radon report must be signed and certified as to its compliance with the requirements of this section by a Radon Professional.

2. Radon Professional.
   a. All testing and mitigation must be performed under the direct supervision of a Radon Professional, in accordance with the protocols referenced in this section.
   b. a. Radon Certification/License of the Radon Professional is required as follows:
      i. Certification from either the American Association of Radon Scientists and Technologists (AARST) National Radon Proficiency Program (NRPP) or the National Radon Safety Board (NRSB); and
      ii. Certification/LICENSE from the state in which the testing or mitigation work is being conducted, if the state has this requirement.

   a. A Radon Professional may conclude that neither testing nor mitigation is necessary based on a physical inspection of the property, the characteristics of...
the buildings, and other valid justifications. An example of a valid justification is having only a garage on the surface level that is open to the air and is fully ventilated. Any such justifications as to why neither testing nor mitigation is necessary must be provided by the Radon Professional (signed letter) and documented in the Environmental Report. Any waiver requests submitted for this section (7.8.) must be made in accordance with this exception. Requests for waiver of this section 7.8 that do not meet the requirements of this exception will not be granted.

b. A radon report is not required for applications that are categorically excluded under 24 CFR 50.19(b) (21) (see 7.1A.5, above).

c. Applicants are encouraged to test for radon even if a radon report is not required per the exceptions above. Any such testing must follow the testing protocols and resident notification protocols below, and must then be incorporated within a radon report as described within this section. If the results of such testing indicate levels of radon above the threshold for unacceptability, mitigation as described in this section is required, with the mitigation requirements for Section 223(a)(7) projects the same as those for 223(f) projects.

Testing Protocols.

a. Radon testing must follow the protocols set by the American Association of Radon Scientists and Technologists, Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings (ANSI-AARST MALB-2014, or most recent edition) (Please see ORCF Environmental Resource Page located on the Section 232 Program website). Applicant has the option to test 25% of ground level units/rooms in each building (sampling). If any of the sampled units/rooms is tested above the 4.0 picocuries per liter (4.0 pCi/L), then they have two options:
   i. Mitigation in 100% ground level units/rooms or
   ii. Test 100% ground level units/rooms. If during 100% ground level test, any units/rooms test above 4.0 pCi/L level, then follow the requirements of the standard above.

b. Threshold for unacceptability: 4.0 picocuries per liter (4.0 pCi/L) based on initial and any confirmatory testing, if performed.

5. Occupant Notification.

a. Testing. Occupants of all new applications for OHP mortgage insurance programs shall be informed of forthcoming testing in the manner described in AARST MALB-2014.

b. Mitigation. Occupants shall be informed both prior to and after mitigation activities. In the case of new construction, incoming occupants shall be informed of radon mitigation activities.

6. Mitigation Standards. Radon resistant construction is required for all new construction, and radon mitigation is required for existing construction where testing has revealed that radon levels exceed the threshold for unacceptability. The Radon
Professional must assure that radon resistant construction or radon mitigation, when required, conforms to the following standards:


7. Mitigation Timing. For new construction and substantial rehabilitation properties, all mitigation, including follow-up testing, must be completed prior to Final Closing. Radon mitigation included as part of a Section 223(f) or 223(a)(7) project’s repairs must be completed as quickly as practicable, and in any event, no later than 12 months after Closing.

8. Certificate of completion. A certificate of completion from the Radon Professional must be submitted and appended to the radon report once radon testing and/or mitigation is completed.

9. HUD requires an operation and maintenance (O&M) plan for any mitigation project that is active. A condition shall be attached to the Firm Commitment requiring that the borrower operate and maintain the property consistent with the referenced O&M plan(s) for the duration of the insured mortgage. Given the ongoing risk associated with radon, an O&M requirement for maintaining active mitigation systems should be implemented when an active mitigation system is present on the property.

10. Cost estimate. Use detailed plans and specifications supplied by the lender’s architectural analyst as a basis for the cost estimate. Estimates must reflect the general level of construction costs in the locality where construction takes place. Costs must be projected to the estimated construction start date.

0.1. Section 223(f) and Non-Excepted Section 223(a)(7).

1. All Section 223(f) and non-excepted 223(a)(7) projects must be tested for radon in accordance with 7.8.B.4, above. Testing must be performed no earlier than 1 year prior to application submission.

a. Mitigation. See requirements at 7.8.B.6. If estimated costs exceed the allowable cost for the Section 223(f) program, the application cannot be approved but may be considered under the substantial rehabilitation program.

D. Substantial Rehabilitation and Conversions. (Applies to all Radon Zones)

1. Testing prior to substantial rehabilitation or conversion.
a. Early testing not feasible. For some proposals, such as a conversion of an existing building from non-residential to residential, the building envelope may change to such an extent that early testing would not be appropriate and in some cases not possible. If this is the case, proceed directly to mitigation as discussed at Section 7.8.D.2. Radon reports are required with the post-construction testing prior to Final Closing.

b. Early testing when feasible.

i. Must be performed no earlier than 1 year prior to application submission in accordance with 7.8.B.4.

ii. If test results are below the threshold, no mitigation is required.

iii. If test results are at or above the threshold, mitigation must be built into the project design per Section 7.8.D.2.a.

2. Mitigation.

a. If mitigation is built into project design, it must be conducted in accordance with the requirements at 7.8.B.6.

b. If mitigation is not built into project design, after construction is complete but prior to Final Closing, radon testing must be conducted. If testing results are above the threshold, retrofit pursuant to the requirements at 7.8.B.6 is required.

E. New Construction.

1. Radon resistant construction is required for all radon zones.

2. Radon reports are required with the post-construction testing prior to Final Closing.

3. Radon Zone 1:

   a. Construction Requirements: All new construction in Radon Zone 1 must meet all of the requirements of ASTM E1465-08a for installation of passive systems.

   b. Post-construction testing is required prior to Final Closing. If testing results are above the threshold, conversion from a passive system to a fan-powered system is required.

4. Radon Zones 2 and 3:

   a. Construction requirements.

      i. Gas permeable layer. The gas permeable layer must meet all of the requirements of ASTM E1465-08a, Section 6.4.

      ii. Ground cover. The concrete slabs and plastic membranes that seal the top of the gas permeable layer must meet all of the requirements of ASTM E1465-08a, Section 6.2.

      iii. Foundation walls. Foundation walls must meet all of the requirements of ASTM E1465-08a, Section 6.3.

   b. Post-construction testing is required, except as provided at 7.8.B.3.
i. Radon testing must be performed after construction is complete, but prior to Final Closing.

ii. If testing results are above the threshold, retrofit based on the applicable standard at 7.8.B.6 is required, with installation of a passive system. If testing results remain above threshold, a fan-powered system is required.