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44

45 **7.1**

Introduction

46 This chapter outlines for the Lender and HUD staff the policies and procedures that must be
47 followed to meet HUD's environmental review responsibilities. The standards and guidance
48 documents referenced in this chapter may be updated, amended or superseded from time to time.
49 Wherever standards or guidance are cited in this chapter, ORCFHUD requires reliance on the
50 most recent edition or superseding document.
51

52 **A. Legal Authorities, HandbooksGuidance, Standards, and FormsDocumentation**

- 53
- 54 1. All Federal agencies are required to comply with the National Environmental Policy Act
55 of 1969 (42 U.S.C. 4321 et seq.) (NEPA), and the implementing procedures issued by the
56 Council on Environmental Quality at 40 CFR Parts 1500-1508. U.S. Department of
57 Housing and Urban Development (HUD) regulations implementing NEPA are contained
58 in 24 CFR ~~Part~~Parts 50, “Protection and Enhancement of Environmental Quality”~~”~~” and
59 58, “Environmental Review Procedures for Entities Assuming HUD Environmental
60 Responsibilities”. 24 CFR Part 50 applies to the Section 232 Program. Related Federal
61 laws and authorities are listed in 24 CFR 50.4 and 50.3(i). Under Part 50, HUD may not
62 delegate its environmental responsibilities to others; ~~it~~HUD is required to prepare the
63 final environmental assessment and review, make the appropriate environmental finding,
64 and obtain all required reviews, comments and approvals and make the appropriate
65 environmental finding prior to issuing a Firm Commitment. (See 24 CFR 50.11.)
66
 - 67 2. HUD has issued ~~two handbooks covering guidance on complying with~~ environmental
68 issues: Handbook 1390.2, “requirements at the HUD Exchange Environmental
69 Assessment Guide for Housing Projects”, and Handbook 1390.4, “A Guide to HUD
70 Review website, which is accessible from the ORCF Environmental Criteria and
71 Standards Contained in 24 CFR 51”. Guidebooks issued by HUD on environmental
72 issues are cited in this chapterResources page located on the Section 232 Program
73 website.
74
 - 75 3. HUD has ~~also~~ established the HUD Environmental Review Online System (HEROS) –
76 Form HUD 4128 to replace the paper HUD 4128 as the prescribed format for all HUD to
77 document compliance with NEPA and other Federal environmental laws, authorities,
78 Executive Orders, and HUD standards. The use of HEROS to document environmental
79 reviews. HUD staff are ~~is~~ required to use HEROS to document all Part 50
80 environmental reviews, consistent with the requirements under 24 CFR 50.31. ~~Further,~~
81 ~~as HEROS becomes accessible to the Section 232 lenders, those lenders are expected to~~
82 ~~use HEROS for inputting~~18(a). All required source documentation, including the ASTM
83 Phase I Environmental Site Assessment (Phase I ESA), must be uploaded to the relevant

84 environmental data for 232 transactions HEROS screens. HEROS source documentation,
85 including but not limited to the ASTM Phase I ESA, will be made available to the public
86 for one year after completion of the review.
87

88 4. The Lender must submit an environmental report to HUD using the HEROS system for
89 all projects. See Section 7.2.A “Lender’s Responsibilities” below.
90

91 5. Aggregation: In accordance with 24 CFR 50.21, activities which are geographically
92 related and are logical parts of a composite of contemplated HUD projects shall be
93 evaluated together. Where a parcel that secures the FHA mortgage is part of a larger site,
94 the project should be defined as the parcel plus the parts of the rest of the site that are
95 directly related to the Section 232 development (access roads, parking, storm water
96 detention systems, open spaces, utilities, etc.). What gets defined as directly related is
97 contextual; it depends on project circumstances and may vary from project to project.
98

99 6. Requirements in this chapter may exceed those of many state and federal agencies. One
100 reason for this is if a Borrower defaults on an FHA-insured project, HUD may become
101 the project owner. Under Section 120(h) of the Comprehensive Environmental Response
102 and Liability Act (CERCLA), Federal agencies that own properties are required to take
103 “all remedial action necessary to protect human health and the environment” with respect
104 to known hazardous substances upon disposition of the property. This requirement is
105 beyond any liability releases under State or Federal law and any due diligence
106 requirements under CERCLA.
107

108 ~~4. Existing projects to be refinanced or purchased under Section 232/223(f) and many~~
109 ~~rehabilitation projects are categorically excluded (CE) from NEPA compliance (see~~
110 ~~exclusions in 24 CFR 50.20(a)). Such projects do not require an environmental~~
111 ~~assessment under NEPA except in extraordinary circumstances (see 24 CFR 50.20(a)~~
112 ~~and (b)), but they must comply with the laws and authorities at 24 CFR 50.4. In~~
113 ~~addition, CE projects must document compliance with parameters related to~~
114 ~~Nuisances and Hazards such as pipelines, fall hazards, and oil and gas wells, as~~
115 ~~described below.~~
116

117 7. Local, State, Tribal or Federal Laws (LSTF): The acronym LSTF as used in this
118 chapter refers to “local, state, tribal or Federal”.
119

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

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

125 c. This chapter is not a substitute for requirements in the laws, regulations, and
126 Executive Orders regarding environmental analysis and mitigation.
127

128 **B. Levels of Environmental Review**

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

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

136
137 **1. Categorically Excluded Not Subject to Related Laws and Authorities (CENST):**

138 Pursuant to 24 CFR 50.19(b)(21), “refinancing of ~~FHA~~HUD-insured mortgages that will
139 not allow new construction or rehabilitation, nor result in any physical impacts or
140 changes except for routine maintenance” are categorically excluded from the
141 ~~environmental assessment (EA) requirements of the National Environmental Policy Act~~
142 ~~(NEPA), except in extraordinary circumstances, and do not require compliance with the~~
143 Federal laws and authorities specified at 24 CFR Part 50.4, other than for the flood
144 insurance requirements specified at 24 CFR 50.4(b)(1). Thus, currently FHA-insured
145 Section 223(f) and 223(a)(7) refinancing transactions that meet these criteria do not
146 require an environmental review. However, the flood insurance requirements specified at
147 24 CFR 50.4(b)(1) are still applicable ~~(. Please note, 24 CFR 50.19(b)(21) applies only to~~
148 ~~projects with existing HUD mortgage insurance.~~

149
150 For environmental review purposes, the term “maintenance” means an activity that slows
151 or halts deterioration of a building and does not materially add to its value or adapt it to
152 new uses. Please refer to HUD Notice CPD-16-02 “Guidance for Categorizing an
153 Activity as Maintenance for Compliance with HUD Environmental Regulations, 24 CFR
154 Parts 50 and 58” or succeeding guidance. ~~Note that this, which is available on the ORCF~~
155 ~~Environmental Resources page. This~~ definition of maintenance is specifically for
156 environmental review purposes and applies to all HUD programs ~~).~~.

157
158 ~~Refinances~~Note that refinances of currently FHA-insured mortgages under Sections
159 223(a)(7) and 223(f) ~~require an environmental review utilizing HEROS Form HUD~~
160 ~~4128)do not qualify for CENST level reviews~~ when any of the conditions listed at
161 ~~7.1.A.6.a., b., or c. immediately~~ below apply ~~to. For projects that do not qualify for~~
162 ~~CENST level reviews,~~ the ~~project.~~ The review process and requirements include
163 submission of a current Phase I Environmental Site Assessment and Vapor Encroachment
164 Screen, ~~HUD’s (VES),~~ consultation with the State Historic Preservation Officer (SHPO),
165 compliance with floodplain management and wetlands regulations and all other
166 applicable environmental requirements when:

- 167 a. The facility has completed a building addition without having obtained HUD’s
- 168 approval;
- 169 b. The project will acquire or has acquired land that was not insured under the original
- 170 mortgage loan and the facility has yet to receive HUD’s approval of the additional
- 171 land; or
- 172 c. The project will involve changes, improvements or repairs that do not qualify as

173 routine maintenance ~~(Please see, (See HUD Notice CPD-16-02 “Guidance for~~
174 ~~Categorizing an Activity as Maintenance for Compliance with HUD Environmental~~
175 ~~Regulations, 24 CFR Parts 50 and 58” or succeeding guidance. Note that this~~
176 ~~definition of maintenance is specifically for environmental review purposes and~~
177 ~~applies to all HUD programs.)~~
178

179 **2. HUD has determined that **Categorically Excluded Subject To Related Laws and****
180 **Authorities (CEST):**

181 a. Pursuant to 24 CFR 50.20(a), existing projects to be refinanced or purchased under
182 Section 232/223(f) ~~refinance~~and rehabilitation projects described at 24 CFR
183 50.20(a)(2)(ii) are categorically excluded from NEPA compliance but still subject to
184 the laws and authorities listed at 24 CFR 50.4 and 24 CFR 50.3(i), described in
185 Section 7.3 below. In addition, CEST projects must comply with programmatic
186 Housing Requirements related to Nuisances and Hazards as described in Section 7.4
187 below.

188 b. For 232/223(f) projects that include new construction of accessory structures or
189 ancillary improvements, the level of review remains the same as a traditional 223(f)
190 project (CEST), but because the project will include ground disturbance, there is a
191 greater risk of environmental impact. The project description must include the extent
192 of the ground disturbance and the HEROS review must consider the laws and
193 authorities at 24 CFR 50.4, 24 CFR 50.3(i), and Section 7.3 in the context of new
194 construction, including:

- 195 • Consultation with federally recognized Tribes in addition to the State Historic
196 Preservation Officer (SHPO) under the National Historic Preservation Act.
- 197 • Noise assessment and mitigation as required if the new construction is a noise
198 sensitive use.
- 199 • Above Ground Storage Tank requirements for new construction.
- 200 • Airport clear zone requirements for new construction.
- 201 • The 8-step analysis for construction in a floodplain or wetland.
- 202 • Consideration of Endangered Species, Farmlands, Sole Source Aquifers, Wild and
203 Scenic Rivers, Coastal Zones and Air Quality.

204 c. Almost all 232/223(f) projects will be CEST, with two limited exceptions:

- 205 i. Currently HUD-insured Section 223(f) refinancing transactions of non-HUD
206 insured mortgages that will not allow new construction or rehabilitation, nor result
207 in any physical impacts or changes except for routine maintenance, and which
208 meet the criteria discussed above for CENST-level review; or
- 209 ii. Categorical Excluded projects having the potential for a significant impact
210 because of extraordinary circumstances may require an Environmental
211 Assessment or Environmental Impact Statement (see 24 CFR 50.20(b)).

212 **3. Environmental Assessment (EA):** Reviews of all new construction projects and reviews
213 of Section 232 rehabilitation, 241(a) and 223(a)(7) projects that rise above the limits of
214 CEST rehabilitation at 24 CFR 50.20(a)(2)(ii) must include the laws and authorities listed

at 24 CFR 50.4 and 24 CFR 50.3(i) (see Section 7.3 below) and Nuisances and Hazards (see Section 7.4) as well as the Environmental Assessment requirements at Section 7.5.

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-4128(Revised) 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.

~~8.1. 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.
- ~~1-2.~~ 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.Q, unless the CENST exemption for FHA-insured projects described at Section 7.1.A-5B.1 applies.
- ~~2-3.~~ TheIn 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.
- ~~3-4.~~ **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

304 include an action or commitment to undertake real property acquisition, repair,
305 rehabilitation, construction, demolition, significant ground disturbance, site clearance, or
306 ground disturbing activities beyond minimal soil borings or minimal archaeological tests
307 for site assessment purposes..

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

311 Other actions

312 ~~b.a.~~ Actions, such as the acquisition, demolition or modification of a wetland, or actions
313 significantly affecting a historic property, ~~do~~ fall within ~~such~~the limitations described
314 above. Additionally, pursuant to the “anticipatory demolition” requirements of
315 Section 110(k) of the National Historic Preservation Act (~~1654 U.S.C. 470h-~~
316 ~~2(k);306113~~) with guidance provided by the Secretary of Interior at 63 FR 20496,
317 even before application submission takes place, any action by a potential Lender or
318 Borrower, or any action by another party that the Lender or Borrower has the legal
319 power to prevent, that is taken with the intent to avoid Section 106 review and that
320 significantly adversely affects a historic property, ~~could~~can result in ~~eventual~~
321 rejection of an application.

322
323 b. Work that exceeds the level of routine maintenance must not begin until HUD
324 prepares its Environmental Review and approves the action. Therefore, if such work
325 occurred before the application’s submission to HUD, whether the work was
326 complete or still in progress at the time of the application submission, the work is not
327 eligible for inclusion as a project repair; and the associated costs must not be included
328 in the repair costs.

329
330 c. If any party is unsure as to whether an action would fall within such limitations, they
331 should seek advice, ~~and possibly approval,~~ from the Office of Residential Care
332 Facilities (ORCF-) prior to beginning the activity. These requirements are distinct
333 and separate from any early start of contractually related construction activities.

334 B. HUD Staff Responsibility:

- 335
336
337 1. In accordance with 24 CFR 50.32, HUD, ~~not the Lender,~~ is responsible for
338 performing independently evaluating the information supplied by the Lender in HEROS,
339 supplementing that information as needed, and making the required findings in HEROS
340 as the environmental review, completing the review in HEROS Form HUD-4128, and
341 determining that record for the project raises no environmental conditions prohibited by
342 law. HUD will determine whether the proposed project: (a) is out of compliance with
343 applicable laws, Executive OrderOrders, or regulation, or that regulations, (b) would
344 otherwise endanger residents’ health or safety, or that(c) would put FHA mortgage
345 insurance or the U.S. Government at financial risk or liability due to environmental
346 conditions. The HUD reviewer will obtain interdisciplinary assistance from professional
347 experts and other HUD staff as needed. ~~The Lender/Borrower are expected to provide~~
348 ~~information needed for the review and, as HEROS becomes available, to input applicable~~

349 ~~data into that system. Additional information may also be requested of the~~
350 ~~Lender/Borrower.~~

- 351
352 2. As part of its environmental review responsibilities, HUD may request additional
353 information from the Lender/Borrower. For example, HUD may require additional
354 material such as a Phase II ESA or a Biological Evaluation, even when the Lender might
355 not believe that such additional environmental material is necessary.
356

357 2.3. HUD staff must review the Phase I Environmental Site Assessment (ESA) submitted by
358 the Lender and will make a site visit ~~for new construction and substantial rehabilitation~~
359 ~~projects. Other projects may be visited~~ on a case by case basis. A site visit will help
360 validate the environmental and site information provided in the Phase I ESA Lender
361 Narrative, and ~~it is useful for evaluating other environmental factors.~~ The HUD reviewer
362 will sign in the completed review in HEROS – Form HUD-4128 as the preparer, and the
363 form will be co-signed by a HUD approving official, consistent with the then-current
364 Delegation of Authority Environmental Report.
365

- 366 4. HUD staff must certify the completed environmental review in HEROS as the Preparer,
367 and a HUD approving official, consistent with the then-current Delegation of Authority,
368 must approve and certify the HEROS environmental review prior to HUD's issuance of a
369 Firm Commitment.
370

- 371 5. HUD staff should refer to the specific directions and guidance contained in Section
372 7. ~~Regulation~~ 3.Q and 7.3.N as applicable for projects that involve remediation and/or
373 monitoring.
374

375 3.6. Regulations at 24 CFR 50.32 ~~requires~~ require that a NEPA Environmental Assessment-
376 level reviews for a ~~project~~ projects with more than 200 dwelling units or 200 beds be sent
377 for review and comment to the ~~appropriate~~ Regional or Field Environmental Officer
378 (REO/FEO) in whose jurisdiction the project is located. The REO/FEO must also review
379 and comment on Environmental Assessment-level new construction projects or projects
380 that convert land uses to residential when noise is in the unacceptable noise zone (above
381 75 DNL (a weighted day-night average sound level)). Neither requirement applies to
382 categorically excluded projects. Projects such as Section 232/223(f), which are deemed
383 categorically excluded from NEPA but require compliance with the Federal laws and
384 authorities cited in 24 CFR 50.4 pursuant to 24 CFR 50.20(a), do not require review and
385 comment from the FEO. However, it is recommended that REO/FEOs be given the
386 option to review and comment when special analysis is required under such laws and
387 authorities listed at §50.4.
388

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

- 391 7. Housing staff are strongly encouraged to consult with the REO/FEO (regardless of the
392 number of units) for CEST and EA projects that:
393 a. Are located on or adjacent to a designated Superfund Site or a Formerly Used Defense
394 Site (FUD).

395
396 b. Have an unresolved contamination issue with the potential to affect the health and
397 safety of occupants. For example:

- 398 • An ASTM Phase I or Phase II Environmental Site Assessment (ESA) indicates a
399 release or threat of release of hazardous substances or petroleum products but
400 does not identify a Recognized Environmental Condition (REC);

401 There is current or proposed

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

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

411
412 c. Are located on or directly adjacent to a parcel with a floodway.

413 414 **C. When to Submit Required Exhibits to Resolve Environmental Issues:**

- 415
416 1. Lenders are required to submit all the exhibits necessary to resolve any
417 environmental issues with the Firm Commitment application and in the HEROS
418 report.
- 419
420 2. Any environmental problems present at the site will require a discussion of
421 impacts to human health and appropriate mitigation measures. The Lender must
422 provide mitigation plans for those environmental ~~problems~~issues when the
423 application for a Firm Commitment is submitted. Remediation of site
424 contamination is discussed in Section 7.3.Q of this chapter, and requires that
425 remediation plans and LSTF approval of those plans be submitted with the
426 application for Firm Commitment. The implementation of mitigation and
427 remediation plans may, with HUD approval, continue throughout the construction
428 period; for projects with initial and final loan closings. HUD will review the
429 Lender's plan and make it a condition of the Firm Commitment, if HUD considers
430 the plan acceptable. This would include any plans for remediation of site
431 contamination, wetlands impacts, noise impacts, historic preservation, and/or
432 floodplain management issues. See the applicable guidance for each of these
433 topics in Section 7.3 below.
- 434
435 3. Removal or containment of lead-based paint or asbestos may continue beyond initial
436 and final closing if HUD approves.

437 438 **D. Qualifications of Professionals:**

439

- 440 1. The Borrower may select the professionals to be used to prepare the Phase I ESA and the
441 other required environmental information ~~discussed in Sections 7.5, 7.6 and 7.7~~, but the
442 Lender must verify that the professionals used are qualified for their assigned
443 responsibilities. It is recommended that the professionals have prior HUD experience,
444 since the analyses of some related laws and authorities are unique to HUD.
445
- 446 2. The environmental professional preparing the Phase I ESA must meet all of the
447 qualification requirements of Appendix X2 of ASTM E1527-13 (or similar section of the
448 most recent edition). Additionally, the environmental professional must meet the
449 license/certification, educational, and experiential requirements of Section X.2.1.1. (2)(i),
450 (ii), or (iii), of Appendix X2 of ASTM E1527-13 (or similar section of the most recent
451 edition). The environmental professional must describe how he or she meets these
452 qualifications in the Qualification(s) of Environmental Professional(s) Section of the
453 Phase I ESA. For “relevant experience” such discussion must be specific as to how the
454 requirements of Section X.2.2 of Appendix X2 of ASTM E1527-13 (or similar section of
455 the most recent edition) have been met. The Phase I ESA must clearly indicate that HUD
456 is an authorized user of the report.
457
- 458 3. When a Phase II study is conducted, the “Phase II Assessor” must meet all of the
459 qualification requirements of Section 3.1.33 of ASTM E1903-11 (or similar section of the
460 most recent edition).
461
- 462 4. Other professionals may be required to evaluate technical areas, such as asbestos, radon,
463 noise, fire safety, wetlands, flooding, historic preservation or soil stability conditions. The
464 Lender should verify that these technicians are also qualified. When these professionals
465 are required, the Lender may contract for those services if the Borrower has not done so.
466

467 ~~E.—Consulting with ORCF: Lenders are encouraged to consult early with ORCF on
468 environmental requirements. Local conditions and interagency relations affecting
469 environmental review requirements differ from state to state. **prior to application:** For
470 instance, coastal zone management requirements are not applicable in most states, but in
471 states where they are applicable, compliance procedures differ. In some states, a letter from
472 the state coastal zone management agency for projects in the coastal zone is required. In
473 others, alternative review procedures make this unnecessary.~~
474

475 ~~F.E. that have obtained an FHA Number, ORCF is available to review answer questions on key
476 environmental issues prior to application submission via its Lean Thinking email box.
477 Lenders may submit questions on unusual site conditions, such as soil contamination,
478 explosive hazards, unacceptable noise levels, fall hazards, etc., to at
479 LeanThinking@HUD.gov. When seeking guidance, provide the project’s FHA Number,
480 street address, type of project (e.g., Section 232 New Construction, 232/223(f), 241(a)) and a
481 description of the project in its current condition and as proposed. Include a site plan/survey
482 when available, and other pertinent documentation, such as a description of proposed
483 construction, repairs, site work and alterations. All communication with Lean Thinking must
484 be included as a clearly identified exhibit in the application submission to ORCF.~~

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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**

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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.

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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.

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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.

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

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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.

- 524 2. Construction or major rehabilitation of any property located within a Clear Zone is
525 prohibited. Acquisition, refinance, and minor rehabilitation which do not extend the
526 physical or economic life of projects within Clear Zones are allowed, with notification
527 requirements for acquisition transactions described below. HUD must determine that
528 projects located in Accident Potential Zones are generally consistent with Department of
529 Defense land use compatibility guidelines for Accident Potential Zones.
- 530
- 531 3. In acquisition transactions, HUD, as part of its environmental review for an existing
532 property, shall advise the Lender, who will inform the Borrower purchasing the
533 property, that the property is in a Runway Protection Zone or Clear Zone.
534 Furthermore, it shall be explained what the implications of such a location are,
535 including the possibility that the airport operator will acquire the parcel. The buyer
536 must sign a statement acknowledging receipt of this information. HUD may reject
537 applications for mortgage insurance on an existing property within a Runway
538 Protection Zone or Clear Zone because of the possibility that the property may be
539 acquired at a later date by the airport operator.

540

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

542

- 543 1. The Clean Air Act was implemented to remedy the damaging effects that poor air quality
544 can have on human health and the environment. The Clean Air Act is administered by the
545 U.S. Environmental Protection Agency (EPA), which sets National Ambient Air Quality
546 Standards (NAAQS). These are limits on certain “criteria” air pollutants, including limits
547 on how much of these pollutants can be in the air anywhere in the United States.
548 Geographic areas that are in compliance with standards are called “attainment areas,”
549 while areas that do not meet standards are called “nonattainment” areas. The location of
550 areas designated by U.S. EPA as polluted under the Clean Air Act is documented in the
551 U.S. EPA’s Nonattainment Areas for Criteria Pollutants (Green Book)
552 (<https://www.epa.gov/green-book>).
- 553
- 554 2. In addition to the EPA, the Clean Air Act is administered by state, tribal, and local
555 agencies, which are responsible for developing local solutions to air quality problems.
556 States must develop State Implementation Plans (SIPs) to regulate their state air quality.
557 In order to show compliance with the NAAQS, projects funded by HUD must
558 demonstrate that they conform to the appropriate SIP.
- 559
- 560 3. For new construction projects located in a nonattainment or maintenance area, HUD must
561 determine if the estimated emission levels exceed de minimis emissions levels for the
562 nonattainment or maintenance level pollutants. If the estimated emissions levels exceed
563 de minimis levels, HUD must determine whether the project can be brought into
564 compliance with the State Implementation Plan through modification or mitigation.
- 565
- 566 4. The HEROS website includes an FAQ on completing the Clean Air Act Screen in
567 HEROS. This can be found on the HUD Exchange website which can be accessed from
568 the ORCF Environmental Resource page.
- 569

570 5. Additional information about complying with the Clean Air Act can be found on the
571 HUD Exchange website which can be accessed from the ORCF Environmental Resource
572 page.

574 C. Asbestos

575
576 1. While specific uses of asbestos are technically allowed today, several uses of asbestos
577 were banned starting in the early 1970s, and many commercial enterprises stopped
578 installing asbestos products as of the late 1970s. In 1989, the U.S. Environmental
579 Protection Agency instituted a partial ban on the manufacture, import, processing and
580 distribution of some asbestos containing products. Some of the more common examples
581 of asbestos containing materials include insulation, fireproofing, sprayed-on finishes
582 such as acoustical ceiling texture, joint compound, ceiling tiles, vinyl floor tile and the mastic
583 or caulk used to fix the tile in place, siding, and roofing, although they can be found in many
584 construction material types installed before 1989 that are still in use today. These asbestos-
585 containing materials (ACM) can be found in both friable and non-friable states. Friable material
586 is a material that is easily crumbled or powdered by moderate (hand) pressure. For any
587 proposed project site containing structures built before 1989, asbestos must be discussed
588 in the Lender Narrative and HEROS, and an asbestos survey per 7.3.C.4 is required. The
589 Environmental Protection Agency rule at 40 CFR 721.11095(a)(2) prohibits the new use
590 of asbestos building products; this includes new ACM.

591
592 2. Asbestos studies and information must be included in the HEROS Environmental Report,
593 in accordance with HUD's environmental policy articulated at 24 CFR 50.3(i) which
594 states that all properties proposed for use in HUD programs be free of hazardous
595 materials, contamination, toxic chemicals and gasses, and radioactive substances, where a
596 hazard could affect the health and safety of occupants or conflict with the intended
597 utilization of the property.

598
599 3. Knowledge of the location, quantity, type and condition of ACM in the facilities,
600 building, and, if applicable, the surrounding area of the property, is critical for proper
601 management of the hazard. These factors will determine if ACM will need to be
602 selectively removed for maintenance, removed prior to renovation, removed prior to
603 demolition, left in place and encapsulated or enclosed with procedures outlined in the
604 Operation & Maintenance (O&M) Program, or a combination of these strategies.

605
606 4. Any structures or ancillary facilities on the site built in whole or in part before 1989 must
607 be assessed as per the ASTM E 2356-18 (or most recent version), "Standard Practice for
608 Comprehensive Building Asbestos Surveys" or the city, county, or state requirements if
609 they exceed the ASTM E2356-18 standards. For structures built in 1989 or later, HUD
610 requires projects to report any knowledge of asbestos use at the property and to verify the
611 composition of roofing materials, either through direct documentation (e.g. receipts or
612 labels) or through sampling and analysis.

613
614 a. At minimum, structures built before 1989 must undergo a Baseline Survey, or stricter
615 standard if applicable in the jurisdiction, to determine if ACMs are present or

- 616 suspected to be present at the site. In those cases where suspect asbestos is identified,
617 it should either be assumed to be ACM or confirmatory testing should be required.
- 618 b. The ASTM E 2356-18 Baseline Survey is a building-wide or facility-wide inspection
619 that provides a general sense of the overall location, type, quantity, and condition of
620 asbestos-containing materials present. It is thorough in that most accessible functional
621 spaces are inspected, and that bulk samples are taken of suspect materials observed.
622 The baseline survey provides information for long-term management of ACM and
623 prioritization of response actions. The presence of asbestos in suspect materials may
624 be assumed or presumed in some cases without bulk samples being taken or analyzed.
625 In a baseline survey, destructive testing is minimized, e.g. concealed spaces are not
626 normally breached.
- 627 c. Any structures or ancillary facilities built before 1989 that are planned to be
628 demolished, or planned to undergo alterations or renovations involving demolition,
629 must complete a building asbestos survey by a qualified asbestos inspector performed
630 pursuant to the “Pre-Construction Survey” requirements of ASTM E 2356-18 or
631 stricter standards if applicable in the jurisdiction. At minimum, the survey must
632 include all spaces within the limits of construction, as well as adjacent areas where
633 ACM may be disturbed by construction activities.
- 634
- 635 The Pre-Construction Survey is performed in anticipation of a demolition or
636 rehabilitation project. It requires destructive testing if concealed spaces are to be
637 breached during construction. The Pre-Construction Survey satisfies the EPA
638 NESHAP requirements for renovation or demolition to “thoroughly inspect the
639 affected facility.”
- 640 d. An accredited asbestos professional will determine whether projects that complete a
641 Pre-Construction Survey must also complete a Baseline Survey. The asbestos
642 professional will also determine if the project requires additional surveys beyond the
643 minimum HUD requirements.
- 644 e. The practices outlined in the ASTM E 2356-18 apply to all activities (unless
645 following a stricter local, state or tribal standard) and all surveys or sample analysis
646 must be completed by a licensed/accredited professional and laboratory.
- 647 i. Asbestos professionals must be accredited by EPA or an EPA approved state
648 program under the Model Accreditation Plan. The professional must also be
649 licensed by the state, city, or local jurisdiction in which the work is being
650 conducted if the jurisdiction has this requirement.
- 651 ii. Transmission electron microscopy (TEM) bulk sample analyses may be necessary
652 for samples originating from jurisdictions that require this analysis. Additionally,
653 TEM analyses is commonly used to verify a reported result of no asbestos
654 detected for non-friable organically bound material (NOB) and other non-friable
655 materials by polarized light microscopy (PLM)
- 656 f. If prior surveys for ACM have been completed within the building, facilities, and
657 project site by a licensed professional and accredited asbestos laboratory, HUD may
658 accept the earlier documentation. If there is question about its validity, HUD will
659 request a determination by an accredited asbestos professional. The determination of
660 the applicability and usability of prior ACM surveys will be based upon the
661 determination of the current licensed/credentialed asbestos professional or by HUD.

662
663 5. If ACM or suspect ACM is identified at a facility, HUD requires a response action to
664 address the risk. Response actions may include complete removal, limited
665 removal/repair, encapsulation, enclosure or management under an Operations and
666 Maintenance (O&M) Program, or a combination of these, as recommended by an
667 accredited asbestos professional. The following are examples for when certain response
668 actions may be appropriate, but they do not encompass all response actions.

669 a. Removal

- 670
671 i. Damaged friable materials
672 ii. Friable materials in good condition with high potential for disturbance (e.g.,
673 accessible pipe or tank insulation, ceiling tiles where air exchanges occur in plenum
674 above, ceiling tiles that are required to be moved to access mechanical equipment
675 or piping on a routine basis, etc.)

676
677 b. Limited removal/repair, encapsulation or enclosure

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

683
684 c. O&M Plan

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

690
691 6. The asbestos survey(s), and O&M plan when applicable, must be submitted with the
692 application and included in the HEROS Environmental Report. If the survey
693 identifies asbestos or asbestos is assumed, the application must include a plan from an
694 accredited asbestos professional with an appropriate mix of asbestos abatement and
695 an asbestos O&M plan in accordance with EPA guidance (for example, “How to Develop
696 and Maintain a Building Asbestos Operations and Maintenance (O&M) Program” is
697 available on the EPA website), or any applicable LSTF requirements if more protective
698 of health and the environment.

699
700 7. The asbestos survey report(s), O&M plans and updated records if materials are removed
701 or identified subsequently, must be maintained by the operator and owner(s) of the
702 property and made available to appropriate staff.

703
704 8. Other than for asbestos abatement on a structure that will be completely demolished, the
705 cost of any asbestos abatement activities may be included in the proposed mortgage loan,
706 with HUD approval. If required, appropriate asbestos remediation can be indicated as a
707 required Firm Commitment condition if HUD approves.

708
709 9. All asbestos abatement shall be done in accordance with EPA requirements for air
710 pollution prevention pursuant to 40 CFR Part 61 subpart M, especially 40 CFR 61.145,
711 and with OSHA requirements for Worker Protection, pursuant to 29 CFR 1926.1101,
712 asbestos safety and health regulations for construction. Any LSTF asbestos abatement
713 and worker protection rules also apply. All asbestos abatement must be performed by a
714 qualified asbestos abatement contractor with a supervisor ('competent person') trained in
715 accordance with OSHA and, if applicable, EPA standards, and workers trained in
716 accordance with the OSHA standard.
717

718 **D. Coastal Barrier Resources (24 CFR 50.4(c)(1)):** Under the Coastal Barriers Resources Act
719 cited in 24 CFR 50.4(c), HUD is prohibited from insuring a project located within designated
720 coastal barriers of the Atlantic Ocean, Gulf of Mexico, or the Great Lakes, known as Coastal
721 Barrier Resources System (CBRS) units, and shown on associated Fish and Wildlife Service
722 maps (see the Official CBRS Maps webpage at <https://www.fws.gov/cbra/maps/index.html>
723 for instructions on obtaining an official CBRS map and unit number). A project located
724 within a CBRS unit, or that includes a facility (such as a water main or a utility conduit)
725 leading to a a CBRS unit, will not be eligible for application processing. Additional
726 information can be found at: [https://www.hudexchange.info/programs/environmental-](https://www.hudexchange.info/programs/environmental-review/coastal-barrier-resources)
727 review/coastal-barrier-resources.
728

729 **E. Coastal Zone Management (24 CFR 50.4(c)(2)):** Projects located within a state's coastal
730 management zone must be found consistent with the approved state Coastal Zone
731 Management program. In many states, HUD will require a letter from the State Coastal Zone
732 Management Agency confirming consistency with the approved program. Lenders should be
733 aware of the extent of coastal management zones in coastal states and should contact the
734 HUD Field Environmental Officer when examining a proposal in a coastal zone. For
735 additional information, see the ORCF Environmental Resources webpage for access to
736 environmental topics on the HUD Exchange website.
737

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

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

746
747 2. A required consultation should be completed for any site within the critical habitat (as
748 defined in 50 CFR Part 17 and Part 226) of a listed species, but consultation may also be
749 required even if no critical habitat is present. As of 2015, critical habitat had been
750 designated for a little less than 50% of threatened and endangered species. The lack of
751 critical habitat is not an indicator of the presence or lack of presence of a listed species.
752

- 753 3. In areas where impacts on endangered or threatened species are a concern, all appropriate
754 information and the results of research regarding possible impacts of the project should be
755 provided to HUD as early as possible. Lenders are encouraged to contact Lean Thinking
756 ahead of application when Endangered Species review will be required.
- 757
- 758 4. The information that is provided to HUD and entered in the HEROS Environmental Report
759 should include review of published information, including but not limited to information
760 on the Services’ websites regarding the possible presence and associated critical habitat of
761 any listed species in the vicinity of the proposal (for example, the Information for Planning
762 and Consultation (iPaC) tool is available on the FWS website). Furthermore, if a proposal
763 is in an area of potential impacts on a listed species or its critical habitat, any possible
764 associated impacts caused by the proposal should be discussed in the HEROS
765 Environmental Report. Lenders and third-party consultants can request species lists,
766 prepare Biological Assessments for HUD’s review, and provide the information needed for
767 consultation, but HUD must initiate formal and informal consultation with the Services.
- 768
- 769 5. If the project involves a type of activity that could affect endangered/threatened species
770 or their habitat, HUD must make a determination of effect, which may be “no effect”,
771 “may affect, not likely to adversely affect” or “may affect, likely to adversely affect”.
- 772 a. HUD must document a “no effect” determination with scientific information or a
773 regional letter or memorandum but does not need to consult with the Services on
774 projects it determines will have no effect. The Services may have a regional letter,
775 memorandum or other document that allows HUD to make a No Effect
776 determination for projects that meet specific criteria.
- 777 b. HUD must seek concurrence of the Services on any “may affect, not likely to
778 adversely affect” determination and associated mitigation measures.
- 779 c. HUD must initiate formal consultation under Section 7 of the Endangered Species
780 Act for a “may affect, likely to adversely affect” determination.
- 781
- 782 6. For all effect determinations, the Lender may be required to obtain special studies such as
783 habitat assessments, surveys or biological assessments at the Borrower’s cost.
- 784
- 785 7. Consultation under Section 7 of the Endangered Species Act may result in more stringent
786 conservation measures than would otherwise be imposed.

787

788 **G. Environmental Justice (24 CFR 50.4(l)):**

- 789 1. Executive Order 12898, Federal Actions to Address Environmental Justice in
790 Minority Populations and Low-Income Populations, requires that federal actions not
791 result in disproportionately high and adverse health or environmental effects on
792 minority or low-income populations.
- 793 2. When a project impacts a minority or low-income population, or other disadvantaged
794 community (see Executive Order 14008), and there are unmitigated

795 adverse environmental impacts such as a location in a floodplain or a noise impacted
796 site, HUD will perform the necessary environmental justice analysis before
797 determining the acceptability of the project. A project that will receive a Low-Income
798 Housing Tax Credit and has unmitigated adverse environmental impacts is an
799 example of when environmental justice concerns should be evaluated.

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

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

807
808 **H. Explosive/Flammable Hazards (24 CFR 50.4(k)): HUD will not insure a property where**
809 **structures and residents will be exposed to unacceptable risks posed by proximity to**
810 **explosive or flammable hazards.**

811
812 1. For new construction projects, rehabilitation projects where residential density is
813 increased, projects where there is a conversion from non-residential to residential use, or
814 projects where a vacant building is made habitable:

815
816 a. Aboveground storage facilities with explosive or flammable material contents must
817 comply with the Acceptable Separation Distance (ASD) standards at 24 CFR Part 51
818 Subpart C, as amended by the final rule (85 FR4225, January 24, 2020) permitting the
819 application of National Fire Protection Association (NFPA) Code 58, 2017 edition, in
820 lieu of HUD ASD standards for residential propane tanks. Analysis of existing or
821 planned explosive or flammable aboveground hazards within one mile of these types
822 of projects must be submitted by the Lender and reviewed by HUD as part of the
823 HEROS review, as per the guidance on the HUD Exchange, which is accessible from
824 the ORCF Environmental Resources page.

825
826 For propane aboveground storage tanks (ASTs) between 125 gallons and 1,000
827 gallons water capacity, and meeting the NFPA 58 exemption, lenders must submit
828 documentation that the specific tanks meet NFPA Code 58 (2017 or more recent)
829 requirements, including separation distance. (See Section 7.3.H.5 below for
830 documentation requirements.) Propane ASTs under 125 gallons capacity are exempt
831 from the separation distance if the Lender documents that they meet all other 2017
832 NFPA Code 58 requirements. Guidance on NFPA 58 compliance and a sample
833 conformance memo are available on the ORCF Environmental Resources Page.

834
835 b. If a plan is agreed upon with HUD before the issuance of a Firm Commitment, these
836 hazards may be mitigated during the construction period prior to the final loan
837 closing, if the work can be done on the subject property. In cases where off-site
838 mitigation is required, the remediation must be completed prior to initial closing.

839
840 2. For existing projects to be refinanced or purchased that do not involve an increase in

841 residential density, HUD will substantively evaluate the risks associated with proximity
842 to hazardous facilities. HUD reviews of such projects will consider the potential danger
843 presented by existing and proposed liquid fuel and gas storage tanks based upon available
844 information, and may require mitigation.

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

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

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

862
863 3. A useful tool for calculating ASDs can be found on the ORCF Environmental Resources
864 Page.

865
866 4. If a barrier will be constructed as hazard mitigation, HUD's Barrier Design Guidance
867 (Guidebook 6600.G) for flammable/explosive hazards mitigation is available on the
868 ORCF Environmental Resources Page. Only a licensed professional engineer (civil or
869 structural) should design and oversee the construction of mitigation barriers.

870
871 5. **Compliance with NFPA 58:** Acceptable documentation that a propane AST not
872 exceeding 1,000 gallons capacity complies with NFPA 58 (2017) and is excluded from
873 coverage under 24 CFR part 51 Subpart C must be provided. (Note: Propane ASTs under
874 125 gallons capacity are exempt from ASD requirements if they comply with NFPA 58
875 (2017)):

876
877 a. In jurisdictions where NFPA 58 (2017) has been adopted into law, HUD relies on
878 enforcement by the jurisdiction. Therefore, all propane tanks of 1,000 gallons or less
879 in those locations are excluded from compliance with HUD's ASD requirements. In
880 these jurisdictions, citation to the NFPA website (which is accessible from the ORCF
881 Environmental Resources page) referencing the applicable state or local code is
882 sufficient to document that any tank in that jurisdiction containing propane of 1,000
883 gallons or less water volume is excepted from coverage under 24 CFR part 51, subpart
884 C.

885 b. In areas where the jurisdiction has not adopted NFPA 58 (2017) into law, an individual
886 propane tank may still comply with that policy based on inspection and maintenance
887 of the tank by the propane distributor, or another individual qualified to inspect propane
888 tanks*. To document that a propane tank of 1,000 gallons or less capacity is excluded
889 from coverage under 24 CFR 51 Subpart C in those locations, provide documentation
890 that the AST is located at an acceptable setback distance from buildings and property
891 lines (under NFPA 58 2017, tanks between 125 and 500 gallons require a setback of
892 10 feet from buildings or property lines, while tanks between 501 and 1,000 gallons
893 have a setback of 25 feet) and one of the following:

- 894 • The gas supplier or tank owner/operator has policies in place that utilize the 2017
895 or more recent NFPA Code 58 for inspection and filling (*provide records from the*
896 *gas supplier or tank owner/operator documenting this policy*); or
- 897 • The local Authority Having Jurisdiction (AHJ) utilizes and specifies current NFPA
898 58 in tank certification and permitting even though the 2017 version is not formally
899 adopted statewide (*provide records or communication from the local AHJ*); or
- 900 • A qualified person, such as an engineer who is familiar with NFPA 58 requirements
901 or a propane industry professional who has completed training to fill and handle
902 propane tanks per NFPA 58, has inspected the tank for the express purpose of
903 documenting compliance with NFPA 58 (2017) in support of the HUD
904 environmental review. The NFPA requires documented training on propane
905 handling procedures, with refresher training every three years, for anyone who
906 dispenses propane. (*Provide documentation of the individual making the*
907 *determination, their professional qualification, and date of the determination. A*
908 *sample letter that may be used as a template is available on the ORCF*
909 *Environmental Resources page*).

910 *Note: State departments of commerce may also be used as sources both to verify
911 current codes and to identify qualified propane inspectors.
912

913 I. **Farmlands Protection** (24 CFR 50.4(j)): The purpose of the Farmland Protection Policy Act
914 is to minimize the effect of Federal programs on the unnecessary and irreversible conversion
915 of important farmland to nonagricultural uses. Important Farmland includes prime farmland,
916 unique farmland, and/or land of statewide or local importance. Farmland subject to Farmland
917 Protection Policy Act requirements does not have to be currently used for cropland.
918

919 For new construction, HUD must consider whether the project will impact important farmland.
920 There are a few exemptions to the Farmland Protection Policy Act, including one for land
921 already in or committed to urban development. USDA/NRCS regulations contained at 7 CFR
922 658.2 define “already in urban development” as land with a density of 30 structures per 40-
923 acre area; lands identified as “urbanized area” (UA) on the Census Bureau Map or as urban
924 area mapped with a “tint overprint” on USGS topographical maps; or as “urban-built-up” on
925 the USDA Important Farmland Maps. Note that land “zoned” for development, i.e. non-
926 agricultural use, does not exempt a project from compliance with the FPPA. This requirement
927 applies only to new construction activities and the acquisition of undeveloped land.

928 this Additional information about farmland, including consulting with the USDA Natural
929 Resources Conservation Service, can be found on the ORCF Environmental Resources Page.

930
931 **J. Flood Insurance (24 CFR 50.4(b)(1)):** In accordance with 24 CFR 50.4(b)(1), and as
932 described in Production, Chapter 14, Section 7.H, flood insurance is required when any
933 portion of a structure is located in a 100-year floodplain.

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

942
943 1. A project located in the 100-year flood zone, also known as the Special Flood Hazard Area
944 (SFHA), has a 26% chance of flooding over the life of a 30-year mortgage. A project
945 located in the moderate flood hazard zone (500-year floodplain) has a 6% chance of
946 flooding over the life of a 30-year mortgage.

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

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

954 4. HUD will also require flood insurance on any building where the Advisory Base Flood
955 Elevations (ABFE) or preliminary FEMA Flood Insurance Rate Map (FIRM) indicates it
956 will be in a Special Flood Hazard Area. Additionally, Housing Approving Officials have
957 the discretion to require flood insurance for buildings located:

958 a. In the moderate flood hazard area (FEMA zones B or shaded X),

959 b. On a parcel that includes a SFHA (including those considered incidental for
960 floodplain management), in coastal areas not in a SFHA but subject to tidal flooding,
961 tsunami, wave action or storm surge, including Limit of Moderate Wave Action
962 (LiMWA) areas, and where topography or past flooding create a high risk for flood
963 events.

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

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

970 14, Section 7.H.

971
972 **K. Floodplain Management (24 CFR 50.4(b)(2), 24 CFR Part 55):**

- 973
974 1. All Section 232 projects are considered “Critical Actions” for Floodplain Management
975 purposes, as defined in 24 CFR 55.2(b)(3). Critical Actions include facilities that are
976 likely to contain occupants who may not be sufficiently mobile to avoid loss of life or
977 injury during flood or storm events. The 500-year floodplain is the minimum floodplain
978 of concern for Critical Actions and is the area subject to inundation from a flood having a
979 0.2 percent chance of occurring in any given year.
- 980
981 2. Applications for Firm Commitment for mortgage insurance are subject to
982 regulations regarding floodplain management found at 24 CFR Part 55 which
983 implements Executive Order 11988 (Floodplain Management).
- 984
985 3. If any part of the site or integral offsite development (i.e., ingress, egress and/or
986 parking) is located within the 100-year floodplain or within a 500-year floodplain
987 for critical actions, according to the best available data, the project must comply
988 with HUD’s Floodplain Management regulations.
- 989
990 4. Lenders must provide the effective Federal Emergency Management Agency
991 (FEMA) Flood Insurance Rate Map (FIRM) with the subject site(s) clearly marked
992 to determine whether the project is in or near a floodplain. In most areas, FIRMs
993 are available online through the FEMA Map Service Center.
- 994
995 5. In addition, the Lender must provide any FEMA-supplied pending or preliminary FIRMs
996 or studies, or Advisory Base Flood Elevations (ABFE) for the site. During its Floodplain
997 Management review, HUD must use the latest of these sources, or as otherwise required
998 by current standards in 24 CFR part 55. If FEMA information is unavailable or
999 insufficiently detailed, other Federal, state, or local data may be used as the “best
1000 available information”. However, a base flood elevation from an interim or preliminary
1001 or non-FEMA source cannot be used if it is lower than the current FIRM. An online
1002 resource for finding the relevant FIRM and ABFE may be found on the ORCF
1003 Environmental Resources page located on the Section 232 Program website. FEMA
1004 issues ABFEs after major flood disasters, such as Hurricane Sandy, and disseminates
1005 them by region.
- 1006
1007 6. FEMA maps indicate floodplains as follows:
- 1008 a. 100-year floodplains (a.k.a. the Special Flood Hazard Area (SFHA) and the 1%
1009 annual chance floodplain) are designated as Zone A1–30, AE, A, AH, AO, AR, or
1010 A99.
- 1011 b. 500-year floodplains (a.k.a. the moderate flood hazard area and the 0.2% annual
1012 chance floodplain) are designated as Zone B or a shaded Zone X.
- 1013 c. Floodways are the portion of the floodplain which is effective in carrying the flow of
1014 flood waters, where the flood hazard is generally the greatest, and where water depths

- 1015 and velocities are the highest. Floodways are designated as hatched areas within a
1016 100-year floodplain.
- 1017 d. Coastal high hazard areas are areas subject to high velocity waters and wave action,
1018 and they are designated as Zone V1–30, VE, or V.
- 1019 e. Limit of Moderate Wave Action (LiMWA) are coastal areas in updated FEMA maps
1020 that are outside of the coastal high hazard area, but which are expected to receive
1021 between 1.5 and 3 foot breaking waves during a 1% annual chance flood. LiMWAs
1022 are designated with an informational line.
- 1023 f. Areas where FEMA has not completed a detailed study sufficient to identify the flood
1024 risk are designated as Zone D. As these areas have the potential for unidentified flood
1025 hazards, HUD will rely on best available information to assess risk.
- 1026
- 1027 7. Due to the potential for significant wave damage in Limit of Moderate Wave Action
1028 (LiMWA) areas, HUD will not approve applications for any new construction, or
1029 substantial improvement as defined at 24 CFR 55. 2(b)(10), on sites in the LiMWA.
1030 HUD strongly discourages approving currently uninsured 232/223(f)s or currently
1031 insured CEST or EA level projects in the LiMWA, and will only do so if the work meets
1032 the current standards for coastal high hazard areas in FEMA regulations (44 CFR
1033 60.3(e)). HUD will consider approving currently insured CENST level refinance
1034 transactions on a case by case basis. (The terms CENST, CEST, and EA are defined in
1035 Section 7.1.B).
- 1036
- 1037 8. Mortgage insurance shall not be approved for a property located in: (a) a floodway, (b) a
1038 coastal high hazard area, or (c) a FEMA identified Special Flood Hazard Area (SFHA) in
1039 which the community has been suspended from or does not participate in the National
1040 Flood Insurance Program. In addition, the only access to a property must not be through a
1041 floodway.
- 1042
- 1043 If a stream coursing through a proposed site is designated as being in the 100-year
1044 floodplain according to FEMA’s best available data, but there is no designated
1045 floodway area (a so-called “regulatory floodway”), development will be prohibited
1046 in the channel of the stream.
- 1047
- 1048 9. In considering the safety of residents, offsite floodways and other flood hazards will be
1049 evaluated in terms of separation distance, elevation differences, and the nature of the
1050 hazard in question. Unacceptable proximity to hazards may result in rejection of the
1051 application.
- 1052
- 1053 10. Exceptions to Part 55 requirements: 24 CFR 55.12(c) lists categories of proposed actions
1054 for which the floodplain management requirements in 24 CFR 55 are not applicable. The
1055 following exceptions are included in Part 55.12(c):
- 1056
- 1057 a. Part 55.12(c)(7) provides an “incidental portion” exception, when only an
1058 incidental portion of the project site is in the 100-year or 500-year floodplain, and
1059 the following conditions are met:
- 1060 i. All construction (including existing improvements) or landscaping

1061 activities (except for minor grubbing, clearing of debris, pruning, sodding,
1062 seeding, etc.) must not occupy or modify the relevant floodplain. Due to
1063 the constraint that activities must “not occupy or modify” the floodplain,
1064 the 100-year or 500-year floodplain cannot be utilized in the development
1065 or support of any project activity, except as passive open or green space.
1066 Open space is a portion of a development site that is permanently set aside
1067 for public or private use and will not be developed. Green space is
1068 considered to be undeveloped land or land restored to its natural state. **The**
1069 **incidental exception does not apply to sites that plan to bring in fill for a**
1070 **Letter of Map Revision because the fill modifies the floodplain.**

1071
1072 ii. Appropriate provision is made for site drainage; and

1073
1074 iii. In accordance with 24 CFR 55.12(c)(7)(iii), a protective covenant or
1075 comparable restriction must be placed on the property’s continued use to
1076 preserve the 100-year or 500-year floodplain. The covenant or comparable
1077 restriction must run with the land to provide for permanent preservation of
1078 the floodplain, and must not be dependent on the mortgage instrument. **A**
1079 **restriction that is contained in a document that would expire at the**
1080 **conclusion of the HUD-insured mortgage does not meet the requirement**
1081 **for permanent preservation of the floodplain.**

1082
1083 A template for a compliant covenant is available online on the ORCF
1084 Environmental Resource page.

1085
1086 b. 24 CFR Part 55 requires the completion of a 5-step or 8-step decision making process
1087 when a project site is located in a 100-year floodplain, or in a 500-year floodplain for
1088 critical actions, according to FEMA’s best available data or as otherwise required by
1089 current standards in 24 CFR part 55. However, the requirement for a decision making
1090 process does not apply if the project will not impact a wetland and FEMA has issued
1091 a Conditional Letter of Map Amendment (CLOMA) or of Map Revision (CLOMR)
1092 removing the entire site from the 100-year and 500-year floodplain (see 24 CFR
1093 55.12(c)(8)).

- 1094 • If the Borrower has a CLOMA or CLOMR, HUD approval for a Firm
1095 Commitment will be conditioned on the Borrower: (1) meeting the requirements of
1096 the CLOMA or CLOMR; (2) obtaining a Final Letter of Map Amendment
1097 (LOMA) or Map Revision (LOMR) removing the entire property from the
1098 applicable floodplain prior to Final Endorsement; and, (3) maintaining flood
1099 insurance on any building during the construction period until the LOMA or
1100 LOMR is issued.
- 1101 • If any portion of the HUD-insured property remains in the floodplain after the
1102 CLOMA/CLOMR, the project will not qualify for this exception and must proceed
1103 with a 5- or 8-step decision making process.

1104
1105 11. New Construction and Substantial Improvement Projects:

1106 Section 232 sites for new construction and substantial improvement, as defined at
1107 24 CFR 55. 2(b)(10), in 100-year or 500-year floodplains are strongly discouraged.
1108 Such sites in the applicable floodplain according to the best available data will not
1109 be considered for mortgage insurance unless the following steps are taken:

1110 a. HUD must determine if there may be extraordinary circumstances leading
1111 to the conclusion that there are no practicable alternatives to the project site
1112 being in the floodplain. ~~is to~~ In order to make this determination, HUD
1113 must conduct an 8-step decision making process that includes publishing
1114 two public notices and taking comments, as summarized in 24 CFR 55.20.
1115 Additional guidance, including an example 8-step process and sample
1116 notices, is available on the HUD Exchange website, which is accessible
1117 from links on the ORCF Environmental Resource page. Prior to issuing the
1118 first public notice, HUD will need detailed information regarding how the
1119 property will be altered and the improvements designed. This information
1120 includes the elevation of the property, the elevation of the floodplain, the
1121 location of life support systems and other data that may be necessary to
1122 assess the safety of the site.

1123 i. For projects involving new construction in a SFHA, the 8-step
1124 process will require as a condition of approval that a CLOMA or
1125 CLOMR be issued for the project buildings prior to initial closing,
1126 and a LOMA or LOMR be issued prior to final closing.

1127 ii. Flood insurance must be maintained on any building in the SFHA
1128 during the construction period until the issuance of a LOMA or
1129 LOMR.

1130 b. The 8-step process shall require that the lowest floor of new construction in
1131 a 100-year or 500-year floodplain be elevated at or above the 100-year
1132 flood level according to FEMA's best available data, plus two feet of
1133 freeboard. Such elevation would also apply to driveways, walkways,
1134 parking areas and any exterior mechanical equipment and supportive
1135 services (e.g. generator pad, aboveground fuel storage tank, etc.). If higher
1136 elevations are required by locally adopted code or standards, those higher
1137 standards apply.

1138 c. Substantial rehabilitation projects must elevate or mitigate following
1139 National Flood Insurance program requirements (as instituted by state and
1140 local codes).

1141 d. All critical actions must comply with the requirements of 24 CFR 55.20(e),
1142 also known as Step 5 of the decision making process. See 7.3.K.12 below
1143 for a list of exhibits that must be submitted with the mortgage insurance
1144 application to document compliance with Step 5.

1145 e. The 8-step process shall be completed before issuance of the Firm
1146 Commitment.

1147 f. HUD must approve the two notices but the costs of publication will be
1148 borne by the Borrower.

1149 g. The 8-step process shall consider three alternatives: the action as proposed,
1150 modifications within the aggregated project site, or no action; i.e., rejection
1151 of the application.

1152 h. Projects that are converting from a non-residential use to a residential use
1153 are considered the same as “new construction” for floodplain management
1154 purposes.

1155
1156 12. As required by 24 CFR 55.20(e), all critical actions in the 100-year or 500-year
1157 floodplain according to FEMA’s best available data or as otherwise required by
1158 current standards in 24 CFR part 55 shall include:

- 1159 a. Preparation of and participation in an early warning system. To document
1160 compliance with this requirement, the application must indicate the specific
1161 method(s) used to monitor weather conditions and flooding alerts.
1162 b. An emergency evacuation and relocation plan. The application must
1163 provide names and addresses of like facilities (i.e., similar residential
1164 healthcare facilities) that have agreements or contracts with the subject to
1165 serve as temporary relocation sites for the subject’s residents.
1166 c. Identification of evacuation route(s) out of the 500-year floodplain.
1167 For documentation, include road maps and the flood zone designations of
1168 the relocation sites. The relocation sites must be located outside the 500-
1169 year floodplain.
1170 d. Identification marks of past or estimated flood levels on all structures. The
1171 markings need to be permanent, and located in a public area to “enhance
1172 public awareness of and knowledge about flood hazards”. A metal plaque
1173 which is permanently installed on the exterior of the building will be
1174 acceptable. The application exhibit should include the
1175 information/calculation used to determine the estimated flood level.

1176
1177 While 100-year flood levels can often be found on the FIRM, 500-year
1178 flood levels are not typically shown on the maps. Methods that can be used
1179 to estimate the 500-year flood level include the following:

- 1180 i. The 500-year flood level may be available in the Flood Insurance
1181 Study (FIS) which is accessible on the FEMA website, or by
1182 contacting the Community’s Floodplain Manager, municipal
1183 planning office or building official.
1184 ii. By multiplying the nearby Base Flood Elevation - BFE (i.e., 100-
1185 year flood level) by a factor of 1.25 (applicable in low-lying areas,
1186 coastal regions).
1187 iii. By using the elevation that results from using the freeboard value.
1188 For critical actions this is reached by adding an additional 3 feet to
1189 the nearby 100-year BFE.
1190 e. Exception to flood level marks: If it has been determined that
1191 identification marks cannot be placed on the building(s) because of items i
1192 and ii below, then the application must include the results of research into
1193 these issues and a description of why flood level identification marks on
1194 the building cannot be provided. The description must address both i and ii
1195 below.
1196 i. There are no indications or evidence that the building has
1197 experienced past floods; and

- 1198 ii. There are no estimated flood levels available. For example:
1199 1. the building is located outside the 100-year and 500-year
1200 floodplains; or
1201 2. the building is located in a 100-year or 500-year floodplain
1202 and FEMA has not established a flood elevation that allows
1203 a reasonable estimate to be made for the subject building,
1204 such as when there is no 100-year BFE in the vicinity at a
1205 reasonably comparable elevation.

1207 13. Abbreviated 8-step Decision Making Process (The 5-step process)

1208 For Section 232/223(f) purchase or refinancing actions described in 24 CFR 55.12(a)(2),
1209 or non-substantial repair, rehabilitation, modernization, weatherization or improvement
1210 actions described in 24 CFR 55.12(a)(3), a 5-step decision making process pursuant to 24
1211 CFR 55.12(a) may be used by HUD to determine their acceptability. The abbreviated
1212 process eliminates the two public notices and the alternatives analysis required by the full
1213 8-step process. Detailed information about the proposed actions, and about any plans for
1214 mitigation, must be submitted with the application. HUD will evaluate risks and
1215 mitigation measures in making its decision but it discourages these actions if either the
1216 lowest floor, or the life support facilities, or egress and ingress of the existing building,
1217 are below the 100-year base flood elevation.

- 1218 • Compliance with 24 CFR 55.20(e) is required as part of the 5-step process for Section
1219 232 projects. See 7.3.K.12 above for a list of exhibits that must be submitted with the
1220 mortgage insurance application to document compliance with Section 55.20(e).
- 1221 • The abbreviated review process shall be completed by HUD before issuance of the Firm
1222 Commitment.

1224 14. Where a site does not appear to be located in the floodplain on official FEMA
1225 maps, but shows evidence of flooding, HUD is not precluded from qualitatively
1226 evaluating the acceptability of the site.

1228 15. Lenders will be required to provide extensive data to aid HUD in evaluating floodplain
1229 sites.

1231 16. The cost of floodplain mitigation may be included in the proposed mortgage loan.

1233 17. Section 232/223(a)(7) and FHA-insured Section 232/223(f) refinances: Pursuant
1234 to 24 CFR 50.19(b) (21), refinances of currently FHA-insured mortgages are
1235 exempt from the 8-step decision making process when the refinance will not result
1236 in any physical impacts or changes except for routine maintenance (CENST).
1237 Guidance for clarifying the difference between routine maintenance and repair is
1238 available on the ORCF Environmental Resources page. In particular, the
1239 following are required for all Section 232 applications when the project site is
1240 located in a 100-year or 500-year floodplain. (See Section 7.3.K.12 for additional

1241 information regarding these items.)

1242 a. Preparation of and participation in an early warning system;

1243 b. An emergency evacuation and relocation plan;

1244 c. Identification of evacuation route(s) out of the 500-year floodplain.

1245
1246 **L. Historic Preservation (24 CFR 50.4(a)):**

1247
1248 1. HUD must comply with the National Historic Preservation Act (54 U.S.C. § 300101 et
1249 seq.) and its implementing regulations at 36 CFR Part 800. Section 106 of the National
1250 Historic Preservation Act (NHPA) requires Federal agencies to take into account the
1251 effects of their undertakings on historic properties, consult with the State Historic
1252 Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer as appropriate,
1253 and to afford the Advisory Council on Historic Preservation a reasonable opportunity to
1254 comment. The process is known as Section 106 review.

1255
1256 2. The Section 106 review must be completed before HUD approves and/or commits funds
1257 to a project. Additional guidance on historic consultation is available on the ORCF
1258 Environmental Resource page.

1259
1260 3. Pursuant to the “anticipatory demolition” requirements of Section 110(k) of the NHPA,
1261 even before the application submission takes place, any action by a potential Lender or
1262 Borrower, or any action by another party that the Lender or Borrower has the legal power
1263 to prevent, which is taken with the intent to circumvent Section 106 review and that
1264 significantly adversely affects a historic property, could result in rejection of an
1265 application.

1266
1267 4. Applications for Firm Commitment for HUD mortgage insurance are considered “federal
1268 undertakings” that require HUD to make a determination of no historic properties
1269 affected, no adverse effect, or adverse effect upon historic properties. There are three
1270 exceptions, listed below. If applicable, a statement identifying the exception and
1271 supporting documentation must be included in the application.

1272 Exceptions:

1273 a. Categorical exclusions not subject to related laws and authorities (CENST) under 24
1274 CFR 50.19(b)(21).

1275 b. Projects that will not involve new construction or rehabilitation, nor result in any
1276 physical impacts or changes except for routine maintenance, have No Potential to
1277 Cause Effects under 36 CFR 800.3(a)(1), and HUD has no further obligations under
1278 Section 106 or 36 CFR Part 800. To determine if a project qualifies for this
1279 exception, please see HUD Notice CPD-16-02 “Guidance for Categorizing an
1280 Activity as Maintenance for Compliance with HUD Environmental Regulations, 24
1281 CFR Parts 50 and 58” (or succeeding guidance), which is available on the ORCF
1282 Environmental Resource page. For such transactions there is no obligation to contact
1283 the SHPO, and historic preservation responsibilities are limited to documenting this
1284 determination in HEROS by marking “No Potential to Cause Effects” on the Historic
1285 Preservation Screen and uploading a copy of relevant documentation.

1286
1287 c. Some states have a Programmatic Agreement (PA) with HUD, and the proposal may
1288 be part of a class of actions that do not require Section 106 consultation under the PA.
1289 HUD’s historic preservation responsibilities are limited to documenting this
1290 determination in HEROS by marking the Programmatic Agreement selection on the
1291 Historic Preservation screen, uploading the PA into HEROS, and copying the
1292 applicable part of the PA agreement into HEROS. Information about states with Part
1293 50 Programmatic Agreements is available on the ORCF Environmental Resource
1294 page.

1295
1296 5. If an exception does not apply, HUD must conduct a Section 106 review and make a
1297 finding of effect. HUD has determined that Lenders and their authorized representatives
1298 may act on behalf of HUD to consult with SHPOs and other consulting parties to initiate
1299 the Section 106 review process, identify and evaluate historic properties, and assess
1300 effects. A link to the Delegation Memorandum for Section 106 Consultation is available
1301 on the ORCF Environmental Resource page.

1302
1303 • Lenders that do not use the delegated process must still provide HUD the
1304 information required in 7.3.L.5.c below.

1305
1306 • This delegation does not extend to consultation with Tribes. HUD must initiate
1307 and conduct tribal consultation.

1308
1309 a. A historic property means any prehistoric or historic district, site, building, structure,
1310 object, or traditional property or landscape included in, or eligible for inclusion in, the
1311 National Register of Historic Places maintained by the Secretary of the Interior.
1312 HUD must also consider the area of potential effect (APE), which is often the site
1313 boundary, but may be the block on which the site is located or the immediate site
1314 environs.

1315
1316 b. After the APE is defined, and historic properties within it are identified, the potential
1317 impacts to those historic properties may be evaluated. Because of the technical nature
1318 of historic property identification, evaluation and treatment, it may be appropriate to
1319 retain a qualified historic preservation professional to prepare the findings. Such
1320 consultant should meet the Secretary of the Interior’s Professional Qualifications (36
1321 CFR Part 61) and have experience in Section 106 reviews.

1322
1323 c. The material provided to the SHPO should include a narrative explaining the
1324 proposal, including a description of the project as is, and the proposed project
1325 activities, construction and/or alterations and repairs; a map identifying the site
1326 location and proposed Area of Potential Effect (APE); a list of potential interested
1327 consulting parties that have been or will be invited to consult; a description of
1328 identified historic properties (listed and eligible); digital photos of buildings and
1329 setting; a description of direct or indirect effects on the historic properties; and a
1330 determination of No Historic Properties Affected, No Adverse Effect, or Adverse
1331 Effect. The information must be submitted to the SHPO following the procedures

1332 outlined by the individual SHPO office.

1333
1334 d. Lenders and their authorized representatives using the delegated process must include
1335 a copy of HUD's delegation Memorandum with each submission to the SHPO. The
1336 submission must include the information discussed in 7.3.L.5.c above, plus the HUD
1337 program followed by the section of the National Housing Act and an appropriate
1338 contact person at both the Lender's organization and the authorized representative
1339 hired to coordinate the review.

1340
1341 e. For Lenders and their authorized representatives using the delegation, if a project
1342 involves demolition of a building over 45 years old, new construction in or adjacent
1343 to a historic district, substantial ground disturbance, or exterior rehabilitation of a
1344 building more than 45 years old, Lenders must retain a Qualified Historic
1345 Preservation Professional in the discipline relevant to the project activities to prepare
1346 submissions to the SHPO, manage consultation with interested parties and the public,
1347 and coordinate with HUD on HUD's tribal consultation.

1348
1349 A Qualified Historic Preservation Professional is one who meets the Secretary of the
1350 Interior's Professional Qualifications Standards for Archeology, History,
1351 Architectural History, Architecture, or Historic Architecture and has substantial
1352 experience in conducting Section 106 reviews of historic properties. Detailed
1353 information can be found at https://www.nps.gov/history/local-law/arch_stnds_9.htm.
1354

1355 f. All submission materials, a copy of the letter to the SHPO and a copy of the response
1356 must be included in the HEROS Environmental Report along with any comments
1357 received from consulting parties and the public. HUD remains legally responsible for
1358 all findings and determinations, regardless of who initiates the Section 106 review.
1359 HUD will independently review and confirm the APE, the determination of effect
1360 finding and the SHPO's response and may request additional information if needed.
1361 Only HUD staff can complete the HEROS Historic Preservation screen by
1362 documenting whether compliance steps or mitigation are required.

1363
1364 g. The SHPO has 30 calendar days to respond from receipt of an adequately documented
1365 submission. If the submission is inadequate, the SHPO may request additional
1366 information and the 30-day clock resets to the date that SHPO receives it.

1367
1368 6. Because of the technical nature of historic property identification, evaluation and treatment,
1369 it may be appropriate to retain a Qualified Historic Preservation Professional to prepare the
1370 initial consultation and supporting documentation even for projects where HUD is
1371 conducting the consultation directly or for delegated projects that do not otherwise require
1372 it. Such consultant should meet the Secretary of the Interior's Professional Qualifications
1373 Standards (36 CFR Part 61) and have experience in Section 106 reviews. Examples of when
1374 retention of a qualified historic preservation professional may be appropriate include when
1375 National Register eligibility of a property is unclear, when adverse effects are expected,

1376 when the property contains archeological sites, and/or when the project is controversial.

1377
1378 7. For a No Historic Properties Affected or No Adverse Effect determination, after a SHPO
1379 concurrence has been received and/or 30 calendar days after the SHPO's receipt of an
1380 adequately documented finding have elapsed without objection from the SHPO or consulting
1381 parties, obligations under Section 106 are fulfilled.

1382 a. No Historic Properties Affected is appropriate when there are no historic properties or
1383 there are no direct or indirect effects on historic properties.

1384 b. No Adverse Effect is used when there is an historic property that is affected by the
1385 project, but the effects are not adverse.

1386
1387 8. HUD will participate in and complete the Section 106 process when: an undertaking may
1388 adversely affect a historic property or historic district; there is a disagreement between the
1389 applicant or their authorized representative and the SHPO regarding identification and
1390 evaluation or historic properties and/or assessment of effects; there is potential for a
1391 foreclosure situation per 36 CFR 800.9(b) or anticipatory demolition as specified in Section
1392 110(k) of the National Historic Preservation Act; there is an objection from Tribes,
1393 consulting parties or the public regarding their involvement in the review process,
1394 recommended Section 106 findings and determinations, or the implementation of agreed
1395 upon provisions; or HUD deems the consultation record inadequate. This process may result
1396 in a design change, research and preservation, salvage, or in rare cases, rejection of the
1397 application for Firm Commitment. Consultation to resolve adverse effects may take
1398 considerable time and must be completed generally through execution of a Memorandum of
1399 Agreement (MOA) before a commitment can be issued.

1400
1401 9. Tribal Consultation:

1402 a. When Section 106 consultation is required, consultation with federally recognized
1403 Indian tribes and Native Hawaiian Organizations may be required as part of the
1404 Section 106 process. Not all projects that require Section 106 review require
1405 consultation with Indian tribes. Consultation with federally recognized tribes is only
1406 required when a project includes activities that have the potential to affect historic
1407 properties of religious and cultural significance to tribes. These types of activities
1408 include:

- 1409 • ground disturbance (digging),
- 1410 • new construction in undeveloped natural areas,
- 1411 • introduction of incongruent visual, audible, or atmospheric changes,
- 1412 • work on a building or structure with significant tribal association, or
- 1413 • transfer, lease or sale of historic properties of religious and cultural significance.

1414
1415 Further guidance on Tribal Consultation is provided in HUD Memorandum, "Section 106
1416 Tribal Consultation in Projects Reviewed Under 24 CFR Part 50", which can be accessed
1417 from the ORCF Environmental Resources page.

1418
1419 b. When tribal consultation is required, the Lender will utilize the HUD Tribal Directory

1420 Assessment Tool (TDAT) (see the ORCF Environmental Resources Page) to
1421 determine if the site is located in an area where a Tribe has indicated interest or
1422 significance, and will present this information to HUD.

1423
1424 c. When tribal consultation is required, the Lender must submit the same information
1425 discussed in Section 7.3.L.5.c to HUD in the form of draft letters to each Tribe, with
1426 photos, maps and exhibits attached. HUD will review the information, prepare the
1427 letters on HUD letterhead, and mail or email the letters, as appropriate for each Tribe.

1428
1429 d. Only HUD can consult with the Tribes.

1430
1431 e. The tribal consultation requirement applies to properties off tribal lands as well as on
1432 tribal lands. Properties with religious and cultural significance to native people may
1433 include ancestral archaeological sites and natural areas where traditional practices or
1434 ceremonies have been carried out as well as more familiar historic properties. Some
1435 traditionally used places have very strong religious associations, and it may be
1436 difficult or even inappropriate for native people to talk about their significance. If
1437 this situation arises, hiring a qualified professional with experience in tribal
1438 consultation may be required.

1439
1440 10. Project Construction/Ground Disturbance: Any contractor must stop construction if
1441 there are (actual or suspected) archeologic site conditions, human remains or cultural
1442 resources found. HUD must be notified in such instances. Construction must not
1443 resume without Tribal/Historic clearance. Therefore, when a project involves ground
1444 disturbance, the environmental review and Firm Commitment will include the
1445 following requirement:

1446
1447 • Archaeological Site, Human Remains, or Cultural Resources of Tribal or
1448 Historic Interest:

1449 If an archaeological site, human remains, or cultural resources of historic or
1450 tribal interest are revealed during the project's construction, the project manager
1451 must immediately stop work in the area of the discovery and notify HUD within
1452 48 hours. HUD will contact the State Historic Preservation Officer (SHPO),
1453 participating tribes and other consulting parties and continue Section 106
1454 consultation. If ground disturbance is to occur after the loan closing, the closing
1455 package must contain a certification of this condition from the borrower.

1456
1457 11. For projects receiving federal and/or state historic tax credits (HTC) the HTC process
1458 does not replace HUD's obligations under Section 106. Projects with HTC must still
1459 consult with the SHPO, Tribes, other consulting Tribes and the public as appropriate.
1460 The materials used in the HTC application (Parts 1 and 2) should be useful in the
1461 Section 106 consultation.

1462
1463 12. The cost of historic preservation mitigation may be included in the proposed mortgage loan.
1464

1465 **M. Housing Requirements – Additional Nuisances and Hazards:**

- 1466 • See Section 7.4 Additional Nuisances and Hazards

1467

1468 **N. Lead Based Paint:**

- 1469 1. Lead-based paint (LBP) may be present in buildings built prior to 1978. During any
1470 proposed repair work, the removal and disposal of the LBP must be performed in
1471 accordance with regulations as published and enforced by the State and the Department
1472 of Labor - Occupational Safety and Health Administration (OSHA). If required,
1473 appropriate lead paint remediation can be a required Firm Commitment condition on the
1474 HEROS Form HUD-4128. LSTF lead based paint requirements must be complied with.
- 1475
- 1476 2. HUD’s lead-based paint requirements at 24 CFR Part 35 are applicable to housing built
1477 before 1978, but do not apply to housing designated exclusively for the elderly or persons
1478 with disabilities or any 0-bedroom dwelling, unless a child of less than 6 years of age
1479 resides or is expected to reside in such housing. . With the exception of Section this
1480 7.3.N., HUD’s lead-based paint requirements are not applicable to rehabilitation,
1481 refinancing or purchase of health care facilities under Section 232.

1482

1483 **O. Noise Analysis (24 CFR 50.4(k)):**

- 1484
- 1485 1. New Construction/Conversion Projects: HUD standards regarding the acceptability of
1486 noise impacts on residential property are found at 24 CFR Part 51, Subpart B; these
1487 standards must be met for new construction and conversion from nonresidential to
1488 residential projects. Where a project is within the criteria on distance from noise
1489 generators, a noise analysis utilizing the methodology in the most current version of
1490 HUD’s Noise Guidebook will be performed as part of HUD’s environmental assessment.
1491 HUD’s automated Day/Night Noise Level electronic assessment tool is available on the
1492 ORCF Environmental Resource Page.
- 1493
- 1494 a. Standards: The degree of acceptability of the noise environment at a site is
1495 determined by the sound levels external to buildings or other facilities
1496 containing noise sensitive uses. The standards shall usually apply at a location
1497 2 meters (6.5 feet) from the building housing noise sensitive activities, in the
1498 direction of the predominant noise source. Where the building location is
1499 undetermined, the standards shall apply 2 meters (6.5 feet) from the building
1500 setback line nearest to the predominant noise source. The standards shall also
1501 apply at other locations where it is determined that quiet outdoor space is
1502 required in an area ancillary to the principal use on the site.
- 1503 i. For new construction and conversions from non-residential to residential
1504 located above the noise threshold criteria, projects shall incorporate noise
1505 attenuation features as required by HUD environmental criteria and
1506 standards at 24 CFR 51.104. The interior standard is 45 dB (decibels).
- 1507 ii. Sites with a day-night average exterior noise level of 65 DNL (Day Night
1508 Level) and below are acceptable.
- 1509 iii. HUD assistance for the construction of new noise sensitive uses is
1510 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. Approvals in this noise zone require a minimum of 5 dB additional sound attenuation for buildings having noise-sensitive uses if the day-night average sound level is greater than 65 dB but does not exceed 70 dB, or a minimum of 10 decibels of additional sound attenuation if the day-night average sound level is greater than 70 dB but does not exceed 75 dB. Where the sound attenuation is determined using the online Sound Transmission Classification Assessment Tool (STraCAT), the required attenuation value provided by the tool may be used (<https://www.hudexchange.info/stracat/>).

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.

1557
1558 3. The HUD noise regulation allows flexibility for non-acoustic benefits in limited situations.
1559 The project must meet all of the conditions at 24 CFR 51.105 and receive the approval of
1560 a Regional or Field Environmental Officer.

1561
1562 4. Railroad Noise, and Location:

1563 a. For new construction applications, a noise study for the railroad should be
1564 projected out 10 years to cover increased usage of the railway tracks.

1565 b. A rail line may not bisect a property, nor should a rail line's right-of-way
1566 generally encroach upon the site. Whenever rail lines are less than 100 feet from
1567 a facility, approval should be obtained prior to the application submission.

1568 c. Railyards (areas of multiple track sections used for assembling and disassembling
1569 trains) have been determined to create loud, impulsive sounds. For projects within
1570 3,000 ft of actively operating rail yards, HUD may require up to 8 dB additional noise
1571 attenuation to be incorporated in the project. In determining whether this is necessary,
1572 HUD will consider the impact of existing or proposed barriers, topography, and nature
1573 of the rail yard operations.

1574
1575 P. Radon

1576 Background. One common constituent of soil and rock is the unstable element
1577 uranium. One of the decay products of uranium is radon, a colorless, odorless gas.
1578 Under certain natural conditions, the radon gas can enter surface soils and become
1579 part of the "soil gas" environment, which then can enter the air, including air inside of
1580 buildings. When soil gas that contains radon enters a building, radon and its decay
1581 products are either directly inhaled, or attached to dust on walls, floors and in the air,
1582 which then can be inhaled. These decay products then undergo further decay,
1583 resulting in the release of subatomic alpha particles. This alpha particle radiation can
1584 cause mutations in lung tissue which can lead to lung cancer. The risk of contracting
1585 lung cancer from radon increases with an increase in the concentration of radon in the
1586 air that is breathed by building occupants. EPA recommends mitigation for residences
1587 with radon concentrations at or above 4 picocuries per liter of air (pCi/L).

1588 General Requirements:

1589 1. Radon Report

1590 a. The radon report is required for all mortgage insurance applications, unless an
1591 exception listed in Section 7.3.P.3 applies.

1592 b. The radon report shall be included in the application, as applicable. For new
1593 construction, or substantial rehabilitations or conversions where early testing is
1594 not feasible, the radon report must be submitted to HUD after construction is
1595 complete but prior to HUD's final inspection. Applications (including those for
1596 which early testing is not feasible) must include the radon mitigation system in the
1597 architectural plans, as HUD relies on the Project Architect to design and incorporate
1598 any required radon mitigation system consistent with the relevant standard. HUD
1599 encourages the Architect to seek technical advice from a radon professional should

1600 the Architect believe it to be necessary in their professional judgment or if it is
1601 required by the relevant mitigation standard.
1602 c. The radon report shall follow the protocols and reporting requirements set forth in the
1603 American Association of Radon Scientists and Technologists, Protocol for
1604 Conducting Measurements of Radon and Radon Decay Products in Schools and
1605 Large Buildings (ANSI/AARST MALB-2014 with 1/2021 REVISIONS, or most
1606 recent edition). The report shall include the results of any testing performed, the
1607 sampling strategy as applicable, the details of any mitigation deemed necessary, and
1608 the timing of any such mitigation. The radon report must be signed and certified as to
1609 its compliance with the requirements of this section by a Radon Professional and
1610 must include copies of appropriate certifications and/or licenses.

1611 2. Radon Professional

1613 a. All testing of existing properties, post-construction testing, and any mitigation must
1614 be performed by, or under, the direct supervision of a Radon Professional, in
1615 accordance with the protocols referenced in this section.

1616 b. Radon Certification/License of the Radon Professional is required as follows:

- 1617 i. Certification from either the American Association of Radon Scientists and
1618 Technologists (AARST) National Radon Proficiency Program (NRPP) or the
1619 National Radon Safety Board (NRSB); and
- 1620 ii. Certification/License from the state in which the testing or mitigation work is
1621 being conducted, if the state has this requirement.

1622 3. Exceptions to Radon Report

1624 a. A Radon Professional may conclude that testing or mitigation is not necessary based
1625 on exemptions laid out in the relevant state or ANSI/AARST radon standard. Any
1626 such justifications as to why testing or mitigation is not necessary must be provided in
1627 the application, in the form of a signed letter from the radon professional that
1628 references the appropriate standard. Housing staff will determine whether to grant the
1629 exception.

1630 b. A radon report is not required for applications that are categorically excluded not
1631 subject to the laws and authorities at 50.4 (CENST) as per 24 CFR 50.19(b) (21) (see
1632 7.1.B.1, above).

1633 c. Applicants are encouraged to test for radon even if a radon report is not required per
1634 the exceptions above. Any such testing must follow the testing protocols and resident
1635 notification protocols below, and must then be incorporated within a radon report as
1636 described within this section. If the results of such testing indicate levels of radon
1637 above the threshold for unacceptability, mitigation as described in this section is
1638 required, with the mitigation requirements for Section 223(a)(7) projects the same as
1639 those for 223(f) projects.

1640 4. Testing Protocols

1642 a. Radon testing must follow the protocols set by ANSI/AARST MALB, most recent
1643 edition. This includes testing 100% of ground floor areas and 10% of upper floor
1644 areas in all buildings included in the project.

1645 b. Threshold for unacceptability: 4.0 picocuries per liter (4.0 pCi/L) based on initial and
1646 any follow-up testing, if performed.

1647
1648 5. Occupant Notification

1649 a. Testing. Occupants of all new applications for ORCF mortgage insurance programs
1650 shall be informed of forthcoming testing in the manner described in ANSI/AARST
1651 MALB.

1652 b. Mitigation. Occupants shall be informed both prior to and after mitigation activities.
1653 In the case of new construction, incoming occupants shall be informed of radon
1654 mitigation activities.

1655
1656 6. Mitigation Standards. Radon resistant construction is required for all new construction,
1657 and radon mitigation is required for existing construction where testing has revealed that
1658 radon levels meet or exceed the threshold for unacceptability. The radon resistant
1659 construction or radon mitigation, when required, must conform to the following
1660 standards, which include post-mitigation testing requirements.

1661 a. Existing buildings:

1662 i. ANSI/AARST RMS-LB-2018 (or most recent version), Radon Mitigation
1663 Standards for Schools and Large Buildings.

1664 ii. A small number of cases may include 1-family, 2-family, or townhouse type
1665 structures. Mitigation in those types of structures reference ANSI/AARST
1666 Standard SGM-SF (most recent version), Soil Gas Mitigation Standards for
1667 Existing Homes.

1668 b. New construction:

1669 i. ANSI/AARST CC-1000-2018 (or most recent version), Soil Gas Control Systems
1670 in New Construction of Buildings is the construction standard for large buildings.

1671 ii. ANSI/AARST CCAH (most recent version), Reducing Radon in New Construction
1672 of 1 & 2 Family Dwellings and Townhouses may be appropriate for a small number
1673 of Section 232 projects. An example would be a large main building (which must
1674 comply with CC-1000) with several duplex residences (which must comply with
1675 CAAH) around the main building.

1676
1677 7. Mitigation Timing.

1678 a. For new construction and substantial rehabilitation properties, all mitigation,
1679 including follow-up testing, must be complete and all reports submitted prior to
1680 HUD's final inspection.

1681 b. Radon mitigation included as part of a Section 232/223(f) or 223(a)(7) project's
1682 repairs must be completed as quickly as practicable, and in any event, no later than 12
1683 months after the Loan Closing. The mitigation budget must be determined prior to the
1684 issuance of the Firm Commitment and the amount must be included in the project's
1685 costs.

1686
1687 8. Certificate of Completion. A certificate of completion from the Radon Professional must
1688 be submitted and appended to the radon report once radon testing and/or mitigation is
1689 completed.

1691 9. Operation and Maintenance Plans: An operation and maintenance plan (called an
1692 operation, maintenance and monitoring (OM&M) plan under the ANSI/AARST
1693 standards) must be administered in accordance with the applicable mitigation standard for
1694 any mitigation project. A condition shall be attached to the Firm Commitment requiring
1695 that the Borrower operate and maintain the property consistent with the referenced
1696 OM&M plan for the duration of the insured mortgage. The project must submit the final
1697 OM&M plan to HUD after the radon mitigation system is installed. Given the ongoing
1698 risk associated with radon, the OM&M requirement for maintaining mitigation systems
1699 must be implemented when a mitigation system is present on the property.

1701 10. Existing Mitigation Systems: All existing mitigation systems installed at the property
1702 must be evaluated to ensure that they function properly, and if applicable, corrective
1703 action must be taken by a qualified radon professional.

1705 11. Cost estimates. It is the responsibility of the Lender to provide the cost estimate for
1706 radon remediation to be included into the overall construction or repair costs. The cost
1707 estimate must include ongoing OM&M costs. Estimates must be based on the locality of
1708 the project as well as the proposed time of installation.

1710 12. Section 223(f) and Non-Excepted Section 223(a)(7).

1711 a. All Section 223(f) and non-excepted 223(a)(7) projects must be tested for radon in
1712 accordance with 7.3.P.4 Testing Protocols, above.

1713 b. Testing must be performed no earlier than 1 year prior to application submission.

1714 c. Mitigation. See requirements at 7.3.P.6 Mitigation Standards which include post
1715 mitigation testing. If estimated costs exceed the allowable cost for the Section 223(f)
1716 program, the application cannot be approved but may be considered under the
1717 substantial rehabilitation program.

1719 13. Substantial Rehabilitation and Conversions.

1720 a. All substantial rehabilitation and conversion projects must be tested for radon.

1721 b. Early testing not feasible: For some proposals, such as a conversion of an existing
1722 building from non-residential to residential, the building envelope may change to
1723 such an extent that early testing would not be appropriate and in some cases not
1724 possible. If this is the case, proceed directly to mitigation as discussed at Section
1725 7.3.P.6 Radon reports are required with the post-construction testing prior to HUD's
1726 Final Inspection.

1727 c. Early testing when feasible

1728 i. Must be performed no earlier than 1 year prior to application submission in
1729 accordance with 7.3.P.4 Testing Protocols

1730 ii. If test results are below the threshold, no mitigation is required.

1731 iii. If test results are at or above the threshold, mitigation must be built into the
1732 project design per Section 7., ~~identify any contamination on a site~~3.P.6.

1733 d. When mitigation is built into project design, it must be conducted in accordance with
1734 the requirements at 7.3.P.6 which require post mitigation testing.

1735 e. If mitigation is not built into project design, radon testing and a radon report must be
1736 submitted to HUD after construction is complete but prior to HUD's Final Inspection.

1737 If testing results are above the threshold, retrofit mitigation pursuant to the
1738 requirements at 7.3.P.6. is required.

1739
1740 14. New Construction: All new construction projects must follow radon resistant
1741 construction requirements.

1742
1743 a. ANSI/AARST CC-1000 (most recent version) is the construction standard for large
1744 buildings.

1745
1746 b. ANSI/AARST CCAH (most recent version) is the construction standard for single
1747 family buildings (1-family, 2-family, townhouses). This standard may be appropriate
1748 for a small number of Section 232 projects. An example would be a large main
1749 building (which must comply with CC-1000) with several duplex residences (which
1750 must comply with CCAH) around the main building. Radon resistant construction is
1751 required for all radon zones.

1752
1753 c. Radon reports are required with the post-construction testing prior to HUD's Final
1754 Inspection. If post-construction testing results are above the threshold, the project
1755 must be brought into compliance by activating the mitigation system or through
1756 retrofit mitigation.

1757
1758 d. All testing and mitigation required as a result of this testing must be performed by, or
1759 under the direct supervision of a Radon Professional, in accordance with the protocols
1760 referenced in this section.

1761
1762 Q. Site Contamination and Toxic Substances (24 CFR 50.3(i)):

1763 1. Phase I Environmental Site Assessment (Phase I ESA)

1764 2. Phase II Environmental Site Assessment

1765 3. Remediation Plans – General

1766 4. Remediation Plans – Complete Removal of Contamination

1767 5. Remediation Plans – Incomplete Removal of Contamination

1768 6. Monitoring Wells, Flushing Wells, or Testing Wells

1769 7. Off-site Contamination

1770 8. Escrow

1771 9. Waivers

1772 10. LSTF Approvals and Reviews

1773 11. Superfund Sites

1774 12. Unacceptable Sites

1775
1776 The purpose of this section is to identify contamination on or affecting a site, other than
1777 contamination from in-place building components such as asbestos containing materials (see
1778 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~~must 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).

Phase I ESA

-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-~~10~~15 (or most recent edition). The Phase I must clearly indicate that HUD is an authorized user of the report.

Phase I ESA

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

1824 insurance application’s submission date to HUD. However, a Phase I ESA that
1825 was conducted more than 180 days prior to the submission date to HUD, but
1826 within the allowable one-year period, must be updated pursuant to Section 4.6 of
1827 ASTM E1527-13 ~~(or similar section of the~~ (most recent edition). A Phase I ESA
1828 originally prepared more than one year prior to submission to HUD, even if
1829 updated within 180 days of submission to HUD, is not acceptable. The ESA
1830 timing requirements cannot be waived.

1831 ~~Phase I ESA Professional~~

1832 ~~-e.~~ **Preparers’ Qualifications:** The Qualifications of Environmental Professionals section
1833 of the Phase I ESA must describe the preparer’s qualifications. The Environmental
1834 Professional preparing the Phase I ESA must meet all of the qualification requirements
1835 of Appendix X2 of ASTM E1527 (most recent edition).

1836
1837 **f. Vapor Encroachment Screen: (VES):** The Phase I ESA must incorporate an
1838 initial vapor (a.k.a. gas) encroachment screen following ASTM E2600 (most
1839 recent edition) to determine if there is a potential for vapors to occur in the
1840 subsurface below existing and/or proposed on-site structures. Those hazardous
1841 substances may be petroleum and petroleum products that consist of volatile
1842 organic compounds (VOC), semi-volatile organic compounds (SVOC) and
1843 inorganic volatile compounds. The vapor encroachment screen shall be performed
1844 using Tier 1 “non-invasive” screening pursuant to ASTM E2600-10 “Standard
1845 Guide for Vapor Encroachment Screening on Property Involved in Real Estate
1846 Transactions,” Section 8 ~~(or similar section of the most recent edition).~~ If the Tier
1847 1 vapor encroachment screen determines that, as indicated in ASTM E2600-10
1848 Section 8.7.1 ~~(or similar section of the most recent edition),~~ there is a “vapor
1849 encroachment condition” (VEC), which is the “presence or likely presence” of
1850 such vapors in the subsurface below existing and/or proposed on-site structures, ~~a~~
1851 ~~likely VEC,~~ or that a VEC “cannot be ruled out”, it ~~shall also be deemed to be a~~
1852 ~~REC for purposes of~~ must be reviewed under the Phase I ESA. ~~Analyses regarding~~
1853 ~~the VES must be~~ to determine if it is a REC as per ASTM E1527. The Vaper
1854 Encroachment Screen analyses must be included in their own section in the Phase I
1855 ESA report, and also integrated within into the various findings, opinions and
1856 conclusions sections of the Phase I ESA.

1857
1858 **g. Underground Storage Tanks (USTs):**

1859 When an underground storage tank (UST) containing, or previously containing,
1860 hazardous waste or petroleum products exists on the project site, HUD will require
1861 information to evaluate the environmental risk that the UST presents. The Phase I
1862 ESA must determine if the UST is considered a REC, and if so, the REC must be
1863 satisfactorily addressed before the application is submitted. This means the REC
1864 must be addressed in accordance with Handbook Requirements. See 7.3.Q.2
1865 through 7.3.Q.5.

- 1866 • When an onsite UST is regulated by the State, including testing and
1867 inspection protocols, provide documentation that confirms compliance with
1868

1869 the State's regulations.

- 1870
- 1871 • Active UST: When a UST is not subject to State testing and inspection
- 1872 protocols, the UST and its service lines must pass an integrity test prior to the
- 1873 submission of an application for Mortgage Insurance. The test must occur no
- 1874 earlier than one year prior to the application's submission to HUD. In
- 1875 addition, an operations & maintenance plan must be submitted that includes
- 1876 periodic testing of the tank and its service lines, as well as repair,
- 1877 maintenance, and emergency response procedures. The implementation of
- 1878 the plan will be a condition of approval. The owner must certify that all
- 1879 applicable personnel are trained and familiar with the plan.
- 1880
- 1881 • Out of Service UST: Any UST that is no longer in service, or that is planned
- 1882 to be taken out of service, must be removed or closed in place in accordance
- 1883 with LSTF requirements. Removal of a UST must occur prior to the
- 1884 application submission. This is due to the potential for contamination to be
- 1885 encountered during, or following, the UST removal.

1886

1887 When a UST was previously removed from the property or abandoned in

1888 place, HUD will require information to evaluate the environmental impact

1889 that the UST may have on the site. Include information such as

1890 removal/closure documentation and Phase II study results in the Phase I

1891 ESA. The Phase I ESA must determine if the former UST is considered a

1892 REC, and if so, the REC must be satisfactorily addressed before the

1893 application is submitted.

1894

1895 **-h. Findings Section:** The Findings section of the Phase I ESA must list all known or

1896 suspect Recognized Environmental Conditions (REC), Controlled Recognized

1897 Environmental Conditions (CREC), Historical Recognized Environmental

1898 Conditions (HREC), and de minimis conditions (such as minor soil staining). The

1899 Findings section must also list VECs, likely VECs, and circumstances in which a

1900 VEC cannot be ruled out.

1901

1902 **i. Opinions Section:** The Opinions section, ~~pursuant to section 12.6 of ASTM~~

1903 ~~E1527-13 (or similar section of the most recent edition),~~ must discuss the impact

1904 on the property of conditions identified in the Findings section, and provide

1905 rationale for concluding that a condition is or is not ~~currently a REC.~~ a REC,

1906 pursuant to Section 12.6 of ASTM E1527 (most recent edition). The justification

1907 for any Finding deemed not to be a REC must be included in the Opinions section.

1908 If the Phase I ESA preparer cannot make a statement as to whether a condition is

1909 or is not a REC, the Opinions section must state what information or further

1910 investigation— e.g. gaining access to a building (a so called “data gap” per section

1911 12.7), but not including a Phase II ESA—would be deemed necessary to make

1912 such a determination. ~~The ESA preparer must also identify any data gaps and state~~

1913 whether the data gaps are significant.

1914

1915 When previous remediation has been performed or is ongoing, i.e., not yet an
1916 HREC at the proposed site, the Phase I ESA must fully discuss the extent of such
1917 remediation in the Opinions section, including any involvement of LSTF
1918 Authorities. The Phase I ESA preparer must justify whether such ongoing
1919 remediation should resolve any RECs or undecided issues identified in the ESA.
1920

1921 Note: ~~Even that even~~ if the ~~environmental professional~~ Environmental Professional
1922 preparing the Phase I ESA determines that a Finding does not rise to the level of a
1923 REC, HUD may ~~nevertheless determine that there is a business environmental risk~~
1924 ~~that requires testing and/or remediation determine that the finding warrants Phase~~
1925 II investigation based on HUD's toxics policy at §50.3(i).
1926

1927 j. **Conclusions Section:** The Conclusions Section must make a determination of
1928 whether a REC, including a CREC, exists on the site in accordance with one of the
1929 two statements at Section 12.8 of ASTM E1527 ~~-13 (or similar section of the most~~
1930 ~~recent edition), i.e.:~~ , i.e.:
1931

- 1932 • “We have performed a Phase I Environmental Site Assessment in
1933 conformance with the scope and limitations of ASTM Practice E 1527 of
1934 [insert address or legal description], the property. Any exceptions to, or
1935 deletions from, this practice are described in Section [] of this report. This
1936 assessment has revealed no evidence of recognized environmental conditions
1937 in connection with the property,” or
- 1938 • “We have performed a Phase I Environmental Site Assessment in
1939 conformance with the scope and limitations of ASTM Practice E 1527 of
1940 [insert address or legal description], the property. Any exceptions to, or
1941 deletions from, this practice are described in Section [] of this report. This
1942 assessment has revealed no evidence of recognized environmental conditions
1943 in connection with the property except for the following: (list).”
1944
1945

1946 k. **Evaluation Section:** In addition to the standard Phase I determination of whether RECs
1947 have been identified in connection with the site, the Evaluation section's discussion of
1948 Findings and Conclusions should state whether further investigation or corrective action
1949 is recommended to meet 24 CFR 50.3(i).
1950

1951 -l. **User Provided Information Section:** The Borrower and the current property
1952 owner, if different from the Borrower, shall complete the User Questionnaire(s)
1953 ~~according to as per~~ Appendix X3 of ASTM E1527 ~~-13 (or similar section of the~~
1954 ~~most recent edition).~~ The User Questionnaire(s) must be included in the “User
1955 Provided Information Section” of the Phase I ESA, and the preparer must take into
1956 account any information provided in the User Questionnaire(s) in the preparation
1957 of the Phase I ESA.
1958

1959 -m. **Testing Not Required:** The Phase I ESA does not require sampling and testing;

1960 ~~which will be performed during the course of a. A~~ Phase II ESA or ~~as part of a~~
1961 ~~remediation plan. However, if required, would include sampling and testing (see~~
1962 ~~Section 7.3.Q.2 below). If a Phase II ESA had been previously completed at the~~
1963 ~~property, the Phase I ESA may must~~ reference and discuss ~~any~~ prior Phase II ESA
1964 ~~performed in general accordance with ASTM E1903-11 (or most recent edition),~~
1965 ~~including whether a condition is a REC.~~

1966
1967 **a.n. Lead-based Paint (LBP) Chips:** During any proposed repair work, the removal
1968 and disposal of LBP must be performed in accordance with regulations as
1969 published and enforced by the State and the Department of Labor - Occupational
1970 Safety and Health Administration (OSHA), and, if the property is covered by
1971 HUD's Lead Safe Housig Rule (24 CFR Part 35, subparts B – R), as described at
1972 Section 7.N above, by that HUD regulation.

1973
1974 LBP chips that are not inside or part of a structure may be deemed to be a
1975 hazardous substance ~~under CERCLA (see EPA document refereneed at Section~~
1976 ~~7.3.C.1.e.(5) below). Therefore, if there is or was a structure on the site that was~~
1977 ~~built prior to 1978 (when the use of LBP was discontinued), any evidence of paint~~
1978 ~~chips not inside or part of any current structures must be discussed in the "Site~~
1979 ~~Reconnaissance" section of the Phase I ESA, must be listed in the Findings~~
1980 ~~Section, and must be discussed further as to whether the paint chips are either a~~
1981 ~~REC or a de minimis condition in the Opinions section.~~

1982
1983 **a.o. Previous Remediation:** When previous remediation has been performed, or
1984 remediation is currently taking place, the Phase I ESA must fully document the
1985 ~~status of such~~ remediation, including any involvement from local, state, tribal, or
1986 Federal (LSTF) authorities, No Further Action (NFA) letters as discussed in
1987 Section 7.3.Q.5.d.iii below, and narrative descriptions of any on-going remediation
1988 work and monitoring. The Phase I ESA must discuss whether the previous or
1989 ongoing remediation is consistent with current applicable LSTF standards.

1990 ~~a. Evaluation of the Phase I ESA: The Phase I ESA will be evaluated by HUD.~~
1991 ~~HUD may require additional information or a Phase II ESA based on Findings that~~
1992 ~~indicate an unacceptable business environmental risk. Any Phase I ESA that~~
1993 ~~identifies a Recognized Environmental Condition requires a Phase II ESA, unless~~
1994 ~~it can be determined from the Phase I ESA that corrective action is not feasible. If~~
1995 ~~no corrective action is feasible, HUD may reject the property.~~

1996 ~~10.1. Phase II ESA:~~

- 1997
1998
1999 ~~1. Purpose: The purpose of the Phase II ESA is to ascertain by chemical testing of~~
2000 ~~samples and within the requirements of ASTM E1903-11, "Environmental Site~~
2001 ~~Assessments: Phase II Environmental Site Assessment Process," (or most recent~~
2002 ~~edition) whether the RECs and/or business environmental risks identified from the~~
2003 ~~Phase I ESA have resulted in the presence of "hazardous substances" as defined by~~
2004 ~~CERCLA, and/or of petroleum and petroleum products at levels that would exceed~~
2005 ~~the Statewide, non-site specific criteria (de minimis levels).~~

2006
2007 2. ~~Timing:~~ The Phase II ESA shall be submitted at the same time as the Phase I ESA.
2008 For new construction or substantial rehabilitation using the initial stage of processing,
2009 the Phase II ESA, if required, must be submitted by the Lender at the initial stage of
2010 submission.

2011
2012 ~~a. **When Required:** A Phase II ESA is required if:~~

- 2013 a. ~~The Phase I ESA indicates that there is a REC and corrective action is~~
2014 ~~potentially feasible,~~
2015 b. ~~The Phase I ESA comes to no definite conclusion regarding the presence of a~~
2016 ~~REC, or~~
2017 c. ~~HUD requires a Phase II ESA for business environmental risk reasons that are~~
2018 ~~described to the Lender.~~

2019
2020 4. ~~Exception to the Phase II Submission Requirement:~~ In cases where it is obvious that
2021 remediation will be required, with HUD's permission, a separate Phase II ESA may
2022 be bypassed and instead incorporated within the "site characterization" segment of
2023 the remediation plan referenced in Section 7.3.C.1 below.

2024
2025 5. ~~Standards to Use:~~ The Phase II ESA is to be performed pursuant to the logic model
2026 of ASTM E1903-11, Section 7 (or similar section of the most recent edition),
2027 including developing the conceptual model and validation.

2028
2029 6. ~~Report Format:~~ The Phase II ESA must be prepared in accordance with the
2030 requirements of ASTM E1903-11, using the table of contents and report format
2031 specified in Appendix X3.2 as amended by X3.3 (or similar section of the most recent
2032 edition). ~~Some of the steps that a Phase II assessor might perform may be intuitive in~~
2033 ~~nature, but they nevertheless must be included in the report so as to ensure its~~
2034 ~~scientific validity.~~

2035
2036 ~~p.~~ **Historical Recognized Environmental Conditions (HREC):** If the Phase I ESA
2037 indicates that there is a HREC as described in ASTM E1527-13 (or (most recent
2038 edition), i.e., a hazard has been remedied and an LSTF Authority has issued a No
2039 Further Action (NFA) letter or similar approval, HUD may either deem the NFA
2040 letter as the completion of the remediation or it may require a Phase II ESA and/or
2041 further remediation.

2042
2043 ~~q.~~ **Evaluation of the Phase I ESA:** The Phase I ESA will be evaluated by HUD to
2044 determine if the property is acceptable for the hazards reviewed. HUD may
2045 require additional information or a Phase II ESA based on Findings that indicate an
2046 unacceptable risk under HUD's toxics policy at §50.3(i), or an unacceptable
2047 business risk. Any Phase I ESA that identifies a REC requires a Phase II ESA,
2048 unless it can be determined from the Phase I ESA that corrective action is not
2049 feasible. If no corrective action is feasible, HUD may reject the property.

2050
2051 2. Phase II Environmental Site Assessment:

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- 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.4Q.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

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screen (per ASTM E2600-~~1015~~, 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-~~1015~~, Appendix X7.1 (or similar section of the most recent edition)), or go directly to a Tier 4 “mitigation” (per ASTM E2600-~~1015~~, Appendix X7.~~1~~~~or 7.2~~ (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-~~1015~~, 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)).

-i. Phase II Conclusion: The Phase II ESA must conclude that either:

- 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.

j. ~~Off-site contamination conclusion:~~ Off-Site Contamination:

-i. The Phase II ESA must address the risk of off-site contamination migrating on to the proposed site including if:

- There is no known or perceived off-site contamination in the vicinity of the proposed site;_i
- It is unlikely that any known or perceived off-site contamination will migrate on to the site;_i or;_i
- It is likely that known or perceived off-site contamination will migrate on to the site.

ii. 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.

-k. 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.

-l. Exception of ~~requirement~~ Requirement for Phase II ~~preparation and submission~~ Submission for ~~ongoing remediation~~ Ongoing Remediation: A Phase II

2143 ESA is not required when remediation is ongoing to the point of not yet being an
2144 HREC (~~see Section 7.3.A.1.f, above~~), ~~if~~₂ the Phase I ESA preparer states that such
2145 remediation should resolve any RECs and undecided Phase I ESA issues (see
2146 “Opinions Section” 7.3.AQ.1.gI, above), and ~~if~~ the remediation plan preparer
2147 indicates that all of the Phase II ESA requirements have been met.
2148

2149 2.3. Remediation Plans – General:

2150 Remediation plans are required if the Phase II ESA ~~cannot make the determinations required~~
2151 ~~by Section concludes that hazardous waste or petroleum products are present at levels that~~
2152 ~~exceed LSTF unrestricted (de minimis) criteria 7.3.B.10.b, and B.11.a or B.11.b. /or that it is~~
2153 ~~likely that known or expected off-site contamination will migrate on to the site.~~
2154

2155 The following requirements apply to all remediation plans:

2156 Complete site. Site characterization.

- 2158 • Anytime a site has been identified from a Phase I or Phase II ESA as having
2159 contamination (or contamination exposure pathways), be it vapor (gas), liquid,
2160 solid, dissolved, or non-aqueous phase liquid (NAPL), above LSTF
2161 residential/unrestricted criteria (de minimis levels;), a complete site
2162 characterization (sometimes known as a special site assessment report, a remedial
2163 investigation report, a detailed Phase II ESA, or a Phase III ESA) must be
2164 prepared as the initial step of any remediation plan.
2165
- 2166 • Such a report must determine the total horizontal nature and vertical
2167 extent/distribution of such contamination, exposure pathways, and potential
2168 receptors (a.k.a., a conceptual site model). However, if the remediation plan
2169 preparer determines that the Phase II ESA preparer has already determined the
2170 total nature and distribution of such contamination, exposure pathways and
2171 potential receptors, then such determination shall be so indicated and the Phase II
2172 ESA shall be made a part of the remediation plan.
2173
- 2174 • The report must ~~also~~ be based on LSTF requirements, or on the appropriate
2175 combination of ~~the following~~ ASTM Practices and Guides ~~(or similar section of~~
2176 ~~the most recent edition), as amended~~, as determined by the remediator’s
2177 environmental investigator. ~~Lesser degrees of site assessments or non-~~
2178 ~~conformance are not acceptable. For lead contaminated sites, refer to the listed~~
2179 ~~EPA Handbook.~~
 - 2180 i. ~~D6235-04, “Practice for Expedited Site Characterization of Vadose~~
2181 ~~Zone and Groundwater Contamination at Hazardous Waste~~
2182 ~~Contaminated Sites”~~
 - 2183 ii. ~~E1689-95, “Standard Guide for Developing Conceptual Site Models~~
2184 ~~for Contaminated Sites”~~
 - 2185 iii. ~~E1903-11, “Standard Guide for Environmental Site Assessments:~~
2186 ~~Phase II Environmental Site Assessment Process”, as amended~~
 - 2187 iv. ~~E1912-98, “Guide for Accelerated Site Characterization for Confirmed~~
2188 ~~or Suspected Petroleum Releases”~~

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~~v. EPA, Superfund Lead Contaminated Residential Sites Handbook, 2003~~

~~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-d. 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.~~

~~**i.**~~

e-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~~ 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~~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.~~ 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.1Q.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.~~ b. All of the requirements of Section 7.3.~~EQ.3~~ (Remediation Plans) must be met.

2279 ~~-c.~~ Offsite Contamination, Groundwater Contamination and/or Vapor Intrusion
2280 Mitigation: A remediation plan that involves control of off-site contamination and/or
2281 vapor intrusion ~~remediationmitigation~~ is not permitted under this section but may be
2282 allowed under Section 7.3.EQ.5, “Remediation Plans – Incomplete Removal of
2283 Contamination,” below.
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2285 ~~3.5.~~ Remediation Plans – Incomplete Removal of Contamination:

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2287 ~~-a.~~ Justification: If the costs are deemed to be exorbitant and/or the feasibility is deemed
2288 impractical for remediation of on-site contamination to de minimis levels, or if there
2289 is known or expected offsite contamination that poses a risk to the project site, the
2290 remediation plan may allow for incomplete removal, as described below.
2291 Justification for such incomplete removal must be submitted along with the
2292 remediation plan. Such justification must include documentation that shows that the
2293 costs of the incomplete removal of contamination, including any life cycle costs for
2294 Operation and Maintenance, and any applicable enforcement requirements of LSTF
2295 authorities, are sufficiently below the costs of complete contamination removal. The
2296 extent of the contamination must be fully understood, including possible exposure
2297 pathways, as part of a Risk-Based Correction Action (RBCA).
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2299 ~~2. All of the requirements of Section 7.3.C must be met.~~

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2301 ~~3. The corrective action must be a Risk Based Corrective Action (RBCA) based on the~~
2302 ~~appropriate combination of:~~

2303 ~~a. The following ASTM Guides and Practices (or their most recent edition), as~~
2304 ~~amended, as determined by the remediator’s environmental investigator: (For~~
2305 ~~lead contaminated sites, refer to the listed EPA Handbook.)~~

2306 ~~— E1689-95 (2014), “Standard Guide for Developing Conceptual Site~~
2307 ~~Models for Contaminated Sites”~~

2308 ~~— E1739-95 (2015), “Standard Guide for Risk-Based Corrective Action~~
2309 ~~Applied at Petroleum Release Sites”~~

2310 ~~— E1943-98 (2010), “Standard Guide for Remediation of Ground Water~~
2311 ~~by Natural Attenuation at Petroleum Release Sites”~~

2312 ~~— E2081-00 (2015), “Standard Guide for Risk-Based Corrective Action”~~

2313 ~~— E2091-11, “Standard Guide for Use of Activity and Use Limitations,~~
2314 ~~Including Institutional and Engineering Controls”~~

2315 ~~— E2435-05 (2015), “Standard Guide for Application of Engineering~~
2316 ~~Controls to Facilitate Use or Redevelopment of Chemical-Affected~~
2317 ~~Properties”~~

2318 ~~— E 2616-09 (2014), “Standard Guide for Remedy Selection Integrating~~
2319 ~~Risk-Based Corrective Action and Non-Risk Considerations”~~

2320 ~~— E2600-10, “Standard Guide for Vapor Encroachment Screening on~~
2321 ~~Property Involved in Real Estate Transactions”~~

2322 ~~— For Lead Contaminated Sites. “EPA, Superfund Lead Contaminated~~
2323 ~~Residential Sites Handbook, 2003”~~

2324 b. ~~LSTF regulatory procedures may be followed in lieu of the ASTM Guides and~~
2325 ~~Practices listed above, when the remediator's environmental investigator~~
2326 ~~determines their equivalence or greater stringency.~~

2327
2328 ~~-b.~~ LSTF requirements: The RBCA must always meet the requirements instituted by any
2329 applicable LSTF regulatory authority.

2330
2331 ~~-c.~~ The RBCA report or other accepted cleanup program report(s) must:

2332 ~~-i~~ meetMeet all of the requirements for Section 7.3.EQ.3,

2333 ~~-ii~~ discussDiscuss how the remediation plan meets/complies with the applicable
2334 ASTM Guides and Practices and LSTF regulatory procedures as listed/discussed
2335 in Section 7.3.E.3 and 7.3.E.4 above,

2336 ~~iii~~ discussDiscuss how the remediation plan meets or will meet all of the
2337 requirements of Section 7.3.Q.5.d below, and

2338 ~~e.~~ Discuss how it meets or will meet all of the requirements of Section 7.3.EQ.6;
2339 and

2340 discuss how it meets or will meet all of the requirements of Section 7.3.F through
2341 ¶10 below.

2342
2343 ~~-d.~~ Risk-Based Corrective Action (The RBCA): The corrective action or other accepted
2344 cleanup program(s) must be a RBCA supported by the applicable combination of:

2345 ~~a.~~ Engineering and Institutional Controls (EC/IC).

2346 ~~i.~~ An Engineering Control is a physical measure that reduces or
2347 eliminates exposure to contamination. An Institutional Control is a
2348 non-engineered instrument, such as administrative and legal control.
2349 ICs typically limit land and/or resource use or provide information that
2350 helps modify or guide human behavior at a site. An appropriate mix of
2351 engineering controlsECs, such as capping and slurry walls, and
2352 institutional controlsICs such as protective covenants and, access
2353 restrictions are, and employee notification, is usually required for all
2354 RBCAs, and shall follow the guidance in ASTMs E2435-05 and
2355 E2091-05 (or most recent editions). The RBCA must indicate how it
2356 met these Guides.

2357
2358 ~~i~~ LSTF regulatory provisions may be followed in lieu of these ASTM Guides, or
2359 other accepted cleanup programs as amended, when approved by the remediator's
2360 environmental professional determines their equivalence. LSTF authority. EC/IC
2361 may include:

2362
2363 a) Hard/Soft Cap Engineering Control: A hard cap EC, such as concrete,
2364 generally is required if any contamination will remain on the site after final
2365 closing. Unless the applicant can justify why a lesser depth to contamination
2366 would be protective of the health and safety of occupants, the depth of any
2367 remaining contamination should be greater than the deepest of the following:

- 2368 • the depth of the foundations of any existing or proposed structures
2369 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 RBCAs 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~~AC~~, 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

2416 contamination remaining on the site and any controls thereof. If HUD determines
2417 that the Borrower does not have sufficient capacity to manage the O&M plan, the
2418 Borrower must contract with an appropriate servicer to do so. ~~(See Section 7.4. for~~
2419 ~~costing) The O&M Plan must ensure maintenance of any engineering controls and~~
2420 ~~assign responsibility for that maintenance. (See Section 7.6 for guidance on cost~~
2421 ~~determination.)~~

2422 ~~iii.—Hard/Soft Cap Engineering Control: A hard cap EC, such as concrete,~~
2423 ~~generally is required if any contamination will remain on the site after~~
2424 ~~final closing. Unless the applicant can justify why a lesser depth to~~
2425 ~~contamination would be protective of the health and safety of~~
2426 ~~occupants, the depth of any remaining contamination should be greater~~
2427 ~~than:~~

2428
2429 ~~• the depth of the foundations of any existing or proposed structures~~
2430 ~~including sumps,~~

2431 ~~• the depth of any existing or proposed utilities on site, and~~

2432 ~~• five feet below the surface.~~

2433 ~~In certain situations, HUD may allow for a soft cap (e.g. dirt) if~~
2434 ~~other engineering controls such as an impenetrable geotextile~~
2435 ~~fabric are included. Even if engineering controls are not required~~
2436 ~~for such RBCAs, institutional controls (IC) are still required.~~

2437 ~~iv.—Slurry Wall or Equivalent Engineering Control: A slurry wall or~~
2438 ~~equivalent type EC may be required to prevent offsite contamination~~
2439 ~~from migrating onsite, or to prevent onsite contamination from~~
2440 ~~migrating onsite or offsite. If the Phase I and/or Phase II ESA~~
2441 ~~determines that the likely existence of off-site contamination presents~~
2442 ~~a risk to the site, such a slurry wall or equivalent type EC will be~~
2443 ~~required.~~

2444 ~~v.—Monitored Natural Attenuation and Enhanced Passive Remediation~~
2445 ~~(MNA/EPR): MNA/EPR such as by bio-augmentation where no~~
2446 ~~additional active input is required and passive engineering controls~~
2447 ~~such as a slurry wall may be allowed as part of the RBCA. In such~~
2448 ~~cases the LSTF authority must issue a conditional No Further Action~~
2449 ~~(NFA) Letter or similar approval. Monitoring wells pursuant to the~~
2450 ~~above RBCAs and meeting the requirements of Section 7.3.F will be~~
2451 ~~required to monitor the progress of the remediation. When MNA/EPR~~
2452 ~~is part of the RBCA, the remediation may continue beyond initial~~
2453 ~~endorsement provided that the LSTF authority has determined in~~
2454 ~~writing that such undertakings would present no threat to health, safety~~
2455 ~~or the environment.~~

2456 ~~Vapor Encroachment/Vapor Intrusion Mitigation: If a VEC is present, a VEC is~~
2457 ~~likely present, or a VEC cannot be ruled out, then mitigation as discussed in~~
2458 ~~ASTM E2600-10, Section 7.2 (or similar section of the most recent edition) is~~
2459 ~~required, unless a VIA performed pursuant to LSTF policy and/or procedure and~~
2460 ~~in accordance with ASTM E2600-10, Appendix X7.1 (or similar section of the~~
2461 ~~most recent edition) has determined that it is in compliance with such policy, or~~

2462 ~~would be in compliance after instituting mitigation. When remediation goes~~
2463 ~~directly from a Tier 1 screen or a Tier 2 screen, such controls shall, where~~
2464 ~~feasible, consist of a poured-on vapor barrier to be used in conjunction with the~~
2465 ~~active and passive venting systems.~~

2466 ~~vii. Institutional Controls (IC) regarding groundwater contamination, if~~
2467 ~~applicable, must be put in place.~~

2468 **iii No Further Action Letter (NFA):** The LSTF authority must issue an NFA, or
2469 similar approval, except that a conditional NFA may be allowed pursuant to
2470 MNA/EPR ~~(see Section 7.3.E.6.a.5 above).~~ The ~~NFA or conditional NFA must be~~
2471 ~~issued pursuant to the time lines stated earlier in Section 7.3.C.8 and 9. Additionally,~~
2472 ~~the~~ LSTF authority must indicate in the NFA approval that the remediation that has
2473 taken place, or will take place, is protective of protects the health, and safety of
2474 occupants and does not conflict with the environmentintended utilization of the
2475 property. The remediation must meet LSTF residential use standards. The NFA must
2476 be submitted to HUD pursuant to the timeline specified in Section 7.3.Q.3.c.i or ii.
2477

2478 **iv Groundwater Requirement:** A site that is/will be otherwise acceptable may be
2479 approved if contamination exists in the groundwater after completion of remediation,
2480 if:

- 2481 a) Institutional controls (ICs) regarding the groundwater are/will be put in place,
2482 along with ~~an O&M plan,~~ approval by the LSTF authority, and any applicable
2483 enforcement requirements of LSTF authorities. Municipal restrictions on
2484 groundwater may substitute for LSTF approval if the restrictions are included as
2485 an IC on the property deed. The ICs must prohibit any and all uses of the
2486 groundwater; ~~and.~~
2487
2488 b) The highest anticipated levels of groundwater based on high groundwater
2489 and/or 100 year flooding events, are below the levels of any construction or
2490 potentially anticipated utility work, unless it can be shown how such high
2491 groundwater levels will not modify the ~~nature~~horizontal and ~~distribution~~vertical
2492 extent of contamination to such a degree that it could affect the health and safety
2493 of residents and workers; and
2494
2495 c) Any vapors from groundwater and/or soils are shown not to present a significant
2496 risk pursuant to Tier 1 vapor encroachment assessment, Tier 2 vapor
2497 encroachment assessment, ~~VIA~~vapor intrusion assessment, or mitigation.
2498

2499 **iv Safety of and Disclosure to Residents and Workers:** Any time contamination
2500 above de minimis levels is allowed to remain on site after initial occupancy and final
2501 closing, all ~~construction~~maintenance workers who might perform activities that could
2502 compromise the EC and/or IC, as well as construction workers, facility staff, and
2503 building residents and their representatives, etc. are to be informed of the general
2504 ~~nature~~type and ~~distribution~~extent of contamination and the protective measures that
2505 have been taken.
2506

2507 **vi Hazardous Substance Quantification:** If any RBCA or other accepted remediation
2508 plan identifies hazardous substances listed in 40 CFR 302.4 that will remain on the
2509 property after final closing, such plan shall determine the quantity of such hazardous
2510 substances and whether it equals or exceeds the levels indicated at 40 CFR 373.2.
2511 (This is ~~a requirement~~ information that HUD is required to report under CERCLA ~~that~~
2512 would apply to HUD at any time in the event that HUD ~~might~~ will own the property or
2513 take over its management.)
2514

2515 **4.6. Monitoring Wells, Flushing Wells, or Testing Wells:**

2516
2517 a. **General Requirements:** The presence of a testing or monitoring well on the
2518 property does not bar the property from consideration for mortgage insurance. If a
2519 monitoring well is required ~~or exists~~ to confirm that contaminants have been removed
2520 to intended levels or to determine that an MNA/EPR is working properly, EC/IC will
2521 be required until such time as contaminants are reduced to de minimis levels ~~LSTF~~
2522 residential/unrestricted use criteria and a Final NFA letter is issued ~~by the LSTF~~
2523 Authority.
2524

2525 **a.b. Monitoring Well Protocols:** Monitoring protocols must be specified in the RBCA
2526 or other accepted program report, and monitoring must proceed ~~to the point that~~
2527 indicates that until contaminants have been removed to intended levels or it is
2528 determined that passive MNA/EPR is working properly.
2529

2530 **a.c. Off-site Contamination—Acceptability:** If a monitoring well is required or exists to
2531 determine if existing or assumed off-site contamination has migrated or might
2532 migrate on-site, the site is generally not acceptable unless associated EC/IC are put in
2533 place pursuant to an acceptable RBCA or other accepted program, or unless the
2534 LSTF authority provides a statement that such off-~~site~~-site contamination would not
2535 present a risk to the health of the project's occupants if it were to migrate on-site.
2536

2537 **a.d. Flushing Wells – Unacceptable:** In no case may final closing or initial occupancy
2538 take place when a flushing well is in operation or will be required.
2539

2540 **a.e. Testing or Monitoring Wells Ordered by LSTF:** A testing or monitoring well may
2541 also be placed on the property by order of the LSTF. The well may test or monitor
2542 contamination on the site or from a neighboring site. If a monitoring well would be
2543 required or exists solely to monitor the general health of an aquifer used as a water
2544 supply or potential water supply, but not in relation to an existing or
2545 ~~potential~~ potentially hazardous condition, it is not a bar to environmental approval.
2546 However, the Lender must notify HUD if there is any current or intended placement
2547 of a monitoring or testing well on the site.
2548

2549 **a.f. Non-operating Wells:** Non-operating wells are not a barrier to environmental
2550 approval, but must be capped over and closed out by pursuant to the appropriate LSTF
2551 authority.
2552

2553 **4.7. Off-site Contamination:** If the Phase I and/or Phase II ESA determines that the
2554 existence of off-site contamination presents a risk to the site or the residents of the project
2555 and the Borrower has no management control over the ~~offsite~~off-site locations of the
2556 contamination, the site is not acceptable unless such off-site contamination is subject to a
2557 RBCA or other accepted program meeting all of the requirements of Sections 7.3.~~Q.3~~
2558 and ~~E~~7.3.Q.5.

2559
2560 **4.8. Escrow:** ~~An escrow account must be set up and held by the Lender for the maintenance~~
2561 ~~of any~~Any monitoring wells and engineering controls, such as caps or slurry walls, may
2562 warrant an escrow account to be established by the Lender at Initial Endorsement to
2563 offset the cost of any ongoing maintenance. See Section 7.6.A.4 (Underwriting) for
2564 further discussion.

2565
2566 **4.9. Waivers:** If ORCF intends to waive any of the requirements in this Section 7.3.Q (Site
2567 Contamination Analysis) that are not regulatory in nature, the advice of the Housing
2568 Environmental Clearance Officer ~~shall~~or the applicable REO/FEO in whose district the
2569 project is located, will be obtained before the waiver is granted to ensure that such waiver
2570 is in compliance with the environmental requirements of 24 CFR 50.3(i).

2571
2572 **4.10. LSTF Approvals and Reviews:** Any approvals by an LSTF authority must be given
2573 directly by that authority and may not be given by a third party approved by that authority
2574 to act in lieu of the authority itself. Approvals by local authorities are only acceptable
2575 when such authority is acting under delegation from the State.

2576
2577 **11. Superfund Sites:** Consultation with the REO/FEO for projects that are located on or
2578 adjacent to a designated Superfund Site is strongly encouraged.

2579
2580 A site located on an existing or proposed Superfund site requires consultation with EPA.
2581 In addition, sites adjacent or proximate to a Superfund site may require consultation with
2582 EPA to confirm that the contamination will not impact the HUD site.

2583
2584 **a. Superfund National Priority List (NPL) Sites:** The first step is to determine the
2585 extent to which EPA has completed a site characterization at the NPL site.

2586
2587 **i** In some cases EPA has conducted a remedial investigation or other characterization
2588 work that allows for an assessment of the area that includes the property of HUD
2589 interest, and EPA's site characterization work may be so detailed and thorough that it
2590 can substitute for HUD requirements regarding an ASTM Phase II and/or a site
2591 characterization report. HUD would make the determination on the adequacy of
2592 available information to substitute for HUD requirements in conjunction with EPA
2593 and relevant state regulatory agencies.

2594
2595 **ii** In other cases EPA has conducted a remedial investigation or other characterization
2596 work at the site that shows the NPL site related contamination does not extend to the
2597 property that HUD may want to support. Examples include ground water at depth

2598 with no potential for vapor intrusion at levels of concern, or a very large site with
2599 uncontaminated areas within the boundary of the overall site.

2600
2601 iii Sometimes EPA has not yet completed a remedial investigation or other site
2602 characterization work for the area that includes the property of HUD interest.
2603 Generally, this will include sites that are newly listed to the NPL or very large sites.
2604 These sites generally undergo at least some characterization to ensure that there are
2605 no unacceptable risks that require immediate action.

2606
2607 iv Projects on existing or proposed NPL sites need written documentation from EPA
2608 (and sometimes also from the relevant LSTF authority) that the project is suitable for
2609 residential use. This written documentation can take four forms:

- 2610
2611 • Where EPA has deleted the site from the NPL and published a deletion notice in
2612 the Federal Register. Because a site could be deleted from the NPL for a planned
2613 nonresidential use, HUD must confirm that the site is suitable for residential use.
- 2614
2615 • Where EPA has issued a Site Wide Ready for Anticipated Use (SWRAU) status
2616 for the site. This indicates that the entire site is safe for the intended use and
2617 institutional and engineering controls are in place. Because a site could achieve
2618 SWRAU status for a planned nonresidential use, HUD must confirm that the
2619 SWRAU is for residential use.
- 2620
2621 • Where EPA has issued a Ready for Reuse (RfR) Determination for the site. The
2622 RfR determination can apply to all of the site or to a part of the site where clean
2623 up or EC/IC has been implemented. HUD must consult with EPA to determine if
2624 the RfR determination applies to the proposed project site and that cleanup is to
2625 residential standards.
- 2626
2627 • Where a site has not yet reached SWRAU or RfR status. In this case, HUD will
2628 need written documentation from EPA that an NPL site is suitable for residential
2629 use.

2630
2631 b. Superfund Sites Not on the NPL: Superfund sites that are not on the NPL will only be
2632 acceptable if the site is cleaned up to residential levels and HUD receives written
2633 documentation from EPA that the site is suitable for residential use.

2634
2635 c. EC/IC Put in Place by EPA: HUD must incorporate any EC/IC put in place by EPA
2636 into its environmental conditions and subsequent program commitments. HUD may
2637 impose additional ICs to ensure long term safety at the site. HUD must conduct its own
2638 due diligence at Superfund sites and may determine that the property is unacceptable for
2639 FHA mortgage insurance or other HUD assistance.

2640
2641 4.12. Unacceptable Sites: A site over a former solid waste landfill/dump and/or Superfund
2642 (National Priorities List (NPL)) site generally site is not acceptable for development unless
2643 the hazardous substances, petroleum, and petroleum products are completely removed, the

2644 site is delisted, or for an NPL site only, the Federal Agency or remediated to restricted
2645 residential standards and the LSTF with management authority over the site gives
2646 approval of the site for residential usage.
2647

2648 **R. Sole Source Aquifers:**

- 2649 1. Some aquifers are drinking water systems that may be impacted by development. The
2650 Safe Drinking Water Act of 1974 requires protection of drinking water systems that are
2651 the sole or principal drinking water source for an area and which, if contaminated, would
2652 create a significant hazard to public health.
2653
2654 2. New construction and Environmental Assessment level rehabilitation projects located
2655 within the boundaries of a sole source aquifer or the recharge area of a designated sole
2656 source aquifer must be reviewed by EPA for the potential to contaminate the sole source
2657 aquifer.
2658
2659 3. Additional information about sole source aquifers, including a national map of sole
2660 source aquifer locations, can be found at on the HUD Exchange website which can be
2661 accessed from the ORCF Environmental Resource page.
2662
2663 4. Some HUD regions have established MOUs or other agreements for HUD projects which
2664 can be found at on the HUD Exchange website which can be accessed from the ORCF
2665 Environmental Resource page.
2666

2667 **S. Wetlands Protection (24 CFR 50.4(b)(3)):**

- 2669 1. Applications for mortgage insurance are subject to regulations regarding wetlands at 24
2670 CFR Part 55 which implement Executive Order (EO) 11990 "Protection of Wetlands".
2671 EO 11990 prohibits the development or disturbance of wetlands unless there is no
2672 practicable alternative and the proposed action includes all practicable measures to
2673 minimize harm to the wetland. Proposals impacting wetlands must be reviewed by HUD
2674 under the 8 step process in Part 55 to determine consistency with requirements of EO
2675 11990.
2676
2677 2. The process for identifying wetlands is set out in Part 55. The term "wetlands" means
2678 those areas that are inundated by surface or ground water with a frequency sufficient to
2679 support, and under normal circumstances does or would support, a prevalence of
2680 vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for
2681 growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar
2682 areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural
2683 ponds. This definition includes both wetlands subject to and those not subject to section
2684 404 of the Clean Water Act (i.e. jurisdictional and non-jurisdictional wetlands).
2685 Manmade retention/detention ponds are not considered wetlands unless they have the
2686 characteristics of a wetland as noted above.
2687
2688 3. Lenders shall use the Fish and Wildlife Service's National Wetlands Inventory (NWI) as
2689 a primary screening tool and must also identify observed or known wetlands not

2690 indicated on NWI maps. HUD must consider onsite and off-site impacts that result in
2691 draining, impounding, or destroying wetlands.

2692
2693 4. If an NWI map indicates the presence of wetlands, FWS staff, if available, must find that
2694 no wetland is present in order for the action to proceed without further processing. Where
2695 FWS staff is unavailable to resolve any NWI map ambiguity or controversy, an
2696 appropriate wetlands professional must find that no wetland is present in order for an
2697 action to proceed without further processing.

2698
2699 5. Projects that develop or disturb onsite or offsite wetlands (also known as new
2700 construction in a wetland) will be considered only after HUD conducts an eight-step
2701 decision-making process as described in 24 CFR 55.20 and includes consultation, issuing
2702 two public notices and taking public comment. Developing or disturbing onsite or offsite
2703 wetlands includes draining, dredging, channelizing, filling, diking, impounding and
2704 related activities. See 24 CFR 55.2(b)(8) for the definition of new construction in a
2705 wetland.

2706
2707 6. Wetlands under local or state jurisdiction are subject to state or local review as appropriate.
2708 However, compliance with state or local requirements is not a substitute for the 8-step
2709 process.

2710
2711 7. Use of individual permits under section 404 of the Clean Water Act:

2712 The first five steps of the 8-step process are not required if,

2713 a. The project involves new construction in a wetland on a property located outside the
2714 100-year floodplain and 500-year floodplain,

2715 b. The applicant has submitted, with its application to HUD, an individual Section 404
2716 permit (including approval conditions) issued by the U.S. Army Corps of Engineers,
2717 or by a State or Tribal government under Section 404(h) of the Clean Water Act for
2718 the proposed project, and

2719 c. All wetlands adversely affected by the project are covered by the permit (see 24 CFR
2720 55.28).

2721
2722 Note: Processing under all of §55.20 is required for new construction in wetlands
2723 that are not subject to section 404 of the Clean Water Act and for new construction
2724 for which the USACE (or a State or Tribal government under section 404(h) of the
2725 Clean Water Act) issues a general permit under Section 404.

2726
2727 The Lender must provide extensive data to aid HUD in evaluating wetland impacts.

2728 The Lender should consult early with HUD when a site could potentially impact a

2729 wetland.

2730
2731 a. HUD may require that the Lender submit a wetlands delineation performed by a
2732 qualified professional to evaluate the direct and/or indirect wetland impacts of the
2733 project.

- 2735 b. Appropriate and practicable compensatory mitigation is recommended for
2736 unavoidable adverse impacts to more than one acre of wetlands. Compensatory
2737 mitigation is defined at 24 CFR 55.2(b)(2) and includes but is not limited to:
2738 permittee-responsible mitigation, mitigation banking, in-lieu fee mitigation, the use of
2739 preservation easements or protective covenants, and any form of mitigation promoted
2740 by state or Federal agencies.
- 2741
- 2742 c. The 8-step process shall consider three alternatives: the action as proposed,
2743 modifications within the site controlled by the applicant, or no action, i.e., rejection of
2744 the application.
- 2745
- 2746 9. When wetlands exist at a project site, HUD will require assurance from the Borrower that
2747 no activities that may impact a wetland will be undertaken during the term of the insured
2748 mortgage without prior approval from HUD. This assurance is required when future
2749 activities at the project site could impact on-site, adjacent and/or other off-site wetlands.
2750 To ensure that any work during the term of the insured mortgage that could impact a
2751 wetland will undergo the applicable reviews and approvals before the work begins, the
2752 below statement is to appear in official project documents as determined by ORCF, such
2753 as a rider to the Borrower Regulatory Agreement or in accordance with current ORCF
2754 requirements. This restriction will end with the termination of the insured mortgage:

2755

2756 WETLANDS RESTRICTION. While any mortgage insured by HUD is in effect,
2757 Borrower shall not perform construction activities on the Mortgaged Property that
2758 impact any area that qualifies as a wetland by the U.S. Army Corps of Engineers
2759 1989 delineation procedures or the U.S. Fish and Wildlife Service "Classification
2760 of Wetlands and Deepwater Habitats of the United States" without first obtaining
2761 the consent of HUD and any applicable federal, state, or local permits. Please note
2762 that this definition includes wetlands that are not defined as jurisdictional under
2763 Section 404 of the Clean Water Act and is to be interpreted consistent with 24
2764 CFR Part 55.

2765

2766 **T. Wild & Scenic Rivers:**

- 2767 1. The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic,
2768 and recreational rivers designated as components or potential components of the National Wild
2769 and Scenic Rivers System (NWSRS).
- 2770 2. For new construction and rehabilitation, HUD must consider whether projects in proximity to a
2771 wild and scenic river could impact the designated river segment or be inconsistent with the
2772 management and land use plan for the designated river area.
- 2773 3. Additional information about the Wild and Scenic Rivers Act and compliance requirements can
2774 be found on the HUD Exchange website which can be accessed from the ORCF Environmental
2775 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

2822 the last tower maintenance, pictures of the tower including the foundation, an
2823 assessment of the hazard to the HUD project, and a discussion of any mitigation
2824 measures that could minimize this risk. HUD staff will determine whether to grant
2825 an exception to the prohibition on being within the engineered fall distance.

2826
2827 3. If the fall zone does not include any buildings, ancillary facilities, structures, or common
2828 areas, document this in the environmental review in HEROS.

2829
2830 **B. Hydraulic Fracturing (Fracking) Activities:**

2831 1. No residential structure may be within 300 feet of the boundary of an existing or
2832 planned fracking well pad.

2833
2834 2. If fracking well pads are greater than 300 feet but within 1000 feet of a project,
2835 HUD requires a hazard analysis from a qualified party such as a geologist or a
2836 geotechnical engineer evidencing that lateral fracking would not negatively affect
2837 soil stability, cause petroleum releases, or create other risks to the HUD property
2838 and/or residents. etc. The analysis should include information about extraction
2839 wells and other fracking operations within 1000 feet of the project site and an
2840 assessment of risks from these operations. The report should include information
2841 regarding the status of each horizontal well and future plans for new drilling at or
2842 adjacent to the site.

2843
2844 a. ORCF requirements related to pressurized pipelines that are above 200 psi
2845 (see Section 7.4.F.1) apply to fracturing operations.

2846
2847 b. If issues are identified, HUD requires mitigation to address the issues and
2848 may reject the project if no mitigation is possible.

2849
2850
2851 **C. Local Requirements:** HUD may adopt additional requirements to address unique local
2852 concerns in specific geographic areas, but if any local requirement is mandated, ORCF must
2853 inform the Housing Program Environmental Clearance Officer of the requirement.

2854
2855 **D. Oil or Gas Wells, Sour Gas Wells, and Slush Pits:**

2856
2857 1. Operating or planned drilling site: No residential structures may be within 300 feet from
2858 the boundary of the drilling site.

2859
2860 2. Operating well: No residential structures may be within 75 feet of an operating well
2861 unless the following mitigating measures are taken:

2862 a. Maintenance of nuisance controls,

2863 b. Controls of noise levels caused by pumping, and

2864 c. Spill controls to reduce risk of contamination.

2865
2866 3. Abandoned well:

2867 a. Confirmation by the State government that the well is safely and permanently

2868 abandoned. No residential structures may be located within 10 feet of an abandoned
2869 well.

2870 b. If there is no confirmation letter, no residential structures may be within 300 feet of
2871 an abandoned well.

2872
2873 4. Sour gas (hydrogen sulfide bi-product) wells: Separation distance must be determined by a
2874 petroleum engineer, with concurrence by State government.

2875
2876 5. Slush pits (used for drilling mud mixes for well lubrication):

2877 a. If located on-site, a hazards analysis is required to be performed pursuant to Section
2878 7.3.Q, Site Contamination. Mitigation activities must include, and are not limited to,
2879 removal of all drilling mud from the site and backfilling with clean compacted
2880 material.

2881 b. If offsite, an analysis must be performed pursuant to Section 7.3.Q regarding offsite
2882 hazards.

2883
2884 E. Overhead High Voltage Electric Transmission Lines: No structure shall be located within
2885 the easement of any overhead high voltage transmission line. A high voltage transmission
2886 line is a power line that carries high voltage between a generating plant and a substation.
2887 High voltage lines do not include local distribution and service lines.

2888
2889 F. Pipeline Hazards:

2890 1. All parts of any structure must be at least 10 feet from the outer boundary of the
2891 easement for any high pressure pipeline transferring flammable or combustible liquids
2892 or gases that exceed 200 psi operating pressure. This does not apply to distribution
2893 lines supplying only the facility itself.

2894
2895 2. In addition, reviews of new construction projects, rehabilitation projects where
2896 residential density will increase, projects where there is a conversion from non-
2897 residential to residential use, or projects where a vacant building is made habitable
2898 must consider the potential hazard of pressurized pipelines within a one (1) mile radius
2899 of the property.

2900
2901 a. The analysis must identify all buried and aboveground high pressure pipelines
2902 within a one (1) mile radius of the property. HUD's primary reference for the
2903 one-mile radius assessment is the National Pipeline Mapping System (NPMS)
2904 Pipeline Information Management and Mapping Application (PIMMA).
2905 Preparers must evaluate all pipelines within the search area that are identified in
2906 the NPMS (public viewer) in the pipeline analysis. While other data sources
2907 may be helpful and are welcome, preparers are not required to analyze lines not
2908 identified in the NPMS, except as noted in Section 7.4.F.4 below for fracking
2909 operations. A link to the PIMMA mapping tool is available on the ORCF
2910 Environmental Resource Page.

2911
2912 b. When the PIMMA tool identifies a high pressure pipeline within the one mile
2913 radius, an analysis is required to determine if the pipeline poses a safety hazard

2914 that requires mitigation. For assistance with this analysis, the reviewer should
2915 contact the HUD Field or Regional environmental officer for the location where
2916 the pipeline is being assessed. A link to the contact information for HUD
2917 Environmental Officers by Region/State is available on the ORCF
2918 Environmental Resources Page.

2919
2920 3. If a pipeline poses a safety hazard, HUD requires mitigation to address the issues and
2921 may reject the project if no mitigation is possible. Mitigation can include modifying
2922 the building design using heat retardant and high tensile strength materials;
2923 rearranging the site plan and exterior building shapes; or constructing a barrier
2924 designed by a licensed professional structural or civil engineer.

2925
2926 4. For projects near fracking sites, the requirement at 7.4.B.2 to analyze hazards from
2927 fracking operations within 1000 feet of the property includes pipelines that are above
2928 200 psi. Section 7.4.F.1 above applies to these pipelines. Such pipelines may not be
2929 shown on the NPMS map but may be identified through the agency that regulates the
2930 oil and gas industry in the jurisdiction (in Texas, for example, The Railroad
2931 Commission of Texas may provide the applicable data).

2932 2933 **G. Railroad Vibration:**

2934 Buildings closer than 100 feet to a railroad track are often subject to excessive vibration
2935 transmitted through the ground. New construction at such sites is discouraged. For
2936 existing properties, the structure must be examined for damage caused by vibrations. A
2937 railroad vibration study may be required.
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Whenever 7.4

HUD Responsibilities in Reviewing Cases Requiring Remediation

rail lines are less than 100 feet from a facility, HUD approval should be obtained prior to
the application submission. In addition to concerns about vibration, HUD will want
documentation that the project complies with applicable LSTF safety standards.

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

2957 applicable safety standards, the mortgage insurance application must identify corrective
2958 measures. The implementation of corrective measures must be completed and compliance
2959 with the applicable water quality standards must be confirmed prior to the loan closing.

2961 1. **Public Water Supply:** The water service’s most recent Consumer Confidence Report
2962 (CCR) should be included in the application. The U.S. Environmental Protection
2963 Agency (EPA) requires every community water supplier to provide a CCR to its
2964 customers.

2966 2. **Private Water Supply/Private Well:** When a private water supply is utilized for
2967 drinking water, the facility’s water supply must meet the requirements of the health
2968 authority with jurisdiction. If there are no local or state water quality standards, then the
2969 water quality must meet the EPA Primary Drinking Water Standards.

2970
2971 K. **Zoning:** If an existing property has a legal non-conforming use/structure, and the current
2972 zoning regulations will not allow the property to be rebuilt to the current density, then the
2973 owners are required to purchase Ordinance or Law insurance coverage with their property
2974 insurance; see Production, Chapter 14.5.B Ordinance or Law Coverage.

7.5

Environmental Assessment Factors

2977
2978 An Environmental Assessment (EA) level review requires compliance with NEPA in addition to
2979 the laws and authorities listed at Chapter 7.3 above and the additional Housing Specific
2980 requirements described in 7.3 and 7.4 above. When conducting an EA level of review, HUD will
2981 require and analyze information to determine if the project results in any significant impact and
2982 if an Environmental Impact Statement is needed.

2983
2984 The following are EA requirements that must be included in the HEROS submission¹:

2985
2986 A. **Purpose and Need:** HUD’s EA review requires a project justification that outlines the
2987 objectives of the environmental review. The purpose and need statement provides a
2988 framework for environmental decision-making.

2989
2990 B. **Existing Conditions and Trends:** HUD’s EA review must determine existing physical
2991 conditions of the project area and also describe the character, features and resources of the
2992 project area and its surrounding. This section should identify the trends that are likely to
2993 continue in the absence of the project.

2994
¹ Additional details and examples of the EA requirements provided at <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>.

2995 C. **Effects Analysis:** HUD’s EA review must consider any changes to the human environment
2996 that are reasonably foreseeable and have a reasonably close causal relationship to the HUD
2997 project. Consistent with 40 CFR 1508.1(g), HUD’s EAs must discuss both effects that occur
2998 at the same time and place as the proposed project and any effects that are farther removed in
2999 time or distance from the project area (e.g. potential changes to the land use and development
3000 patterns of the surrounding community). This analysis must include the full aggregated
3001 project site.

3002
3003 D. **Alternatives:** Projects must always consider the No Action alternative. HUD staff are
3004 considering an application for FHA at a particular site and therefore are limited to
3005 considering three alternatives: the action as proposed, modifications within the site controlled
3006 by the applicant, or no action, i.e., rejection of the application.

3007
3008 E. **Environmental Assessment Factors:** The EA must analyze the project’s impacts on land
3009 development, socioeconomic factors, community facilities and services, and natural
3010 features.² The analysis will vary from project to project. For example, a project designed to
3011 house families will focus on access to schools, parks and recreation while a project designed
3012 to house seniors would instead focus on healthcare and social services. Some EA factors are
3013 listed below. For a full list with suggested resources, see footnotes in this section.

- 3014 1. **Conformance with comprehensive plans, zoning compatibility, site safety, energy**
3015 **consumption, and urban impact.**
- 3016 2. **Availability of services like educational facilities, commercial facilities, health care**
3017 **and social services.**
- 3018 3. **Availability of supporting infrastructure such as solid waste, wastewater, storm**
3019 **water, and access to municipal water supply, public safety (Police, Fire, and**
3020 **Emergency Medical Services), open space and recreation, cultural facilities, and**
3021 **transportation.**

7.6

HUD and Lender Responsibilities in Cases Requiring Remediation

A. General Responsibilities

3023
3024
3025
3026 The Department assumes greater risk anytime that a Firm Commitment is issued on a
3027 contaminated site. The risk is even greater when a loan is closed on a site where complete
3028 removal of contamination is not possible, requiring monitoring possibly with continuous
3029 remediation techniques such as Monitored Natural Attenuation and Enhanced Passive
3030 Remediation (MNA/EPR). Therefore, HUD staff must exercise great care in the review
3031 process to assure that all reasonable measures are taken to mitigate HUD’s exposure and that
3032 an accurate determination is made of any remediation costs that are included in the FHA-
3033 insured mortgage. Any special site assessment reports, Phase II or Phase III ESAs should be
3034 reviewed so that the extent of the contamination is fully understood. Although the Lender is

² Guidance on considering EA factors can be found at
<https://files.hudexchange.info/resources/documents/Environmental-Assessment-Factors-Guidance.pdf>.

3035 responsible for assuring that environmental remediation contractors are qualified and
3036 experienced, HUD staff must still review references and qualifications, and are strongly
3037 encouraged to consult with an Environmental Officer REO/FEO at the start of any
3038 remediation discussion.

3039
3040 **Complete 1.** In cases requiring remediation, the lender must provide the plan and the cost
3041 estimate from a qualified contractor who will perform the mitigation work.

3042 **B.-2. Removal of Site Contamination Valuation**

3043 The HUD staff preparing the environmental review in HEROS ~~—Form 4128~~ is generally
3044 responsible for reviewing ~~and documenting~~ the adequacy of the proposed remediation
3045 plan.
3046

3047
3048 ~~Any estimates of value or rents should be made as if the project is unaffected by~~
3049 ~~contamination and conditioned on successful removal. The appraisal must address~~
3050 ~~any effect on marketability that may be present due to the prior environmental~~
3051 ~~history.~~
3052

3053
3054 If an environmental issue involves areas of special engineering expertise, environmental
3055 science, or State and local ~~procedure~~procedures, the HUD reviewer may request technical
3056 assistance from the ~~Field Environmental Officer (REO or FEO)~~ assigned in that
3057 jurisdiction, and defer to their guidance and judgment in the matter. HUD reviewers may
3058 also request the attention of ~~HUD Regional Environmental Officers (REO) or~~ the
3059 Program Environmental Clearance ~~Officers~~Officer and/or Specialists when unusual or
3060 controversial issues arise.
3061

3062 ~~Underwriting: The ORCF Underwriter is responsible for determining if~~3.

3063 ~~Architecture/Engineering and Cost: Engineering staff or a Cost Analyst should review~~ the
3064 ~~cost estimate of the remediation plan to determine whether it is reasonable and if the~~
3065 ~~remediation and removal contractor is appropriately bonded and qualified. The ORCF~~
3066 ~~Underwriter may consult with HUD Architectural/Engineering and Cost staff, and with~~
3067 ~~local environmental remediation professionals about costs for similar work. Cost data for~~
3068 ~~remediation is not as plentiful as with more routine construction tasks. “Environmental~~
3069 ~~Remediation Estimating Methods” might be helpful in some cases and is available~~
3070 ~~through RS Means (Please see ORCF Environmental Resource Page located on the~~
3071 ~~Section 232 Program website). HUD staff may consult with local environmental~~
3072 ~~remediation professionals about costs for similar work.~~
3073

3074 **4. Underwriting:** ~~The amount of escrow or bond~~ORCF Underwriter shall be based on the
3075 ~~estimated cost determine~~ escrow, performance and bond payment requirements. The cost
3076 of the mitigation work based upon the estimated cost from the contractor. ~~— may be~~
3077 included in the insured loan.
3078

3079 The amount of escrow or bond should be for 150% of the total estimated cost, ~~or in an~~
3080 ~~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

3127 addressed above, the remediation contractor must also provide HUD a separate guarantee of
3128 completion for their work.
3129
3130

7.5

Environmental Information for the Lender Narrative

3131
3132 In addition to the reports and submission requirements discussed above, ORCF requires the
3133 Lender to provide a Lender Narrative with environmental issues discussed, along with any
3134 available supporting documentation for the project in the application submission. Supporting
3135 documentation may be included in the Phase I ESA report or it may be submitted separately
3136 within the application to HUD.

3137
3138
3139 The following important environmental issues must be discussed in the Lender Narrative when
3140 applicable:
3141

- 3142 A. Coastal Zone Management (24 CFR 50.4(c)(2))
- 3143 B. Coastal Barrier Resources (24 CFR 50.4(c)(1))
- 3144 C. Floodplain Management (24 CFR 50.4(b)(2))
- 3145 D. Historic Preservation (24 CFR 50.4(a))
- 3146 E. Noise Analysis (24 CFR Part 50.4(k))
- 3147 F. Explosive/Flammable Hazards (24 CFR 50.4(k))
- 3148 G. Airport Clear Zones (24 CFR 50.4(k))
- 3149 H. Wetlands Protection (24 CFR 50.4(b)(3))
- 3150 I. Toxic Chemicals and Radioactive Materials (24 CFR 50.3(i))
- 3151 J. Other Applicable Federal Laws
 - 3152 a. Endangered Species (24 CFR 50.4(e))
 - 3153 b. Sole Source Aquifers (24 CFR 50.4(d))
 - 3154 c. Farmlands Protection (24 CFR 50.4(j))
 - 3155 d. Flood Insurance (24 CFR 50.4(b)(1))
 - 3156 e. Environmental Justice (24 CFR 50.4(l))

3157 Additional Hazards and Nuisances (radon, pipelines, vibrations, fall hazards, etc.)
3158
3159

3160 The existence of mold in a structure is not a topic that is covered during the environmental
3161 review. It is addressed in the Project Capital Needs Assessment (PCNA) as part of the building
3162 inspection. Lenders and ORCF underwriters will refer to the PCNA to determine if mold
3163 assessment and remediation is required.
3164

3165 The issues discussed below must be analyzed by HUD staff during their preparation of the
3166 environmental review in HEROS Form HUD-4128 and provide guidance by which the Lender
3167 can assist HUD. These brief descriptions are not substitutes for the requirements in the statutes,
3168 regulations, Executive Orders, notices and handbooks.

3169
3170 ~~I. **Coastal Zone Management (24 CFR 50.4(c)(2)):** Projects located within a state’s coastal~~
3171 ~~management zone must be found consistent with the approved state Coastal Zone~~
3172 ~~Management program. In many states, HUD will require a letter from the State Coastal Zone~~
3173 ~~Management Agency confirming consistency with the approved program. Lenders should be~~
3174 ~~aware of the extent of coastal management zones in coastal states and contact HUD early~~
3175 ~~when examining a proposal in a coastal zone.~~

3176
3177 ~~J. **Coastal Barriers (24 CFR 50.4(c)(1)):** Under the Coastal Barriers Resources Act cited in 24~~
3178 ~~CFR 50.4(c), HUD is prohibited from insuring a project located within designated coastal~~
3179 ~~barriers of the Atlantic Ocean, Gulf of Mexico, or the Great Lakes, known as Coastal Barrier~~
3180 ~~Resource System (CBRS) units, and shown on associated Fish and Wildlife Service maps. A~~
3181 ~~project located within a CBRS unit, or that includes a facility (such as a water main) to a~~
3182 ~~CBRS unit, will not be eligible for application processing.~~

3183
3184 ~~K. **Floodplain Management (24 CFR 50.4(b)(2)):**~~

3185
3186 ~~1. Applications for Firm Commitment for mortgage insurance are subject to~~
3187 ~~regulations regarding floodplain management found at 24 CFR Part 55 which~~
3188 ~~implements Executive Order 11988 (Floodplain Management).~~

3189
3190 ~~2. All Section 232 projects are considered “critical actions” as defined in 24 CFR~~
3191 ~~55.2(b)(3).~~

3192
3193 ~~3. The Lender must utilize the Federal Emergency Management Agency’s best available~~
3194 ~~data to comply with Floodplain Management requirements, which is the latest~~
3195 ~~Advisory Base Flood Elevations (ABFEs), Preliminary Flood Insurance Rate Maps~~
3196 ~~(P-FIRMs), or Flood Insurance Rate Maps (FIRMs). However, base flood elevations~~
3197 ~~from an advisory or preliminary map may not be used if the elevations are lower than~~
3198 ~~the elevations on the current FIRM used for ratemaking purposes. An online resource~~
3199 ~~for finding the relevant FIRM and ABFE may be found on the ORCF Environmental~~
3200 ~~Resource Page located on the Section 232 Program website. If any part of the site or~~
3201 ~~integral offsite development is located within the 500-year floodplain (0.2% chance~~
3202 ~~of annual flood) according to the best available data, the project must comply with~~
3203 ~~HUD’s floodplain management regulations. Note: the 500-year floodplain includes~~
3204 ~~the 100-year floodplain (1% chance or greater chance of flood in any given year,~~
3205 ~~known as the Special Flood Hazard area). The project will need to comply with~~
3206 ~~current standards in 24 CFR part 55 if they are more restrictive than this handbook.~~
3207 ~~Visit the ORCF Environmental Resource Page for the latest guidance.~~

3208
3209 ~~4. Mortgage insurance shall not be approved for a property located in (a) a floodway, (b)~~
3210 ~~a coastal high hazard area, or (c) a FEMA identified Special Flood Hazard Area~~
3211 ~~(SFHA) in which the community has been suspended from or does not participate in~~
3212 ~~the National Flood Insurance Program. The terms “coastal high hazard area”,~~
3213 ~~“floodway”, and “functionally dependent use” are defined in 24 CFR 55.2.~~

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~~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.i. Appropriate provision is made for site drainage; and~~

~~e. In accordance with 24 CFR 55.12(e)(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 (FLOMR) 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~~

3261 ~~be extraordinary circumstances leading to the conclusion that there are~~
3262 ~~no practicable alternatives to the project site being in the floodplain. In~~
3263 ~~order to make this determination, HUD must conduct an 8-step~~
3264 ~~decision-making process that includes publishing two public notices~~
3265 ~~and taking comments, as summarized in 24 CFR 55.20. In such~~
3266 ~~instances, prior to issuing the first public notice, HUD will need~~
3267 ~~detailed information regarding how the property will be altered and the~~
3268 ~~improvements designed. This information includes the elevation of the~~
3269 ~~property, the elevation of the floodplain, and the location of life support~~
3270 ~~systems.~~

3271
3272 ~~Except in circumstances where it would not be practicable, in order to~~
3273 ~~minimize adverse impacts, the 8-step process shall require as a~~
3274 ~~condition of any project approval that a CLOMA or CLOMR be issued~~
3275 ~~prior to initial closing, and a FLOMA or FLOMR be issued prior to~~
3276 ~~final closing.~~

3277
3278 ~~The 8-step process shall require that new construction in a floodplain be~~
3279 ~~elevated to the 100-year floodplain according to FEMA's best available~~
3280 ~~data. If higher elevations are required by locally adopted code or~~
3281 ~~standards, those higher standards would apply. The 8-step process shall~~
3282 ~~also require that any new construction in Coastal A zones must utilize~~
3283 ~~Zone VE construction practices in accordance with the FEMA Coastal~~
3284 ~~Construction Manual, as recommended by FEMA. Information on~~
3285 ~~those construction practices can be found on the ORCF Environmental~~
3286 ~~Resource Page.~~

3287
3288 ~~The 8-step process shall be completed before issuance of the Firm~~
3289 ~~Commitment. HUD must develop the two notices but the costs of~~
3290 ~~publication will be borne by the Borrower. HUD approval for a Firm~~
3291 ~~Commitment will be conditioned on the Borrower maintaining flood~~
3292 ~~insurance on any building located in the 100-year floodplain until the~~
3293 ~~issuance of the FLOMA or FLOMR.~~

3294
3295 ~~7. As required by 24 CFR 55.20(e), all critical actions in the 100-year or 500-year~~
3296 ~~floodplain shall be designed and built at or above the 100-year floodplain (in~~
3297 ~~the case of new construction) according to FEMA's best available data or as~~
3298 ~~otherwise required by current standards in 24 CFR part 55, and modified to~~
3299 ~~include:~~

- 3300 ~~a. Preparation of and participation in an early warning system;~~
- 3301 ~~b. An emergency evacuation and relocation plan;~~
- 3302 ~~c. Identification of evacuation route(s) out of the 500-year floodplain; and~~
- 3303 ~~d. Identification marks of past or estimated flood levels on all structures.~~

3304
3305 ~~a. Projects that are converting from a non-residential use to a residential use~~
3306 ~~are considered the same as "new construction" for floodplain management~~

3307 ~~purposes.~~

3308
3309 ~~9. For Section 223(f) purchase or refinancing actions described in 24 CFR 55.12(a)(2),~~
3310 ~~or repair, rehabilitation, modernization, weatherization or improvement actions~~
3311 ~~described in 24 CFR 55.12(a)(3), an abbreviated decision-making process pursuant to~~
3312 ~~24 CFR 55.12(a) may be used by HUD to determine their acceptability. The~~
3313 ~~Department will evaluate risks and mitigation measures in making its decision but it~~
3314 ~~discourages these actions if either the lowest floor, or the life support facilities, or~~
3315 ~~egress and ingress of the existing building, are below the 100 year floodplain line.~~

3316
3317 ~~10.1. Where a site does not appear to be located in the floodplain on official FEMA maps, but~~
3318 ~~shows evidence of flooding, HUD is not precluded from qualitatively evaluating the~~
3319 ~~acceptability of the site. Lenders will be required to provide extensive data to aid HUD in~~
3320 ~~evaluating floodplain sites.~~

3321
3322 ~~11. At the time of the application for Firm Commitment, the Lender must submit a~~
3323 ~~completed Standard Flood Hazard Determination Form (FEMA Form 086-0-~~
3324 ~~32).~~

3325
3326 ~~12. Any building accepted for mortgage insurance that is located within a FEMA~~
3327 ~~mapped 100-year floodplain is required to carry flood insurance. General~~
3328 ~~flood insurance requirements as well as required insurance coverage amounts~~
3329 ~~are set forth in Production, Chapter 14.7.H. When the facility's contents such~~
3330 ~~as major movables are part of the mortgage security, the maximum available~~
3331 ~~coverage amount consists of the total available for both the building and~~
3332 ~~contents. Whenever flood insurance is required for a project, proof that the~~
3333 ~~Borrower has a commitment for flood insurance effective as of the loan closing~~
3334 ~~must be submitted with the mortgage insurance application.~~

3335
3336 ~~1. All new and renewal leases must contain acknowledgements signed by the residents~~
3337 ~~indicating that they have been advised that the property is in a floodplain and flood~~
3338 ~~insurance is available for their personal property. This applies to all Section 232 properties~~
3339 ~~within the 100-year and 500-year floodplains.~~

3340
3341 ~~14. Section 232/223(a)(7) and FHA-insured Section 232/223(f) refinances:~~
3342 ~~Pursuant to 24 CFR 50.19(b)(21), refinances of currently FHA-insured~~
3343 ~~mortgages are exempt from the 8-step decision-making process when the~~
3344 ~~refinance will not result in any physical impacts or changes except for routine~~
3345 ~~maintenance. Guidance for clarifying the difference between routine~~
3346 ~~maintenance and repair is available on the on the ORCF Environmental~~
3347 ~~Resource Page. All other requirements discussed in this section are being~~
3348 ~~extended by HUD to such §50.19 Categorical Exclusions. In particular, the~~
3349 ~~following are required for all Section 232 applications when the project is~~
3350 ~~located in a 100-year or 500-year floodplain:~~

- 3351 ~~a. Preparation of and participation in an early warning system;~~
3352 ~~a. An emergency evacuation and relocation plan;~~
3353 ~~c. Identification of evacuation route(s) out of the 500-year floodplain; and~~
3354 ~~d. Identification marks of past or estimated flood levels on all structures.~~
3355

3356 ~~15. In considering the safety of residents, offsite floodways and other flood hazards will~~
3357 ~~be evaluated in terms of separation distance, elevation differences, and the nature of~~
3358 ~~the hazard in question. Unacceptable proximity to hazards may result in rejection of~~
3359 ~~the application. Pre-submission guidance can be requested through~~
3360 ~~LEANThinking@hud.gov.~~
3361

3362 ~~**L. Flood Insurance:** In accordance with 24 CFR 50.4(b)(1), and as described in Section 7.5.C.12~~
3363 ~~above, flood insurance is required when any portion of a structure is located in a 100-year~~
3364 ~~floodplain.~~
3365

3366 ~~**K.L. Historic Preservation (24 CFR 50.4(a)):**~~
3367

3368 ~~HUD must follow the procedures implementing the National Historic Preservation Act (54~~
3369 ~~U.S.C. § 300101 et seq.) with regulations found at 36 CFR Part 800. Section 106 of the National~~
3370 ~~Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of~~
3371 ~~their undertakings on historic properties and to afford the Advisory Council on Historic~~
3372 ~~Preservation a reasonable opportunity to comment. All applications for Firm Commitment for~~
3373 ~~HUD mortgage insurance, whether new construction, rehabilitation, refinancing or conversion~~
3374 ~~from non-residential to residential property, except those categorically excluded under 24 CFR~~
3375 ~~50.19(b)(21), are considered “federal undertakings” that require HUD to make a determination~~
3376 ~~of no historic properties affected, no adverse effect, or adverse effect upon historic properties. A~~
3377 ~~historic property means any prehistoric or historic district, site, building, structure, object, or~~
3378 ~~traditional cultural property or landscape included in, or eligible for inclusion in, the National~~
3379 ~~Register of Historic Places maintained by the Secretary of the Interior.~~
3380

3381 ~~1. Defining the Area of Potential Effects (APE): HUD must consider the Area of~~
3382 ~~Potential Effects (APE). Establishing a project’s APE is part of a ‘reasonable and~~
3383 ~~good faith effort’ to identify historic properties that may be affected by the project.~~
3384 ~~The APE defines where to look for historic properties, based on where direct and~~
3385 ~~indirect impacts of the project are anticipated. Sometimes the APE is simply the~~
3386 ~~project parcel, and other times, it is a larger area, neighborhood, or historic district.~~
3387 ~~The APE should be based on project activities, without regard to whether there~~
3388 ~~actually are historic properties in the area. Identification of historic properties in the~~
3389 ~~APE comes later. Establishing the APE requires consideration of the effects a project~~
3390 ~~might have on and beyond its site. The effects of an interior rehabilitation project~~
3391 ~~will likely be limited to the building footprint itself. The APE for a simple exterior~~
3392 ~~rehabilitation would likely be the property parcel, including the building and its~~
3393 ~~immediate setting. Substantial earthmoving on a site may indicate the need for a~~
3394 ~~vertical dimension to the APE. Direct effects may also occur outside a project site. A~~
3395 ~~new construction project might have new roads and utility lines leading to the site and~~
3396 ~~they might be included within the APE. In major infrastructure projects that require~~

3397 large amounts of fill, the source of the fill (“borrow area”) may be included in the
3398 APE. Determination of the APE also needs to take into account possible indirect
3399 effects that might negatively alter the character or use of adjacent properties. For
3400 example, the review should consider whether the project will significantly increase
3401 traffic or change traffic patterns in the vicinity of the project, whether the project will
3402 introduce excessive light or noise in the area, and whether the project will have visual
3403 ramifications on the surrounding area through its relatively massive scale or height.
3404 If potential effects extend beyond the project site, the Section 106 documentation
3405 should delineate the larger APE on a map.

- 3406
- 3407 ~~2. After the APE is defined, and historic properties within it are identified, the potential~~
3408 ~~impacts to those historic properties may be evaluated. Because of the technical nature~~
3409 ~~of historic property identification, evaluation and treatment, it may be appropriate to~~
3410 ~~retain a qualified historic preservation professional to prepare the findings. Such~~
3411 ~~consultant should meet the Secretary of the Interior’s Professional Qualifications (36~~
3412 ~~CFR Part 61) and have experience in Section 106 reviews.~~
- 3413
- 3414 ~~3. The Section 106 review must be completed before HUD approves and/or commits~~
3415 ~~funds to a project.~~
- 3416
- 3417 ~~4. All Section 232 new construction and substantial rehabilitation projects, and all non-~~
3418 ~~excepted Section 232/223(f), 223(a)(7) and 241(a) applications require consultation~~
3419 ~~with the State Historic Preservation Officer (SHPO) and with any applicable Tribal~~
3420 ~~Historic Preservation Officer (THPO) and affected tribes.~~

3421

3422 **Exceptions:**

- 3423 i. ~~Projects that will not involve new construction or rehabilitation, nor result in~~
3424 ~~any physical impacts or changes except for routine maintenance, have “no~~
3425 ~~potential to cause effects” to historic properties, as described in 36 CFR~~
3426 ~~800.3(a)(1), and therefore HUD has no further obligations under Section 106~~
3427 ~~of the NHPA or 36 CFR Part 800. For such transactions there is no obligation~~
3428 ~~to contact the SHPO or THPO/affected tribes, and HUD staff’s historic~~
3429 ~~preservation responsibilities are limited to documenting this determination in~~
3430 ~~HEROS Form HUD 4128). Guidance for clarifying the difference between~~
3431 ~~routine maintenance (Please reference HUD Notice CPD 16-02 “Guidance for~~
3432 ~~Categorizing an Activity as Maintenance for Compliance with HUD~~
3433 ~~Environmental Regulations, 24 CFR Parts 50 and 58” or succeeding guidance.~~
3434 ~~Note that this definition of maintenance is specifically for environmental~~
3435 ~~review purposes and applies to all HUD programs.) and a repair is available~~
3436 ~~on the ORCF Environmental Resource Page.~~
- 3437 ii. ~~Some states may have a Programmatic Agreement (PA) with HUD and the~~
3438 ~~proposal may be part of a class of actions that do not require Section 106~~
3439 ~~consultation under the MOA or PA.~~

- 3440
- 3441 ~~5. To assist HUD in making its historic preservation determination, the Borrower or~~
3442 ~~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~~

3489 ~~properties of religious and cultural significance to tribes. These types of activities~~
3490 ~~include:~~

- 3491 ~~• ground disturbance (digging);~~
- 3492 ~~• new construction in undeveloped natural areas;~~
- 3493 ~~• introduction of incongruent visual, audible, or atmospheric changes;~~
- 3494 ~~• work on a building or structure with significant tribal association, or~~
- 3495 ~~• transfer, lease or sale of historic properties of religious and cultural significance.~~

3496
3497 ~~Further guidance may be found in HUD’s Notice on Tribal Consultation can~~
3498 ~~be found on the ORCF Environmental Resource Page.~~

3500
3501 ~~When tribal consultation is required, the HUD reviewer will utilize the HUD Tribal~~
3502 ~~Directory Assessment Tool (TDAT) (see the ORCF Environmental Resource Page)~~
3503 ~~during the environmental review process to determine if the site is located in an area of~~
3504 ~~tribal significance. The tribal consultation requirement applies to properties off tribal~~
3505 ~~lands as well as on tribal lands. Properties with religious and cultural significance to~~
3506 ~~native people may include ancestral archaeological sites and natural areas where~~
3507 ~~traditional practices or ceremonies have been carried out as well as more familiar historic~~
3508 ~~properties. Some traditionally used places have very strong religious associations, and it~~
3509 ~~may be difficult or even inappropriate for native people to talk about their significance.~~
3510 ~~If this situation arises, hiring a qualified professional with experience in tribal~~
3511 ~~consultation may be required. The cost of such an interpreter shall be paid by the~~
3512 ~~Borrower.~~

3513 ~~Pursuant to the “anticipatory demolition” requirements of Section 110(k) of the National~~
3514 ~~Historic Preservation Act (54 U.S.C. 306113), even before the concept meeting or~~
3515 ~~application submission takes place, any action by a potential lender or borrower, or any~~
3516 ~~action by another party that the lender or borrower has the legal power to prevent, that is~~
3517 ~~taken with the intent to circumvent Section 106 review and that significantly adversely~~
3518 ~~affects a historic property, could result in rejection of an application.~~

- 3519 ~~d. The Section 106 review must be completed before HUD approves and/or~~
3520 ~~commits funds to a project. Additional guidance on historic consultation is~~
3521 ~~available on the ORCF Environmental Resource Page.~~

3522
3523
3524 **N. ~~Noise (24 CFR 50.4(k)):~~**

3525
3526 ~~New Construction/Conversion Projects: HUD standards regarding the acceptability of noise~~
3527 ~~impacts on residential property are found at 24 CFR Part 51, Subpart B., which standards~~
3528 ~~must be met for new construction and conversion from nonresidential to residential projects.~~
3529 ~~Where a project is within the criteria on distance from noise generators, a noise analysis~~
3530 ~~utilizing the methodology in the most current version of HUD’s Noise Guidebook will be~~
3531 ~~performed as part of HUD’s environmental assessment. HUD’s automated Day/Night Noise~~
3532 ~~Level electronic assessment tool is available on the ORCF Environmental Resource Page.~~

- 3533 ~~a. Standards: The degree of acceptability of the noise environment at a site is~~
3534 ~~determined by the sound levels external to buildings or other facilities~~

3535 containing noise sensitive uses. The standards shall usually apply at a location
3536 2 meters (6.5 feet) from the building housing noise sensitive activities, in the
3537 direction of the predominant noise source. Where the building location is
3538 undetermined, the standards shall apply 2 meters (6.5 feet) from the building
3539 setback line nearest to the predominant noise source. The standards shall also
3540 apply at other locations where it is determined that quiet outdoor space is
3541 required in an area ancillary to the principal use on the site.

3542 i. ~~Sites with a day-night average exterior noise level of 65 DNL (Day Night~~
3543 ~~Level) and below are acceptable.~~

3544 ii. ~~HUD assistance for the construction of new noise sensitive uses is~~
3545 ~~discouraged for projects with normally unacceptable noise~~
3546 ~~exposure (above 65 DNL but not exceeding 75 DNL) and is~~
3547 ~~prohibited generally for projects with unacceptable noise~~
3548 ~~exposures above 75 DNL.~~

3549 iii.i. ~~New construction or conversions of existing structures to residential housing in~~
3550 ~~the Unacceptable Noise Zone, where outdoor noise levels are above 75 dB, are~~
3551 ~~generally prohibited. If the Regional Office wants to consider such a proposal,~~
3552 ~~it must:~~

3553 • ~~Prepare an Environmental Impact Statement (EIS). If ORCF believes~~
3554 ~~that the proposal is acceptable based on the EIS, it must then obtain~~
3555 ~~project approval, including approval of noise mitigation measures,~~
3556 ~~from the Assistant Secretary for Community Planning and~~
3557 ~~Development but must also obtain project approval, including~~
3558 ~~approval of noise mitigation measures, from the Assistant Secretary.~~

3559 • ~~If ORCF determines that noise is the only environmental issue and no~~
3560 ~~outdoor noise sensitive activity that is not mitigated to below HUD's~~
3561 ~~65 decibel standard will take place on the site, it may request a waiver~~
3562 ~~of the EIS Requirement by the Assistant Secretary for Community~~
3563 ~~Planning and Development but must also obtain project approval,~~
3564 ~~including approval of noise mitigation measures, from the Assistant~~
3565 ~~Secretary.~~

3566 a. ~~Projections of Noise Exposure: In addition to assessing existing exposure,~~
3567 ~~future conditions should be projected. To the extent possible, noise exposure~~
3568 ~~shall be projected to be representative of conditions that are expected to exist~~
3569 ~~at a time at least 10 years beyond the project application date.~~

3570 a. ~~HUD should be consulted prior to designing mitigation measures.~~

3571
3572 2. ~~Existing and Rehabilitation Projects: For rehabilitation and refinancing, noise~~
3573 ~~exposure will be considered as a marketability factor. For rehabilitation projects,~~
3574 ~~HUD will encourage appropriate noise attenuation measures for inclusion in the~~
3575 ~~alterations.~~

3576
3577 **A. ~~Railroad Vibration, Noise, and Location:~~**

3578 1. ~~Buildings closer than 100 feet to a railroad track are often subject to excessive~~
3579 ~~vibration transmitted through the ground. New construction at such sites is~~

discouraged. ~~For existing properties, the structure should be examined for damage caused by vibrations. A railroad vibration study may be required.~~
b.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.~~
c.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.~~

- 3626 a. ~~Whenever aboveground tanks (ASTs) exist on site, whether containing liquid~~
3627 ~~fuel (over 100 gallons in size), or containing pressurized gas (stationary tanks~~
3628 ~~of any size), a conformance letter from the governing Fire Department/District~~
3629 ~~is required. The letter must specifically address the safety of the AST(s).~~
3630 b. ~~In cases where safety letters cannot be obtained for existing ASTs, where new~~
3631 ~~ASTs are being added, or where off-site tanks are in close proximity to the~~
3632 ~~existing subject building, an acceptable separation distance (ASD) calculation~~
3633 ~~must be included in the application, and mitigation may be required.~~

3634
3635 ~~P.A. Runway Clear Zone, Runway Protection Zones, Clear Zone, or Accident Potential Zone (24~~
3636 ~~CFR 50.4(k)):~~

- 3637
3638 1. ~~HUD standards regarding the acceptability of property located in Runway Clear~~
3639 ~~Zones (also known as Runway Protection Zones), Clear Zones, and Accident~~
3640 ~~Potential Zones are found at 24 CFR Part 51 Subpart D. An Accident Potential Zone~~
3641 ~~is an area at a military airfield that is beyond the Clear Zone.~~

3642
3643
3644 0.1. ~~Construction or major rehabilitation of any property located within a Clear Zone is~~
3645 ~~prohibited. Acquisition, refinance, and minor rehabilitation which do not extend the~~
3646 ~~physical or economic life of projects within Clear Zones are allowed. HUD must~~
3647 ~~determine that projects located in Accident Potential Zones are generally consistent with~~
3648 ~~Department of Defense land use compatibility guidelines for Accident Potential Zones.~~

3649
3650 0.1. ~~In acquisition transactions, HUD, as part of its environmental review for an existing~~
3651 ~~property, shall advise the Lender, who will inform the Borrower purchasing the~~
3652 ~~property, that the property is in a Runway Protection Zone or Clear Zone.~~
3653 ~~Furthermore, it shall be explained that the implications of such a location are an~~
3654 ~~increased likelihood of airplane crashes on the property and the possibility that the~~
3655 ~~airport operator will acquire the parcel. The buyer must sign a statement~~
3656 ~~acknowledging receipt of this information. HUD may reject applications for~~
3657 ~~mortgage insurance on an existing property within a Runway Protection Zone or~~
3658 ~~Clear Zone because of the possibility that the property may be acquired at a later~~
3659 ~~date by the airport operator.~~

3660
3661 ~~Q. Wetlands Protection (24 CFR 50.4(b)(3)):~~

3662
3663 0. 1. ~~Applications for mortgage insurance for new construction as defined in Executive~~
3664 ~~Order 11990 (Protection of Wetlands) are subject to regulations regarding wetlands in 24~~
3665 ~~CFR Part 55 that implement EO 11990. EO 11990 prohibits the development or~~
3666 ~~disturbance of wetlands unless there is no practicable alternative and the proposed action~~
3667 ~~includes all practicable measures to minimize harm to the wetland. Proposals impacting~~
3668 ~~wetlands must be reviewed by HUD under the 8 step process in Part 55 to determine~~
3669 ~~consistency with requirements of EO 11990.~~

3670
3671 ~~The process for identifying wetlands is set out in Part 55. As primary screening, HUD~~

3672 will verify whether the project area is located in proximity to wetlands identified on the
3673 National Wetlands Inventory maintained by the U.S. Fish and Wildlife Service (FWS); if
3674 so, HUD will attempt to consult with FWS. Construction projects that will result in new
3675 construction as defined in EO 11990 in a wetland will be considered only after HUD
3676 conducts an eight-step decision-making process, which is the same as the decision
3677 making process used for floodplains and includes consultation, issuing two public notices
3678 and taking public comment. However, the first five steps are not required if the project
3679 involves new construction outside the 100-year floodplain or 500-year floodplain and the
3680 applicant has submitted with its application to HUD an individual Section 404 permit
3681 (including approval conditions) issued by the U.S. Army Corps of Engineers, or by a
3682 State or Tribal government under Section 404(h) of the Clean Water Act, and all
3683 wetlands adversely affected by the project are covered by the permit. Wetlands under
3684 local or state jurisdiction are subject to state or local review as appropriate. However,
3685 compliance with state or local requirements is not a substitute for the eight-step process.
3686 ~~3. The Lender must provide extensive data to aid HUD in evaluating wetland impacts.
3687 The Lender should consult early with HUD when a site could potentially impact a
3688 wetlands area.~~

3689
3690 Only in rare cases will rehabilitation, purchase, and refinancing proposals be permitted to
3691 involve wetlands impacts.

3692
3693 ~~5. When on-site wetlands exist, HUD will require assurance from the Borrower that no
3694 activities that may impact a wetland will be undertaken without prior approval from
3695 HUD.~~

3696
3697 **~~R. Other Applicable Federal Laws (24 CFR 50.4):~~**

3698
3699 ~~1. Endangered Species: Under Section 7 of the Endangered Species Act, HUD must
3700 consult with the U.S. Fish and Wildlife Service (FWS) and/or, the National Marine
3701 Fisheries Service (NMFS), whenever a proposal may affect an endangered or
3702 threatened species or its habitat. A required consultation should be completed for any
3703 site within the critical habitat of a listed species, but consultation may also be
3704 required even if no critical habitat is. In areas where impacts on endangered or
3705 threatened species are a concern, all appropriate information and the results of
3706 research regarding possible impacts of the project should be included in the
3707 application submission. Lenders should not contact FWS or NMFS directly.
3708 Consultation under Section 7 may result in more stringent conservation measures than
3709 would otherwise be imposed.~~

3710
3711 ~~2. Sole Source Aquifers: An aquifer is an underground body of water usually kept in
3712 place by rock, gravel, or sand. New construction and some rehabilitation projects
3713 located within the boundaries of the recharge area of a designated sole source aquifer
3714 must be reviewed by EPA for their potential to contaminate the sole source aquifer.~~

3715
3716 ~~Farmlands Protection: If the site of a proposed new construction project has not been
3717 previously developed, the project must conform to the Farmland Protection Policy Act. The~~

3718 environmental review must determine if the proposed HUD-assisted project site is located in
3719 an area committed to urban uses and if not, whether it includes Important Farmland as
3720 identified by the Natural Resources and Conservation Service (NRCS), Department of
3721 Agriculture. If the proposed project site includes Important Farmland, the environmental
3722 review must include an evaluation of the land using form AD-1006, "Farmland Conversion
3723 Impact Rating." ~~This requirement applies only to new construction activities and the~~
3724 ~~acquisition of undeveloped land.~~

3725
3726 4. ~~Environmental Justice: HUD will also determine whether or not Executive Order~~
3727 ~~12898, "Federal Actions to Address Environmental Justice in Minority Populations~~
3728 ~~and Low-Income Populations," is applicable to the project. This EO requires that~~
3729 ~~federal actions not result in disproportionately high and adverse human health or~~
3730 ~~environmental effects on minority populations and low-income populations. When a~~
3731 ~~project impacts a minority or low-income population, or when siting of a project~~
3732 ~~raises questions of discrimination, HUD will perform the necessary analysis before~~
3733 ~~determining acceptability of the project. Whenever possible, the Environmental~~
3734 ~~Justice review should reflect input from affected minority and low-income~~
3735 ~~communities. For more information, see HUD's website at:~~
3736 ~~<https://www.hudexchange.info/environmental-review/environmental-justice>.~~

3737
3738 ~~HUD will advise the Lender of any Environmental Justice concerns including~~
3739 ~~recommendations for their resolution. In most cases the preferred resolution would~~
3740 ~~be to modify the project to eliminate or at least reduce the adverse effects, when~~
3741 ~~feasible.~~

3742
3743 5. ~~Applications for Firm Commitment for mortgage insurance are also subject to~~
3744 ~~provisions of other Federal authorities, including the Wild and Scenic Rivers Act, and~~
3745 ~~regulations implementing the Clean Air Act. There are state regulations implementing~~
3746 ~~air quality requirements. HUD may require mitigation of a variety of nuisances and~~
3747 ~~hazards on the property that would affect the health and safety of residents and the~~
3748 ~~security of the collateral.~~

3749 ~~S. Commonly Found or Observed Additional Nuisances and Hazards:~~

3750
3751
3752 The following requirements apply to existing projects as well as to new construction and
3753 substantial rehabilitation activities.

3754
3755 A. ~~All parts of any structure must be at least 10 feet from the outer boundary of the~~
3756 ~~easement for any high-pressure gas or liquid petroleum transportation pipeline.~~

3757
3758 B. ~~No structure shall be located within the easement of any overhead high-voltage~~
3759 ~~transmission line. In addition, all structures shall be located outside the engineered~~
3760 ~~fall distance of any support structure for high-voltage transmission lines, radio~~
3761 ~~antennae, satellite towers, cellular towers, etc. This does not apply to local service~~
3762 ~~electric lines and poles. This policy does not apply to water towers.~~

3764 ~~Compliance with HUD requirements regarding operating and/or abandoned oil or gas wells,~~
3765 ~~sour gas wells, and slush pits is recorded.~~
3766 ~~1. Operating or planned drilling site: No residential structures may be within 300 feet from~~
3767 ~~the boundary of the drilling site.~~
3768 ~~1. Operating well: No residential structures may be within 75 feet of an operating well~~
3769 ~~unless the following mitigating measures are taken:~~
3770 ~~a. Maintenance of nuisance controls,~~
3771 ~~b) Controls of noise levels caused by pumping,~~
3772 ~~c) Restrictions on hours of operation,~~
3773 ~~d) Limits on supporting truck traffic, and~~
3774 ~~a. Spill controls to reduce risk of contamination:~~
3775 ~~e. Abandoned well~~
3776 ~~a) Confirmation by the State government that the well is safely and~~
3777 ~~permanently abandoned and that no residential structures are within 10~~
3778 ~~feet must be obtained.~~
3779 ~~a. If there is no confirmation letter, no residential structures may be within 300 feet of~~
3780 ~~an abandoned well.~~
3781 ~~1. Sour gas (hydrogen sulfide by-product) wells: Separation distance must be determined by a~~
3782 ~~petroleum engineer, with concurrence by State government.~~
3783 ~~e. Slush pits (used for drilling mud mixes for well lubrication):~~
3784 ~~i. If on-site, hazards analysis is required to be performed pursuant to~~
3785 ~~Section 7.3 above. Mitigation must include, but not necessarily be~~
3786 ~~limited to, removal of all drilling mud from the site and backfilling with~~
3787 ~~clean compacted material.~~
3788 ~~ii. If offsite, an analysis must be performed pursuant to Section 7.3~~
3789 ~~regarding offsite hazards.~~
3790
3791 ~~D. If any part of a site appears to be developed on filled ground, HUD may require that~~
3792 ~~all grading be properly controlled to prevent differential earth movement, sliding,~~
3793 ~~erosion, and/or other occurrences which might damage dwellings, streets or other~~
3794 ~~improvements. Soil boring samples from filled areas must be submitted, as well as~~
3795 ~~any other documentation regarding soil fill composition and compaction, to satisfy~~
3796 ~~HUD as to its stability in place, re-grading or re-use.~~
3797
3798 ~~E. If an existing property has a legal non-conforming use/structure, and the current~~
3799 ~~zoning regulations will not allow the property to be rebuilt to the current density, then~~
3800 ~~the owners are required to purchase Ordinance and Law insurance coverage with their~~
3801 ~~property insurance; see Production, Chapter 14.5.B.~~
3802
3803 ~~F. HUD may adopt additional requirements to address unique local concerns in specific~~
3804 ~~geographic areas, but if any local requirement is mandated, ORCF must inform the~~
3805 ~~HUD Headquarters Housing Environmental Clearance Officer of the requirement.~~
3806
3807

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~~

3848 be required. If the asbestos survey indicates the presence of asbestos or the presence of
3849 asbestos is assumed, and if the application for Firm Commitment is approved, HUD will
3850 condition the approval on an appropriate mix of asbestos abatement and an asbestos
3851 operations and maintenance plan (O&M plan). O&M programs which establish management
3852 protocols for asbestos containing materials should be accompanied with evidence of hazard
3853 awareness training for maintenance staff. Training is to include Local, State and Federal
3854 regulations, as applicable.
3855

3856 ~~D. If Asbestos Containing Materials (ACMs) or suspect ACMs are identified at a facility, HUD~~
3857 ~~requires that a response action be appropriate to address the hazard. Response actions may~~
3858 ~~include complete removal, limited removal/repair, encapsulation, enclosure or management~~
3859 ~~under an O&M Program, as recommended by an accredited professional. The following are~~
3860 ~~examples for when certain response actions may be appropriate.~~
3861

3862 ~~Removal~~

- 3863 ~~i. Damaged friable materials~~
- 3864 ~~ii.i. Friable materials in good condition with high potential for disturbance (e.g.,~~
3865 ~~accessible pipe or tank insulation, ceiling tiles where air exchanges occur in plenum~~
3866 ~~above, ceiling tiles that are required to be moved to access mechanical equipment~~
3867 ~~or piping on a routine basis, etc.)~~
- 3868
- 3869 ~~a. Limited removal/repair, encapsulation or enclosure~~
 - 3870 ~~i. Damaged non-friable materials (limited removal/repair)~~
 - 3871 ~~ii.i. Limited damage to ceiling texture (limited removal/repair)~~
 - 3872 ~~iii.i. More extensive wall and/or ceiling texture damage or highly friable texture~~
 - 3873 ~~iv.i. Pipe insulation with limited damage but with limited potential for~~
3874 ~~disturbance/impact (enclosure or removal)~~

3875 ~~O&M~~

3876 ~~Non-friable materials in good condition~~

- 3877 ~~i. Joint compound or wall and ceiling textures in good condition~~
- 3878 ~~ii.i. Adhesive ceiling tiles with no real potential for disturbance~~
- 3879 ~~iii.i. Friable pipe insulation materials in mechanical areas in good condition with limited potential~~
3880 ~~for disturbance/impact by routine maintenance activities.~~

3881

3882 ~~0.1. Other than for asbestos abatement on a structure that will be completely demolished, the~~
3883 ~~cost of any asbestos abatement activities may be included in the proposed mortgage loan,~~
3884 ~~with HUD approval. If required, appropriate asbestos remediation can be indicated as a~~
3885 ~~required Firm Commitment condition if HUD approves.~~
3886

3887

3888 ~~F. All asbestos abatement shall be done in accordance with EPA requirements for air pollution~~
3889 ~~prevention pursuant to 40 CFR subpart M, especially 40 CFR 61.145, and with OSHA~~
3890 ~~requirements for Worker Protection, pursuant to 29 CFR 1926.1101. Any LSTF asbestos~~
3891 ~~abatement and worker protection rules also apply. All asbestos abatement must be performed~~
3892 ~~by a qualified asbestos abatement contractor.~~
3893

7.8**Radon**

~~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~~~~1. Radon Report.~~

- ~~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 Constuction, 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.i. 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 neither testing nor mitigation is necessary based on a physical inspection of the property, the characteristics of~~

3937 the buildings, and other valid justifications. An example of a valid
3938 justification is having only a garage on the surface level that is open to the air
3939 and is fully ventilated. Any such justifications as to why neither testing nor
3940 mitigation is necessary must be provided by the Radon Professional (signed
3941 letter) and documented in the Environmental Report. Any waiver requests
3942 submitted for this section (7.8.) must be made in accordance with this
3943 exception. Requests for waiver of this section 7.8 that do not meet the
3944 requirements of this exception will not be granted.

3945 b. A radon report is not required for applications that are categorically excluded
3946 under 24 CFR 50.19(b) (21) (see 7.1.A.5, above).

3947 ~~e.a. Applicants are encouraged to test for radon even if a radon report is not required per
3948 the exceptions above. Any such testing must follow the testing protocols and resident
3949 notification protocols below, and must then be incorporated within a radon report as
3950 described within this section. If the results of such testing indicate levels of radon
3951 above the threshold for unacceptability, mitigation as described in this section is
3952 required, with the mitigation requirements for Section 223(a)(7) projects the same as
3953 those for 223(f) projects.~~

3954 Testing Protocols.

3955 a. ~~Radon testing must follow the protocols set by the American Association of
3956 Radon Scientists and Technologists, Protocol for Conducting Measurements
3957 of Radon and Radon Decay Products in Schools and Large Buildings (ANSI-
3958 AARST MALB 2014, or most recent edition) (Please see ORCF
3959 Environmental Resource Page located on the Section 232 Program website).
3960 Applicant has the option to test 25% of ground level units/rooms in each
3961 building (sampling). If any of the sampled units/rooms is tested above the 4.0
3962 picocuries per liter (4.0 pCi/L), then they have two options:~~

3963 i. ~~Mitigation in 100% ground level units/rooms or~~

3964 ii. ~~Test 100% ground level units/rooms. If during 100% ground level
3965 test, any units/rooms test above 4.0 pCi/L level, then follow the
3966 requirements of the standard above.~~

3967 b. ~~Threshold for unacceptability: 4.0 picocuries per liter (4.0 pCi/L) based on
3968 initial and any confirmatory testing, if performed.~~

3969 5. ~~Occupant Notification.~~

3970 a. ~~Testing. Occupants of all new applications for OHP mortgage insurance
3971 programs shall be informed of forthcoming testing in the manner described in
3972 AARST MALB 2014.~~

3973 ~~b.a. Mitigation. Occupants shall be informed both prior to and after mitigation activities.
3974 In the case of new construction, incoming occupants shall be informed of radon
3975 mitigation activities.~~

3976 6. ~~Mitigation Standards. Radon resistant construction is required for all new
3977 construction, and radon mitigation is required for existing construction where testing
3978 has revealed that radon levels exceed the threshold for unacceptability. The Radon
3979
3980
3981~~

3982 Professional must assure that radon-resistant construction or radon mitigation, when
3983 required, conforms to the following standards:

3984 a. Existing buildings:

3985 ANSI AARST RMS LB 2014, Radon Mitigation Standards for Schools and
3986 Large Buildings (Please see the ORCF Environmental Resource Page located
3987 on the Section 232 Program website).

3988 b. ~~New construction:~~ Radon Prevention in the Design and Construction of
3989 Schools and Other Large Buildings EPA 625-R-92-016, June 1994 (Please see
3990 the ORCF Environmental Resource Page located on the Section 232 Program
3991 website).

3992
3993 7. ~~Mitigation Timing.~~ For new construction and substantial rehabilitation properties, all
3994 mitigation, including follow-up testing, must be completed prior to Final Closing.
3995 Radon mitigation included as part of a Section 223(f) or 223(a)(7) project's repairs
3996 must be completed as quickly as practicable, and in any event, no later than 12
3997 months after Closing.

3998
3999 ~~8.1. Certificate of completion.~~ A certificate of completion from the Radon Professional must
4000 be submitted and appended to the radon report once radon testing and/or mitigation is
4001 completed.

4002
4003 9. HUD requires an operation and maintenance (O+M) plan for any mitigation project
4004 that is active. A condition shall be attached to the Firm Commitment requiring that
4005 the borrower operate and maintain the property consistent with the referenced O+M
4006 plan(s) for the duration of the insured mortgage. Given the ongoing risk associated
4007 with radon, an O+M requirement for maintaining active mitigation systems should be
4008 implemented when an active mitigation system is present on the property.

4009
4010 10. Cost estimate. Use detailed plans and specifications supplied by the lender's
4011 architectural analyst as a basis for the cost estimate. Estimates must reflect the
4012 general level of construction costs in the locality where construction takes place.
4013 Costs must be projected to the estimated construction start date.

4014
4015 ~~0.1. Section 223(f) and Non-Excepted Section 223(a)(7).~~

4016
4017 1. All Section 223(f) and non-excepted 223(a)(7) projects must be tested for radon in
4018 accordance with 7.8.B.4, above. Testing must be performed no earlier than 1 year
4019 prior to application submission.

4020
4021 ~~a. Mitigation.~~ See requirements at 7.8.B.6. If estimated costs exceed the allowable cost
4022 for the Section 223(f) program, the application cannot be approved but may be
4023 considered under the substantial rehabilitation program.

4024
4025 ~~D. Substantial Rehabilitation and Conversions. (Applies to all Radon Zones)~~

4026
4027 1. ~~Testing prior to substantial rehabilitation or conversion.~~

- 4028 a. ~~Early testing not feasible. For some proposals, such as a conversion of an~~
4029 ~~existing building from non-residential to residential, the building envelope~~
4030 ~~may change to such an extent that early testing would not be appropriate and~~
4031 ~~in some cases not possible. If this is the case, proceed directly to mitigation as~~
4032 ~~discussed at Section 7.8.D.2. Radon reports are required with the post-~~
4033 ~~construction testing prior to Final Closing.~~
4034 b. ~~Early testing when feasible.~~
4035 ~~i. Must be performed no earlier than 1 year prior to application~~
4036 ~~submission in accordance with 7.8.B.4.~~
4037 ~~ii.i. If test results are below the threshold, no mitigation is required.~~
4038 ~~iii. If test results are at or above the threshold, mitigation must be built~~
4039 ~~into the project design per Section 7.8.D.2.a.~~
4040
4041 2. ~~Mitigation.~~
4042 a. ~~If mitigation is built into project design, it must be conducted in accordance~~
4043 ~~with the requirements at 7.8.B.6.~~
4044 b. ~~If mitigation is not built into project design, after construction is complete but~~
4045 ~~prior to Final Closing, radon testing must be conducted. If testing results are~~
4046 ~~above the threshold, retrofit pursuant to the requirements at 7.8.B.6 is~~
4047 ~~required.~~
4048
4049 E. ~~New Construction.~~
4050
4051 1. ~~Radon resistant construction is required for all radon zones.~~
4052
4053 2. ~~Radon reports are required with the post-construction testing prior to Final Closing.~~
4054
4055 3. ~~Radon Zone 1:~~
4056 a. ~~Construction Requirements: All new construction in Radon Zone 1 must meet~~
4057 ~~all of the requirements of ASTM E1465-08a for installation of passive~~
4058 ~~systems.~~
4059 b. ~~Post-construction testing is required prior to Final Closing. If testing results~~
4060 ~~are above the threshold, conversion from a passive system to a fan-powered~~
4061 ~~system is required.~~
4062
4063 4. ~~Radon Zones 2 and 3:~~
4064 a. ~~Construction requirements.~~
4065 i. ~~Gas permeable layer. The gas permeable layer must meet all of the~~
4066 ~~requirements of ASTM E1465-08a, Section 6.4.~~
4067 ii. ~~Ground cover. The concrete slabs and plastic membranes that seal the~~
4068 ~~top of the gas permeable layer must meet all of the requirements of~~
4069 ~~ASTM E 1465-08a, Section 6.2.~~
4070 iii. ~~Foundation walls. Foundation walls must meet all of the requirements~~
4071 ~~of ASTM E1465-08a, Section 6.3.~~
4072 b. ~~Post-construction testing is required, except as provided at 7.8.B.3.~~

4073
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- ~~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.~~

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