

ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE

# Decommissioning Program Plan

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"REVIEWED FOR CLASSIFICATION  
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43 **1. INTRODUCTION**

44

45 As required by the Rocky Flats Cleanup Agreement (RFCA), this Decommissioning  
 46 Program Plan (DPP) establishes the regulatory steps to be used for decommissioning  
 47 buildings at the Rocky Flats Environmental Technology Site (Site) The  
 48 decommissioning process is only one part of a building's disposition, disposition starts  
 49 when the building's mission ends and may encompass deactivation, decommissioning,  
 50 including decontamination and release for reuse or dismantlement, demolition and  
 51 environmental restoration Different areas within a single building can be at different  
 52 phases in the disposition approach, e g , one room can be undergoing deactivation, while  
 53 the rest of the building is in post-deactivation For those buildings where Special Nuclear  
 54 Materials (SNM) activities never took place, the disposition process will begin with post-  
 55 deactivation

56

57 Decommissioning is a series of activities that commences with the conclusion of  
 58 deactivation and follows through to environmental restoration For a more detailed  
 59 definition of decommissioning, see §1.1.2 During the decommissioning phase, all  
 60 buildings, utility systems, infrastructure systems and related facilities at the Site will be  
 61 dismantled and/or demolished safely and efficiently using appropriate procedures and  
 62 work controls

63

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65 **1.1 RFCA Framework**

66

67 On July 19, 1996, the Department of Energy (DOE), Environmental Protection Agency  
 68 (EPA) and Colorado Department of Public Health and Environment (CDPHE) executed  
 69 RFCA RFCA is the Federal Facility Agreement pursuant to the Comprehensive  
 70 Environmental Response Compensation and Liability Act (CERCLA) and Consent Order  
 71 under the Resource Conservation and Recovery Act (RCRA) and Colorado Hazardous  
 72 Waste Act (CHWA) RFCA replaces the Interagency Agreement between these parties  
 73 that had been in place since 1991 RFCA regulates the Site cleanup under the three  
 74 statutes The Rocky Flats Vision (Vision), RFCA Appendix 9, guides virtually all  
 75 activities at the Site, including those required by RFCA Among other things, the Vision  
 76 for Rocky Flats is to achieve accelerated cleanup and closure of the Site in a safe,  
 77 environmentally protective manner and in compliance with applicable state and federal  
 78 environmental laws All work done at the Site to achieve the Vision is scheduled through  
 79 a unified planning process that is captured in the Integrated Site-wide Baseline (which is  
 80 now called the "Closure Project Baseline" or "CPB"), as described in RFCA ¶¶s 136 to  
 81 141

82

83 RFCA coordinates DOE's response obligations under CERCLA, closure obligations  
 84 under CHWA and corrective action obligations under CHWA and RCRA, as well as the  
 85 remedial activities regulated under the Federal Facility Compliance Act for treatment of

86 mixed wastes generated by RFCA-regulated activities RFCA §§ 11 and 12 DOE's  
 87 decommissioning activities will be conducted as CERCLA removal actions, consistent  
 88 with RFCA § 96, the joint DOE-EPA May 22, 1996 policy regarding decommissioning of  
 89 DOE facilities, and RFCA attachment 9 RFCA also established a consultative process  
 90 among the parties to ensure the efficient implementation of Site closure See RFCA Part  
 91 7 Also, RFCA divides the Site into two major operable units--the Industrial Area and the  
 92 Buffer Zone, and designated a Lead Regulatory Agency (LRA) for each The LRA has  
 93 primary authority to review and approve regulatory decision documents throughout the  
 94 cleanup and closure of the Site until the end of the process at which time both EPA and  
 95 CDPHE need to agree that the Site has been cleaned up to the degree required by their  
 96 respective authorities See RFCA §§ 67 to 69

97  
 98

### 99 1 1 1 Working Relationships

100

101 All parties to this DPP recognize that the decommissioning of buildings at the Site,  
 102 especially former plutonium production buildings, will be a lengthy and complicated  
 103 process The parties also recognize that the work to be performed in dispositioning  
 104 buildings at the Site is unprecedented in many respects This includes the establishment  
 105 of working relationships among DOE, its contractors, the regulators and the general  
 106 public It is the intent of the parties to this DPP to establish and maintain working  
 107 relationships that encourage information sharing and effective dialogue among all persons  
 108 with an interest in the Site building disposition program

109

110 In implementing the DPP, the parties commit themselves to working collaboratively with  
 111 one another and with the public The parties explicitly recognize and support RFCA  
 112 Appendix 2, "Principles for Effective Dialogue and Communications at Rocky Flats," and  
 113 agree to use their best efforts to employ these principles in their respective roles in  
 114 implementing the Site decommissioning program

115

116 More specifically, the parties intend to use the following principles to implement this  
 117 DPP

118

- 119 1) Timely sharing of information – All parties will use their best effort to share  
 120 project and program information in a timely manner DOE will inform the  
 121 regulators on an ongoing basis of building disposition activities sitewide,  
 122 including decommissioning and pre-decommissioning activities Information  
 123 sharing efforts may include but need not be limited to updates of the overall  
 124 Site closure baseline, briefings on the development of annual work plans and  
 125 budgets, briefings on changes to approved baselines affecting building  
 126 disposition activities, invitations to attend project status briefings, and  
 127 consultations on decommissioning strategy CDPHE and EPA recognize their  
 128 responsibility to provide timely comments on decision documents and other  
 129 documents for which their comments have been requested, and agree to raise

- 130 concerns regarding the Site building disposition program and projects in a  
131 concise and timely manner  
132
- 133 2) Collaborative discussions of program changes – All the parties to the DPP  
134 recognize that changes in program and project approach will occur on an  
135 ongoing basis as buildings are dispositioned at the Site. These changes may  
136 arise due to unforeseen conditions, because of the Site’s desire to continually  
137 attempt to accelerate closure, or for other reasons. As an example, the Rocky  
138 Flats Field Office (RFFO) Site Change Control Board, which controls the Site  
139 baseline, has recently adopted a policy for certain plutonium buildings  
140 undergoing closure. This policy gives preference for funds saved in these  
141 buildings’ baselines to be redirected within those buildings to accelerate  
142 closure activities there. Changes in program or project approach may be  
143 necessary or desirable despite DOE’s best efforts to present the regulators and  
144 the public with a comprehensive plan for building disposition activities. In  
145 such circumstances, DOE intends to consult with the regulators and inform the  
146 stakeholders as soon as possible of significant changes to its building  
147 disposition program, especially those that would necessitate formal regulatory  
148 or public involvement (such as actions that would require a new decision  
149 document, or would substantially modify an existing one). In turn, CDPHE  
150 and EPA agree to work with DOE to review and provide input on changes in a  
151 timely manner. The goal of all parties in this regard shall be to raise and  
152 resolve issues without delaying building disposition activities  
153
- 154 3) Designation and use of project points of contact for information exchange and  
155 resolution of issues – All parties agree to designate points of contact for  
156 disposition activities occurring in individual buildings or building clusters as  
157 appropriate. DOE will additionally provide project point of contact  
158 designations for its integrating contractor. All parties anticipate that ongoing  
159 interactions among project points of contact will be the primary means of  
160 exchanging project information, for the review of regulatory documents [such  
161 as, Decommissioning Operations Plans (DOP’s), Interim Measure/Interim  
162 Remedial Action (IM/IRA’s) and Proposed Action Memorandums (PAM’s)]  
163 while they are in development, for answering questions and resolving issues,  
164 and for seeking and receiving regulatory decisions as described elsewhere in  
165 this DPP. All parties believe that frequent, open communication among  
166 project points of contact is critical to effective implementation of the Site’s  
167 building disposition program  
168
- 169 4) Respect for the roles and responsibilities of the parties – Per RFCA Appendix  
170 2, all the DPP parties have “distinct roles and independent decision-making  
171 responsibilities” in implementing the Site building disposition program. In  
172 general, DOE’s role is to oversee program and project planning, to approve  
173 baselines and changes to these baselines, to prioritize and select work to be  
174 performed, and to oversee its contractors. As part of the latter function, DOE

175 staff may review and comment on documents prepared by its contractors prior  
 176 to their dissemination to the regulators or the public while remaining  
 177 cognizant of issues, resolutions, and agreements identified in prior  
 178 consultative interactions. In general, it is the regulators' role to oversee the  
 179 planning and implementation of building disposition work to ensure the  
 180 protection of human health and the environment, to monitor compliance with  
 181 RFCA and other environmental statutes, regulations and enforceable  
 182 agreements, and, to approve documents and make decisions as outlined herein  
 183 and in RFCA. All parties additionally recognize the oversight role of the  
 184 Defense Nuclear Facilities Safety Board (DNFSB), as described in RFCA  
 185 Appendix 1, "Memorandum of Understanding Governing Regulation and  
 186 Oversight of Department of Energy Activities in the Rocky Flats  
 187 Environmental Technology Site Industrial Area." Recognition of these  
 188 respective roles, however, is not intended to in any way restrict the open flow  
 189 of information among DOE, CDPHE, EPA and the DNFSB regarding the  
 190 building disposition program. Similarly, discussions of specific roles and  
 191 responsibilities within this DPP are not intended to abrogate any parties'  
 192 authorities or responsibilities under RFCA or any other applicable statute,  
 193 regulation or agreement.

- 194  
 195 5) Training – The parties to this agreement agree to develop and provide joint  
 196 training for their respective staffs, DOE contractors and interested member of  
 197 the public to assist in the implementation of this DPP  
 198

199 Finally, all parties recognize that informing the public, and meaningfully responding to  
 200 public input and public concern, is integral to the success of the Site building disposition  
 201 program. All parties intend to be active in informing the public in an open and timely  
 202 manner regarding planned and ongoing program activities. All parties will try to inform  
 203 the public and seek their input regarding planned activities well in advance of prescribed  
 204 comment periods. When disagreements among the parties are discussed in a public  
 205 forum, the parties agree to discuss such disagreements in an objective, professional and  
 206 informative manner, and to consider public input in resolving such disagreements  
 207  
 208

209 1 1 2 Definition of Decommissioning and Deactivation

210  
 211 In ¶ 25(z), RFCA defines decommissioning as

212  
 213 for those buildings, portions of buildings, structures, systems or components (as  
 214 used in the rest of this paragraph, "building")<sup>1</sup> in which deactivation occurs, all  
 215 activities that occur after the deactivation. It includes surveillance, maintenance,  
 216 decontamination and/or dismantlement for the purpose of retiring the building

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<sup>1</sup> This DPP follows the RFCA convention insofar as the term building may mean a building, portion thereof, structure, system or component

217 from service with adequate regard for the health and safety of workers and the  
 218 public and protection of the environment For those buildings in which no  
 219 deactivation occurs, the term includes characterization as described in Attachment  
 220 9, surveillance, maintenance, decontamination and/or dismantlement for the  
 221 purpose of retiring the building from service with adequate regard for the health  
 222 and safety of workers and the public and protection of the environment The  
 223 ultimate goal of decommissioning is unrestricted use, or if unrestricted use is not  
 224 feasible, restricted use of the buildings  
 225

226 Deactivation (as defined in RFCA ¶ 25(y)) means the process of placing a building, portion  
 227 of a building, structure, system, or component (as used in the rest of this paragraph,  
 228 "building") in a safe and stable condition to minimize the long-term cost of a surveillance  
 229 and maintenance program in a manner that is protective of workers, the public, and the  
 230 environment Actions during deactivation could include the removal of fuel, draining  
 231 and/or de-energizing of nonessential systems, removal of stored radiological and hazardous  
 232 materials and related actions As the bridge between operations and decommissioning,  
 233 based upon Decommissioning Operations Plans (DOPs) or the Decommissioning Program  
 234 Plan (DPP), deactivation can accomplish operations-like activities such as final process  
 235 runs, and also decontamination activities aimed at placing the building in a safe and stable  
 236 condition Deactivation does not include decontamination necessary for the dismantlement  
 237 and demolition phase of decommissioning, i e , removal of contamination remaining in  
 238 fixed structures and equipment after deactivation Deactivation does not include removal of  
 239 contaminated systems, system components, or equipment except for the purpose of  
 240 accountability of SNM and nuclear safety It also does not include removal of  
 241 contamination except as incidental to other deactivation or for the purposes of  
 242 accountability of SNM and nuclear safety  
 243

244 The following are examples of potential end points for deactivation Not all end points  
 245 will apply in all buildings which go through a deactivation process  
 246

- 247 • a determination that the probability of a criticality event in the building is
- 248 considered not credible,
- 249 • removal of all combustibles that are not integral parts of the building,
- 250 • removal of all classified materials,
- 251 • a shift in primacy from Atomic Energy Act oversight of the Defense Nuclear
- 252 Facility Safety Board to CERCLA regulation through RFCA by EPA and
- 253 CDPHE  
 254

255 Activities such as waste chemical removal, disposition of excess property, chemical  
 256 hazards reduction and placement of RCRA units into RCRA stable condition or their  
 257 closure may occur either during deactivation or decommissioning  
 258  
 259

## 260 1 1 3 DPP

261

262 The DPP is the RFCA document that describes the steps for accomplishing the Vision of  
263 closing Rocky Flats, in terms of decommissioning buildings for their removal or reuse. It  
264 establishes the overall framework for decommissioning a building leading up to either its  
265 release for reuse or its demolition and disposal. It elaborates on the relevant portions of  
266 the building disposition process described in RFCA Attachment 9. For each building on  
267 Site, the DPP describes a process that starts with a scoping meeting, proceeds to a  
268 reconnaissance level survey for contamination and a hazard assessment, follows the  
269 report of these activities' findings with the removal of contamination or physical hazards  
270 identified and ends, for those buildings requiring decontamination, with a final  
271 characterization survey to document that the building is ready for reuse or dismantlement  
272 and demolition. Depending on the level of contamination, decontamination may be  
273 required for the buildings, or parts of the building. In some instances, decontamination  
274 may not be practicable and the building may be dismantled and demolished as low level  
275 or low level mixed waste. Consistent with Section 3.3.4, buildings determined after the  
276 reconnaissance level characterization to be free of contamination may go directly to reuse,  
277 dismantlement or demolition using applicable federal property disposition rules. The Site  
278 will also follow, as necessary, any other applicable legal requirement associated with the  
279 disposal of excess federal property, including the remediation of hazards associated with  
280 materials containing polychlorinated biphenyls (PCBs) and asbestos. Pursuant to RFCA  
281 ¶ 119(k), the DPP is a site-wide decision document subject to the review and approval of  
282 both EPA and CDPHE.

283

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## 285 1 1 4 Requirements for DOPs and Other Decision Documents

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287 Pursuant to RFCA Attachment 9, "Building Disposition," a DOP will be developed for  
288 any building found, as a result of reconnaissance level characterization, to have  
289 significant radioactive contamination or hazards. The DOP will present an activity-based  
290 program to decontaminate the locations identified in that building's reconnaissance  
291 characterization study as contaminated or presented a physical hazard. The DOP will  
292 include risk, economic and engineering assessments. Pursuant to RFCA ¶ 118(l), DOPs  
293 for major nuclear facilities are decision documents subject to the review and approval of  
294 the LRA. Since all of the Site's major nuclear facilities are located in the Industrial Area,  
295 the practical outcome of this direction is that CDPHE, the LRA in the Industrial Area,  
296 will be the agency reviewing and approving DOPs. Also, since it appears likely that the  
297 decommissioning of each building needing a DOP will take at least six months to  
298 complete, the Site intends to develop and seek approvals for the DOPs through the RFCA  
299 IM/IRA process.

300

301 If DOE proposes to take actions that appear to require consultation with the LRA or  
302 require a RFCA decision document, the Site project point of contact will seek  
303 concurrence from the LRA before performing the actions. In seeking this concurrence,

304 DOE will provide the LRA with data and a description of work which demonstrate that  
 305 the work can be performed without a threat of release of a hazardous substance DOE  
 306 will discuss the relationship of the proposed activity to the overall CPB and the  
 307 disposition plans for the buildings as they are known at the time This demonstration may  
 308 be made informally to the LRA project point of contact, with concurrence documented for  
 309 the building administrative record The Site and LRA point of contact will use the  
 310 "RFCA Decision Document Requirement Method" (see next paragraph) to determine if  
 311 the actions require preparation of a RFCA decision document The parties to this DPP  
 312 anticipate that this and other questions regarding the necessity of decision documents for  
 313 performing building disposition work will be resolved through ongoing consultation  
 314 among the respective project points of contact

315  
 316 The following method provides the screen the Site and LRA project points of contact will  
 317 use in determining if a RFCA decision document is needed for a specific activity or  
 318 related group of activities

319

320

### 321 RFCA Decision Document Decision Method

322

#### 323 I Purpose

324 A Provide a decision method (screen) to facilitate determining if an activity  
 325 or related set of activities would be classified as requiring a RFCA  
 326 decision document, that is, a DOP, PAM, IM/IRA or RFCA Standard  
 327 Operating Protocol (RSOP)

#### 328 II The method facilitates

- 329 1 implementing the consultative process,
- 330 2 project planning at an early stage (scope, schedule, budget),
- 331 3 determining if waste is "process" or remediation waste,
- 332 4 determining National Environmental Policy Act (NEPA) document  
 333 requirements,
- 334 5 stakeholder involvement and schedule,
- 335 6 determining if consultation with the LRA or preparation of a  
 336 RFCA decision document is needed

#### 337 III The method is for use by

- 338 A the project points of contact,
- 339 B oversight organizations internal and external to the Site

#### 340 IV Method

- 341 A The Site project point of contact will determine the initial scope and  
 342 schedule for the activity and related activities
- 343 B The Site project point of contact will do an initial screen to determine if  
 344 activity is decommissioning using the following screen

345

346 A RFCA decision document (such as a PAM, IM/IRA or DOP) is  
 347 required, will be prepared, and regulatory approval received before an  
 348 activity is undertaken that meets all of the following criteria

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- 1 is not considered “maintenance<sup>2</sup>” or process waste management<sup>3</sup>, and
- 2 does not support SNM removal for the purpose of deactivation or other pre-decommissioning actions, and
- 3 involves work that is likely to impact systems or equipment contaminated with radiological or other hazardous substances, and
- 4 relates to the building proper (that is, removal of fixed equipment and structural components) but exclude follow-on environmental remediation activities

Activities that meet the above criteria, and that are otherwise regulated (for example, RCRA closure, asbestos and polychlorinated biphenyl removal, underground storage tank closures, etc ) may be regulated either under a RFCA decision document or under the other regulatory process

Figure 1 1-1 provides a flowchart of the above criteria DOE expects open communication and consultation between the project points of contact

Some activities that do not meet all of these criteria may be included for information in some decision documents

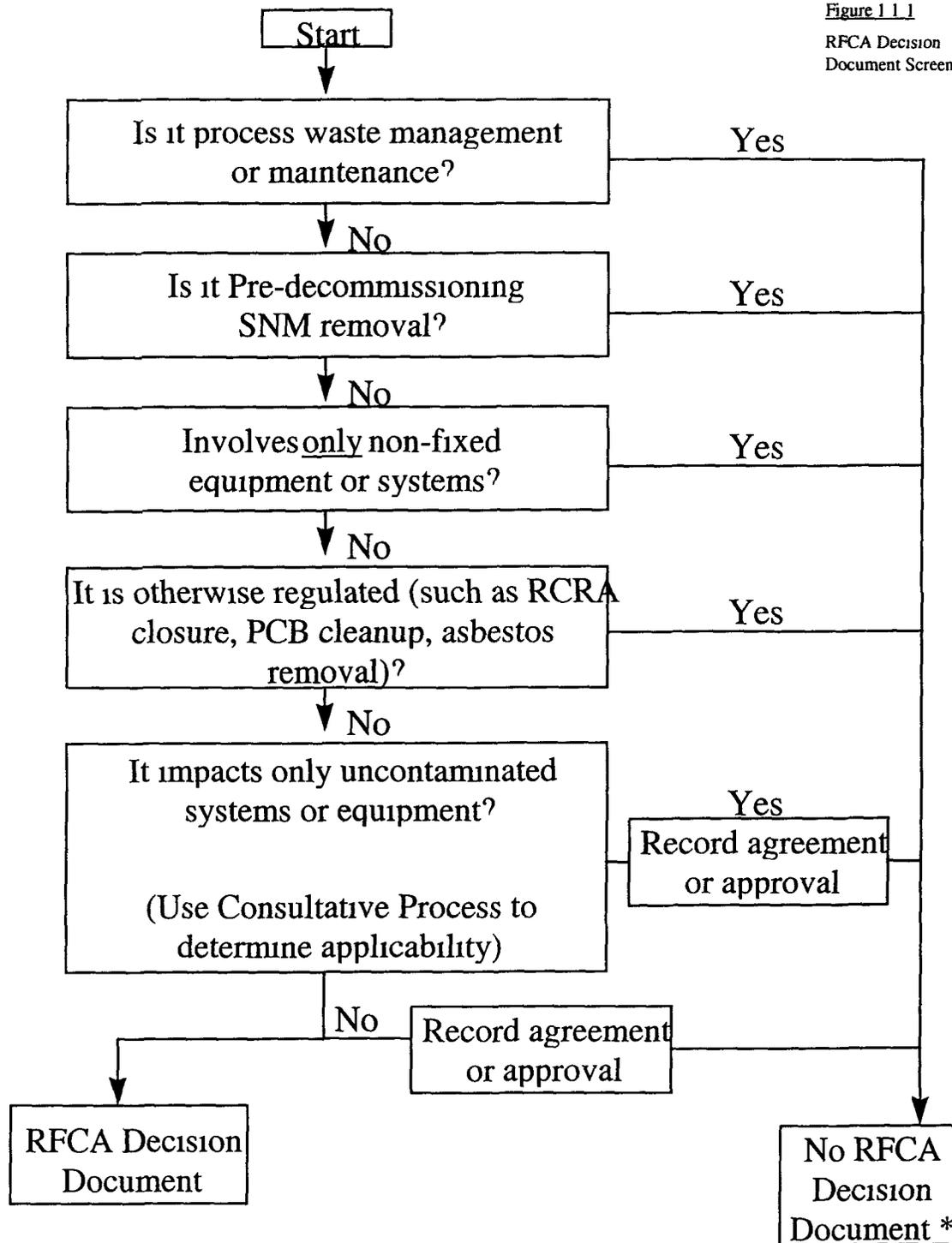
- C If the initial screen shows the activity may require a RFCA decision or is in the “gray area” between what may or may not need a RFCA decision document, the Site project point of contact will arrange a consultative briefing of the regulators. The briefing will include a discussion of the scope and schedule for the project. The briefing should follow the format established in the DPP for DOP content to ensure the discussion is focused and the information typically needed by the LRA is presented in a reasonably consistent format. The graded approach should be used in determining the level of detail for the briefing.
- D The LRA will review the results of the Site’s screen to determine if it agrees with the Site determination.
- E If the collaborative agreement is that the activity does not require a RFCA decision document, the Site project point of contact will
- document the agreement in the manner agreed to during the meeting with the LRA project point of contact, and
  - document the decision in the Administrative Record, and
  - monitor the project scope to ensure it remains within that agreed to, and

<sup>2</sup> “Maintenance” includes activities that are necessary to continue a building’s current mission, maintain a building’s safety envelope, or modify a building for a change in mission (except a change of mission to decommissioning)

<sup>3</sup> “Process waste” means waste generated before “decommissioning” commences for the activity being analyzed

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- notify the LRA before the project goes out of scope if possible, in sufficient time to initiate consultation with the LRA on the issue A changed or invalid assumption that changes the scope would be part of the consultation discussions
- F If the collaborative agreement is that the activity does require a RFCA decision document, the following actions will occur
- 1 The consultative process will follow the requirements in RFCA and the DPP to determine what type of decision document is needed The LRA will identify as specifically as possible what, if any, additional information is needed for approval of the activity This will include information needed by the Support Regulatory Agency
  - 2 A schedule will be agreed to for
    - a) the Site to provide the additional information,
    - b) the LRA to complete its review of the information,
    - c) the public comment period and review times,
    - d) any other schedule issues involving both the Site and the LRA, and,
    - e) the Site to provide any additional information
  - 3 The Site will then draft the decision document and involve the regulators as the document is drafted

Figure 1.1.1  
 RFCA Decision  
 Document Screen



410 1 1 5 RSOPs

411

412 RFCA Standard Operating Protocols are defined in RFCA as “approved protocols  
413 applicable to a set of routine environmental remediation and/or decommissioning  
414 activities regulated under this Agreement that DOE may repeat without re-obtaining  
415 approval after the initial approval because of the substantially similar nature of the work  
416 to be done ” Currently, DOE intends to incorporate the information necessary for the  
417 approval of decommissioning work into project-specific decision documents such as  
418 DOPs, PAMs or IM/IRAs As the decommissioning program matures, the Site and the  
419 regulatory agencies may decide to adopt the use of RSOPs which would be developed  
420 through the RFCA process, including public review and comment

421

422

## 423 2 BUILDING DISPOSITION

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### 425 2.1 Goal of Building Disposition

426

427 Building disposition is the sequence of activities required to take a facility from its  
428 existing condition to final disposition The goal of disposition is for the Site to  
429 accomplish all of the activities necessary either to demolish the building and dispose of  
430 the resulting waste or to release the building for reuse

431

432 As discussed in RFCA Attachment 9, unless building specific conditions otherwise  
433 warrant, the activities denoted below are typical, but not all inclusive, of those that will be  
434 performed in each building

435

- 436 a) containerized waste and materials removed,
- 437 b) liquid waste and processing systems drained,
- 438 c) RCRA units closed or have a closure plan integrated with building disposition  
439 plan
- 440 d) all transuranic (TRU) waste, defined as materials in excess of 100 nanocuries  
441 per gram, removed,
- 442 e) equipment, piping, ducts, glove boxes, and major electrical components  
443 removed (e g , strip out)
- 444 f) radioactive hot spots and hazardous substances removed, and
- 445 g) easily removed contamination removed

446

447

448 **2.2 Building Classification**

449

450 The Site will sort its buildings into three types, based on differing levels of  
 451 contamination, each with its own degree of regulation. The Reconnaissance Level  
 452 Characterization will be used to determine the building type

453

454 *Type 1 Buildings free of contamination<sup>4</sup>*

455

456 "Free of contamination" means that the following conditions have been met

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- 458 • Hazardous wastes, if any, generated and/or stored in the facility have been  
 459 previously removed in accordance with CHWA and RCRA requirements and  
 460 any RCRA units have been closed or, if partially closed, the parts of the unit  
 461 within the facility have been certified as being clean closed, (It will be  
 462 insufficient to have RCRA units simply in a RCRA stable configuration ),  
 463 AND
- 464 • Routine surveys for radiological contamination performed pursuant to the  
 465 RFETS radiological protection program show the building is not  
 466 contaminated, AND
- 467 • Surveys, if required, for hazardous substance contamination show the building  
 468 is not contaminated, AND
- 469 • If any hazardous substances including polychlorinated biphenyls (PCBs) or  
 470 asbestos are present, they are an integral part of the building's structural,  
 471 lighting, heating, electrical, insulation or decorative materials. As such, they  
 472 are not "contamination"

473

474 Since the presence or absence of physical or safety hazards, while important to the Site in  
 475 terms of how to proceed with a building's disposition, is not a determinant of whether it  
 476 will be regulated pursuant to RFCA, DOE will not consider such hazards in categorizing  
 477 a building as Type 1

478

479 *Type 2 Buildings without significant contamination or hazards, but in need of*  
 480 *decontamination*

481

482 Type 2 buildings contain some radiological contamination or hazardous substance  
 483 contamination. The extent of the contamination is such that routine methods of  
 484 decontamination should suffice and only a moderate potential exists for environmental  
 485 releases during decommissioning. Some buildings in this category, e.g., 865, 886 and  
 486 991, are now undergoing, or will undergo deactivation in certain areas prior to  
 487 decommissioning. The mere fact that deactivation will occur does not push a building

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<sup>4</sup> NOTE The DOE may choose to remove materials containing polychlorinated biphenyls (PCBs) and asbestos pursuant to other laws which regulate DOE actions independently from RFCA

488 into the Type 3 category Most buildings where industrial operations occurred that used  
 489 hazardous substances or radioactive materials or both will fall into this category

490

491

492 *Type 3 Buildings with significant contamination and/or hazards*

493

494 Type 3 buildings contain extensive radiological contamination, usually as a result of  
 495 plutonium processing operations or accidents Contamination may exist in gloveboxes,  
 496 ventilation systems, or the building structure Site personnel expect those buildings that  
 497 were used for plutonium component production, along with the major support buildings  
 498 for such production, will have significant contamination, and are therefore expected to be  
 499 classified as Type 3 These buildings include

500

501	371/374	559	771/774
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502	707	776/777	779
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### 505 **2.3 Project Approach**

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507 A “project” approach is the most effective way to disposition a building To handle a  
 508 single building or cluster of buildings as a project means to encompass deactivation and  
 509 decontamination, if necessary, and preparation for reuse or dismantlement/demolition and  
 510 environmental restoration for under-building contamination in a unified work package  
 511 and planning effort While the Site will apply the project approach to disposition all  
 512 buildings, for regulatory purposes the DPP governs the disposition of all buildings in  
 513 accordance with RFCA until preparation for non-DOE reuse or dismantlement/demolition  
 514 is complete

515

516 Facility characterization activities need to be consistent throughout the facility disposition  
 517 process To meet this goal, the site will follow *The RFETS Decontamination &*  
 518 *Decommissioning Characterization Protocol* developed for that purpose, unless it is  
 519 modified through individual decision documents *The RFETS Decontamination &*  
 520 *Decommissioning Characterization Protocol* will adapt the *Multi-Agency Radiation*  
 521 *Survey and Site Investigation Manual (MARSSIM)* for use in radiation surveys during  
 522 decommissioning DOE will consult with CDPHE and EPA to reach concurrence on *The*  
 523 *RFETS Decontamination & Decommissioning Characterization Protocol* –If concurrence  
 524 is not reached within a reasonable timeframe and it appears unlikely that the consultative  
 525 process will result in concurrence, the parties agree to use the dispute resolution process  
 526 in RFCA Part 15, subpart E, Disputes Regarding Site-Wide Issues

527

528

529

530

531

488 into the Type 3 category Most buildings where industrial operations occurred that used  
489 hazardous substances or radioactive materials or both will fall into this category

490

491

492 *Type 3 Buildings with significant contamination and/or hazards*

493

494 Type 3 buildings contain extensive radiological contamination, usually as a result of  
495 plutonium processing operations or accidents Contamination may exist in gloveboxes,  
496 ventilation systems, or the building structure Site personnel expect those buildings that  
497 were used for plutonium component production, along with the major support buildings  
498 for such production, will have significant contamination, and are therefore expected to be  
499 classified as Type 3 These buildings include

500

501 371/374

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771/774

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503

504

### 505 2.3 Project Approach

506

507 A "project" approach is the most effective way to disposition a building To handle a  
508 single building or cluster of buildings as a project means to encompass deactivation and  
509 decontamination, if necessary, and preparation for reuse or dismantlement/demolition and  
510 environmental restoration for under-building contamination in a unified work package  
511 and planning effort While the Site will apply the project approach to disposition all  
512 buildings, for regulatory purposes the DPP governs the disposition of all buildings in  
513 accordance with RFCA until preparation for non-DOE reuse or dismantlement/demolition  
514 is complete

515

516 Facility Characterization activities need to be consistent throughout the facility  
517 disposition process To meet this goal, the site will follow *The RFETS Decontamination  
518 & Decommissioning Characterization Protocol* developed for that purpose DOE will  
519 consult with CDPHE and EPA to reach concurrence on *The RFETS Decontamination &  
520 Decommissioning Characterization Protocol* If concurrence is not reached with a  
521 reasonable timeframe and it appears unlikely that the consultative process will result in  
522 concurrence, the parties agree to use the dispute resolution process in RFCA Part 15,  
523 subpart E, Disputes Regarding Site-Wide Issues

524

525 *The RFETS Decontamination & Decommissioning Characterization Protocol* will adapt  
526 the *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)* for use in  
527 radiation surveys during decommissioning Although *The RFETS Decontamination &  
528 Decommissioning Characterization Protocol* is not an enforceable requirement of RFCA,  
529 DOE will use *The RFETS Decontamination & Decommissioning Characterization  
530 Protocol* for decommissioning characterization activities, unless they are modified  
531 through individual decision documents

532 2 3 1 Pre-Decommissioning Activities

533

534 DOE will make the determination to either dismantle or release the building for reuse

535 Prior to decommissioning, certain building operations will continue, for example

536

- 537 • to disposition excess chemicals or equipment,
- 538 • to perform surveillance and maintenance, and
- 539 • to provide risk reduction from Site hazards to the worker, the public and the
- 540 environment

541

542 Closure of RCRA units and the collection, packaging, storage and shipment of wastes

543 stored in the building or generated during the above-listed activities may also occur

544 Each of these activities is regulated through other means. Because some buildings are

545 needed to support disposition activities in other buildings, they may continue to operate

546 until the buildings they support are through the disposition process

547

548

549 2 3 2 Building Decommissioning

550

551 RFCA's definition of decommissioning is quoted above in § 1 1 2. Decommissioning

552 will commence, either in an entire building or a part thereof, when deactivation, whose

553 end points are discussed in section 1 1 2 is complete. In non-nuclear buildings,

554 decommissioning may begin as soon as the building's mission is at an end. In some

555 buildings, decommissioning may run concurrently with deactivation. If so, the DOP will

556 identify how the Site will manage each suite of activities

557

558 The following list of examples of decommissioning activities should help delineate that

559 portion of the disposition continuum which is regulated as decommissioning under RFCA

560 and is therefore covered by this DPP

561

- 562 • characterization of contamination
- 563 • hazards identification
- 564 • decontamination in preparation for release for reuse or dismantlement
- 565 • strip out and removal of glove boxes, ducts and tank/process equipment
- 566 • size reduction of glove boxes, ducts and tank/process equipment
- 567 • waste minimization activities associated with decommissioning
- 568 • dismantlement
- 569 • demolition

570

571 It is the Site's intention that most or all risk reduction activities will be completed during

572 deactivation. However as stated above in § 1 1 2, certain activities may occur either

573 during deactivation or decommissioning. These include waste chemical removal,

574 disposition of excess property, reduction of chemical hazards and the placement of  
575 RCRA units into RCRA stable condition or their closure

576

577 The Site has more than 200 buildings that supported nuclear weapons production, but  
578 were never defined as defense nuclear facilities. Their total floor area is estimated to be  
579 nearly two million square feet. Many contaminated buildings where SNM activities  
580 never took place are ready for the decommissioning phase now with surveillance and  
581 maintenance as the current activity. These buildings will be decommissioned pursuant to  
582 this DPP and available PAMs or IM/IRAs, and possibly RSOPs, if used in the future

583

584

### 585 2 3 3 Waste Management

586

587 RFCA provides that process wastes and wastes generated during deactivation are  
588 CHWA/RCRA-regulated, whereas wastes generated during decommissioning are  
589 CERCLA-regulated. RFCA §§ 70-71. However, as described in §§ 2 3 2 and 2 3 3  
590 above, there will be times when the Site will be engaged simultaneously in deactivation  
591 and decommissioning in some buildings. At such times, it may prove safer, more cost  
592 effective and more expeditious from an operational stance, to manage the wastes  
593 generated from both activity in the same manner. For example, if Site personnel engaged  
594 in deactivation and decommissioning in different rooms of the same building are both  
595 generating mixed transuranic wastes, the project point of contact may choose to store all  
596 such waste in a single area and commingle such wastes in common containers. If this  
597 practice occurs, the wastes will be managed under CHWA/RCRA, although the RFCA  
598 decision document would discuss the proposed waste management strategy

599

600

### 601 2 3 4 Environmental Restoration

602

603 Environmental Restoration constitutes those activities necessary to characterize, assess  
604 and remediate contamination in soils, sediments, surface and ground water from past  
605 nuclear weapons production activities. One goal of environmental restoration is to follow  
606 the CERCLA process so that a DOE property like the Site is ultimately removed from the  
607 National Priorities List. Typically, the Site removes contamination to satisfy a risk-based  
608 standard or environmental requirement for the medium affected. Environmental  
609 restoration at the Site will include remediation of all under building contamination after  
610 the removal of building foundations or slabs. Such remediation will conform to the  
611 standards established in RFCA Attachment 5 and the final applicable or relevant and  
612 appropriate requirements (ARARs) selected for the Site. This DPP does not regulate  
613 environmental restoration, however this discussion has been included to make clear that,  
614 while the decommissioning that the DPP does regulate is part of a broader process, other  
615 phases in that process are regulated elsewhere

616

617

618 **3 BUILDING DECOMMISSIONING**

619

620 **3.1 Maintaining the Administrative Record**

621

622 As a CERCLA decision document, upon approval, the DPP will be placed into the Site-  
 623 wide Administrative Record. Subsequent decommissioning actions requiring regulatory  
 624 approval, e.g., RSOPs, PAMs, IM/IRAs and DOPs, will have separate Administrative  
 625 Records. The DOE will also place documents used in the regulatory decision-making  
 626 process, such as, the Reconnaissance Level Characterization, in the Administrative  
 627 Record. For RSOPs, the Administrative Record will remain open until the record is  
 628 closed for the Industrial Area Operable Unit so that all notifications made pursuant to the  
 629 RSOP will become part of a single Administrative Record file. Since the Administrative  
 630 Record will otherwise be closed at the time of a decision document's, i.e., a PAM',  
 631 IM/IRA' or DOP's, approval, operational documents generated after the administrative  
 632 record has been closed, e.g., a Demolition Closure Report, will be incorporated into a  
 633 Post-Decisional File for the action that will be part of the Industrial Area Administrative  
 634 Record File. The DOE will follow the Site Level 1 Procedure regarding administrative  
 635 records.

636

637 For Type 1 buildings, a project specific administrative record is not required for the  
 638 project. However, the reconnaissance level characterization report, the close-out report,  
 639 and LRA concurrence with building typing per section 3.3.4, if provided, must be  
 640 included in the administrative record as either a project specific file or placed within the  
 641 appropriate operable unit (OU), that is, industrial area OU or buffer zone OU. These  
 642 documents are required to be placed in the administrative record because these documents  
 643 will support the final Corrective Action Decision/Record of Decision (CAD/ROD) for the  
 644 OU.

645

646

647 **3.2 Closure Project Baseline**

648

649 Planning activities for decommissioning are underway at most buildings. Site personnel  
 650 schedule building decommissioning work and ensure the integration of such work with  
 651 other Site activities by including such work on a controlled master resource-loaded  
 652 critical path method schedule, referred to in RFCA, Part 11, Subpart A, as the Integrated  
 653 Site-wide Baseline, which is now called the Closure Project Baseline (CPB). The CPB  
 654 contains the entire building disposition schedule. Both CDPHE and EPA review the  
 655 CPB, including revisions, annually.

656

657

658 **3.3 Decommissioning Activities**

659

660 Once DOE has decided to proceed with decommissioning a particular building or group  
661 of buildings, has completed any precursor activities (such as deactivation), and has  
662 scheduled the work on the CPB, the decommissioning process begins. Figure 3-3-1 is a  
663 flowchart showing the regulatory path for each Site building.

664

665

666 3.3.1 Scoping

667

668 With the information known to date about the project, the project points of contact from  
669 the Site and the LRA will engage in the RFCA consultative process to discuss the scope  
670 of the decommissioning action for all buildings, including the schedule, budget, risks and  
671 approach for performing the work. This will include agreeing to the length of the public  
672 comment period. The scoping meeting is one step in a broader and longer-term scoping  
673 process.

674

675

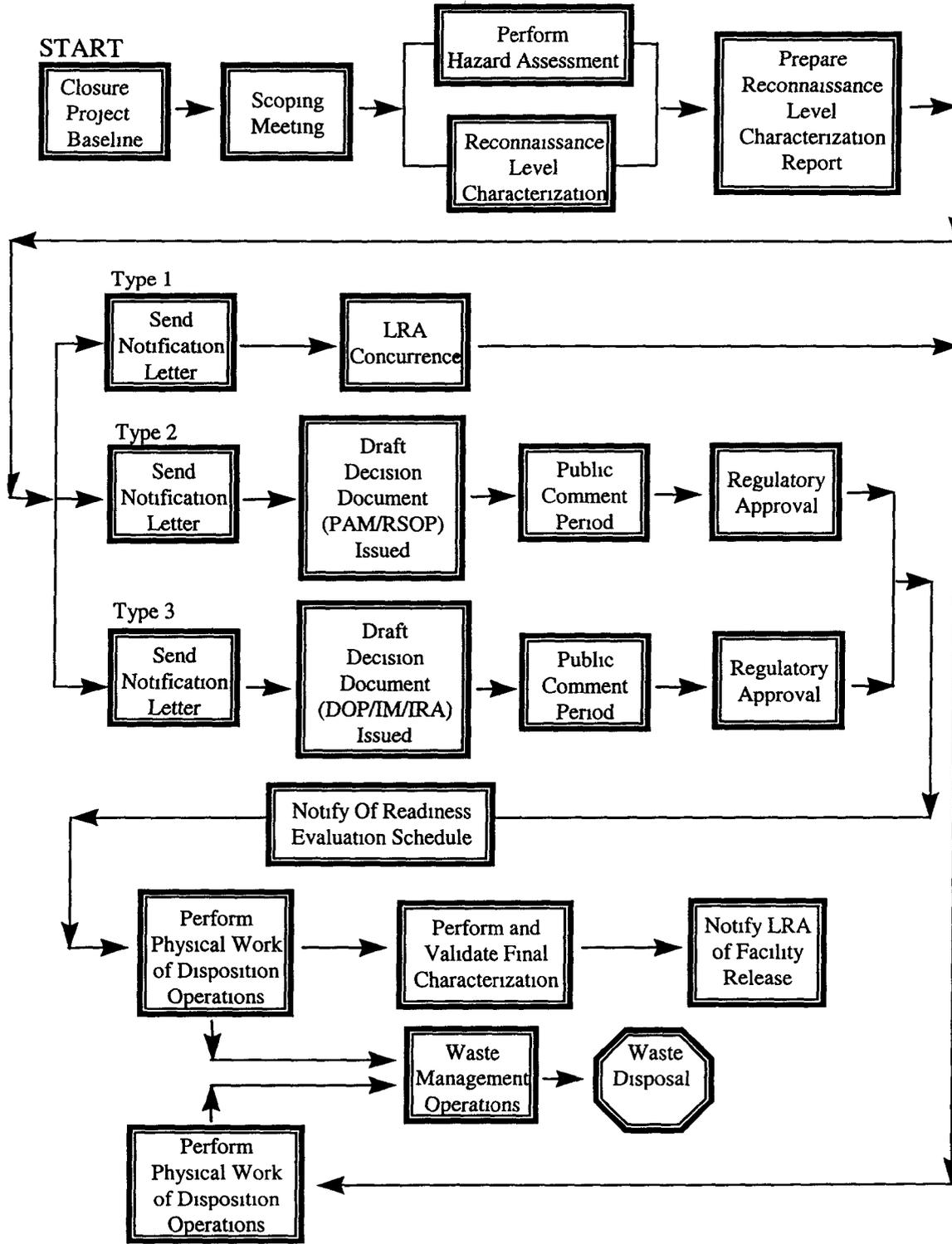
676 3.3.2 Facility Walk Down

677

678 Site personnel will perform a facility walk down to obtain the information necessary to  
679 prepare the hazard assessment and the Reconnaissance Level Characterization Report  
680 (RLCR).

681

Figure 3 3 1 Regulatory Process Flow for Building Decommissioning



682  
683

## 684 3 3 2 1 Perform Hazard Assessment

685

686 RFCA Attachment 9 and prudent business practices require that the Site identify safety  
 687 and physical hazards as part of the initial building reconnaissance. The management and  
 688 resolution of such hazards occurs outside of the RFCA regulatory framework. The safety  
 689 and physical hazard assessment will help Site personnel determine the possible risks to  
 690 workers, the public and the environment during decommissioning.

691

692 To identify and control hazards, the Site will follow the process set out in its Integrated  
 693 Safety Management process description and implementation plan (ISM). The ISM was  
 694 initially developed in March 1997 in response to DNFSB Recommendation 95-2. The  
 695 ISM integrates the identification, analysis and control of hazards and provides feedback  
 696 for improvement. The ISM consists of five core safety management functions.

697

698

- define the scope of work
- identify and analyze hazards associated with the work
- develop and implement hazard controls
- perform the work within such controls, and
- provide feedback on the adequacy of the controls

699

700

701

702

703

704

## 705 3 3 2 2 Reconnaissance Level Characterization

706

707 The Reconnaissance Level Characterization produces an overall assessment of the  
 708 contamination, hazards, and other conditions associated with each building. The  
 709 radiological and chemical (including PCBs and asbestos) condition of the building will be  
 710 assessed in order to identify radioactive or hazardous waste storage areas, contaminated  
 711 areas and hazards, as well as physical obstacles or other conditions that could affect  
 712 decommissioning activities. The RLCR will contain sufficient detail including analysis  
 713 of analytic information to establish the basis for decommissioning activities.

714

715 The Reconnaissance Level Characterization will locate or confirm previously located  
 716 quantities of SNM. The Reconnaissance Level Characterization will include a room-by-  
 717 room review of quantities of radioactive or hazardous materials or chemicals that require  
 718 special work controls to complete decommissioning safely. In all cases, the team  
 719 performing the RLC will check the historic information against current observed  
 720 conditions, will identify and record areas with loose or fixed contamination and will note  
 721 unclosed RCRA units and idle equipment still in residence. The project points of contact  
 722 and staff use the RLCR to provide input to the preparation of the health and safety  
 723 analysis, the determination of the engineering support requirements, and the  
 724 determination of appropriate milestones.

725

726

727 3 3 4 Prepare Reconnaissance Level Characterization Report

728

729 Based on the Reconnaissance Level Characterization, the Site will prepare a report for  
 730 transmission to the LRA that summarizes the results of the Reconnaissance Level  
 731 Characterization and provides an analysis of the risks presented in the building. The Site  
 732 will use the methods and characterization protocols in *The RFETS Decontamination &*  
 733 *Decommissioning Characterization Protocol*, routine surveys for radiological  
 734 contamination performed pursuant to the RFETS radiological protection program, process  
 735 knowledge, the facility walkdown, and historical information to develop the RLCR. The  
 736 RLCR will be compared against proposed decommissioning activities to determine if  
 737 those activities are feasible and to identify the need for quantitative in process sampling  
 738 and analysis, through application of *The RFETS Decontamination & Decommissioning*  
 739 *Characterization Protocol*. DOE will use the information from the RLCR to confirm its  
 740 typing of the building, and will transmit the RLCR and a notification letter to the LRA for  
 741 concurrence. The notification letter will include DOE's determination as to the building  
 742 type. The LRA will have fourteen days to concur with DOE's determination or to non-  
 743 concur and state in writing its reasons for non-concurrence. For Type 1 buildings, if the  
 744 LRA does not transmit its written non-concurrence (along with the reasons for non-  
 745 concurrence) within fourteen days, DOE may begin decommissioning of the building(s)  
 746 in question. If the LRA does not concur with DOE's determination, DOE and the LRA  
 747 will meet to attempt to resolve the reasons for the LRA's non-concurrence, using the  
 748 consultative process. If these differences cannot be resolved, the RFCA dispute  
 749 mechanism may be invoked by any party. DOE will provide the RLCR and notification  
 750 letter for a building sufficiently in advance of decommissioning to allow for the fourteen  
 751 day concurrence cycle by the LRA, and to allow for consultative resolution of  
 752 disagreements should they arise.

753

754 A RLCR will be submitted to the LRA prior to "mothballing" or prior to beginning  
 755 decommissioning.<sup>5</sup> In addition, whenever DOE chooses to "mothball" a facility, DOE  
 756 will submit a hazards analysis of the facility specific conditions for the mothballed  
 757 period, meet with the LRA to discuss any potential hazards or releases to the environment  
 758 which might occur during the mothball period, devise actions to mitigate potential  
 759 releases in collaboration with the LRA and propose adequate monitoring methods to  
 760 monitor any release. Any modification to work previously approved in a decision  
 761 document would be processed in accordance with RFCA, Part 10, Changes to Work

762

763

764 3 3 5 Type 1 Buildings Decommissioning

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<sup>5</sup> The term "mothball" is defined as placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, and fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating.

766 Decommissioning of buildings classified as Type 1 (uncontaminated) based on a final  
767 reconnaissance level characterization report will not require RFCA decision documents in  
768 addition to the DPP and will proceed based on plant procedures

769 However, if contamination is discovered during decommissioning of a building classified  
770 as Type 1, decommissioning activities in the affected areas will cease until the LRA is  
771 notified and the need to reclassify the facility is considered collaboratively

772 Discovery of contamination after the determination that the building is Type 1 will not  
773 necessarily result in the need to reclassify a building into the Type 2 classification. If  
774 contamination can be removed by methods in which there is no threat of release of a  
775 hazardous substance to the environment, for example by simply cutting out the fixed,  
776 contamination, the building may remain as Type 1. Contamination will be cleaned up  
777 and disposed properly using existing radiological or hazardous waste management  
778 procedures

779 Reclassification as a Type 2 building must be considered in any instance where removal  
780 techniques involve a threat of release of a hazardous substance (as determined by the  
781 consultative process) to the environment

782

783 No further regulatory involvement for Type 1 buildings will be required for buildings  
784 containing asbestos provided the Site follows the requirements of the Site asbestos  
785 management program

786

787 For Type 1 facilities containing PCBs that are not contaminated with radioactive  
788 materials, no further regulatory involvement will be required provided the Site follows  
789 the requirements of the Site PCB management procedures

790

791

792 3.3.6 Type 2 Buildings Decommissioning

793

794 Following scoping and characterization, the Site will prepare its internal plan for  
795 decommissioning the Type 2 building or cluster of buildings at issue. Based on the  
796 necessary activities to complete such decommissioning, the Site may be able to take  
797 advantage of the streamlined regulatory process that exists if the necessary  
798 decommissioning activities fall within the scope of one or more existing RSOPs. For an  
799 explanation of RSOPs, see § 1.1.5. At the time that this DPP is being written, no RSOP  
800 exists. Where contemplated decommissioning activities do not fall within an existing  
801 RSOP, decommissioning may only proceed pursuant to an approved PAM or IM/IRA

802

803 The table of contents for a DOP will be the same as that for an IM/IRA and is listed in  
804 section 3.3.7.1. A graded approach will be discussed with the LRA and will be used in  
805 determining the level of detail of the information in the decision documents

806

807 DOE anticipates conducting one or more readiness evaluations prior to and during the  
808 course of decommissioning projects. The LRA will be notified of the schedule for the

809 readiness evaluation including but not limited to management reviews and environmental  
 810 readiness evaluations and of the time and location of the initial meeting of the evaluation  
 811 team designated for each decommissioning project. The LRA may designate a participant  
 812 for regulatory oversight and to accompany the team and attend its meetings. It is  
 813 anticipated that the participant will be the LRA project lead. A copy of the readiness  
 814 evaluation team's final report will be made available to the LRA upon request of its  
 815 designated participant. (*Note this language also appears in Sec 3 3 7 3*)

816  
 817

### 818 3 3 6 1 Release, Review and Approval of RSOPs

819

820 Prior to being able to perform work pursuant to an RSOP, the Site must have obtained  
 821 approval for such RSOP pursuant to RFCA. This requires the Site to scope the RSOP  
 822 through the consultative process, draft an RSOP for public comment and the review and  
 823 approval of EPA and CDPHE, prepare a formal response to public comment and obtain  
 824 EPA's and CDPHE's approval through the IM/IRA process described in RFCA ¶107

825  
 826

### 827 3 3 6 2 Notification of Intent to Proceed under RSOP

828

829 If the planned decommissioning activities fall within the scope of one or more approved  
 830 RSOPs, then the Site will notify EPA, CDPHE and the public in writing of its intent to  
 831 proceed with such activities. This notification letter will become part of the  
 832 Administrative Record for the RSOP(s)

833  
 834

### 835 3 3 6 3 Decommissioning Type 2 Buildings prior to RSOP approval or where activities 836 contemplated are not covered by an RSOP

837

838 Until such time as the Site has an approved RSOP(s) for decommissioning activities, the  
 839 Site may only perform decommissioning in a Type 2 building pursuant to an approved,  
 840 building-specific (or building cluster-specific) PAM or IM/IRA. The process for  
 841 approval of PAMs and IM/IRAs along with the required contents for each are set forth in  
 842 RFCA ¶¶106 and 107. Even at such time as the Site has obtained regulatory approval  
 843 for an RSOP, some Type 2 buildings may require decommissioning activities that fall  
 844 outside its scope, thereby requiring building-specific regulatory approval for those non-  
 845 covered activities

846  
 847

### 848 3 3 7 Type 3 Buildings Decommissioning

849

850 The Site will decommission each Type 3 building pursuant to an individual DOP for the  
 851 building or building cluster. The list of buildings currently expected to fall within Type 3  
 852 is in § 2.2

853  
 854

855 3.3.7.1 Preparation of DOPs, and RFCA Decommissioning IM/IRAs

856

857 The DOP will be prepared and approved in accordance with the RFCA IM/IRA approval  
 858 process. The DOP will contain sufficient information so the regulators can be satisfied  
 859 that the project can proceed compliantly, with a high probability of success. Support  
 860 buildings associated with a major project may be included in its DOP if they would be  
 861 managed in the same project. A graded approach will be followed to determine the level  
 862 of detail in the table of contents for PAMs. Using a graded approach, a DOP or IM/IRA  
 863 at a minimum will contain the following information

864

865 DOP AND IM/IRA PLAN TABLE OF CONTENTS

866

867 EXECUTIVE SUMMARY

868

869 INTRODUCTION

870

- 871 • Include purpose of document and scope. Scope will include a
- 872 description of the facility after decommissioning activities are
- 873 completed, e.g., buildings to slab
- 874 • Include brief justification explaining consistency with the CPB, or if
- 875 not, logic for doing, e.g., reduced risk, costs, etc. (Explanation for why
- 876 it is important to do work and the relationship of the project to long-
- 877 term remedial objectives)

878

879 BUILDING/CLUSTER DESCRIPTION

880

- 881 • A physical description of building area, a brief operational history,
- 882 including known releases and fires (based, where the information
- 883 exists, on the historical release record), identification of RCRA units
- 884 and CERCLA Individual Hazardous Substance Sites (IHSSs),
- 885 summary of the RLCR findings
- 886 • The DOP will describe the expected condition of the building at the
- 887 beginning of decommissioning

888

889 ALTERNATIVES ANALYSIS & SELECTION

890

- 891 • Include an alternatives analysis and an impact analysis

892

893 PROJECT APPROACH

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913
- Description of project including a description of project activities and work and emission controls, performance standards, any included RCRA closure activities, any separate environmental management or compliance approvals needed, and a description of the on-going plan for facility characterization
    - Include Identification of hazards from the RLCR and how they will be addressed (The use of tables is recommended for summarizing data)
  - Identification of activities to address hazards, including Work/Environmental/Spill(emphasize)/ Effluent controls
    - Identify Decontamination approach
    - Identify need for a Final Radiation Survey Plan and a Decontamination Plan
    - Identify monitoring requirements
    - Identify cleanup levels
  - Discuss Authorization Basis (reference documents that identify surveillance and equipment maintenance requirements) and Work Authorization

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916  
917  
918  
919

NOTE Prior to proceeding with decommissioning, a management review of the project's infrastructure, procedures and personnel will be completed by DOE, the LRA and the IMC, such review, to verify that the conditions exist to support the activities safely, may result in changes to the project as described in this document

920 HEALTH AND SAFETY

- 921  
922  
923  
924  
925  
926  
927
- Include a description of the health and safety issues (worker and environmental)
  - Include ISM discussion and how safety is built into approach
  - Address emergency response
  - Summary of hazards from Project Approach above

928 WASTE MANAGEMENT

- 929  
930  
931  
932  
933  
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935  
936  
937  
938
- Include a summary of the waste management issues, including those related to disposal
  - Identify waste quantities to be generated (TRU, low level waste, and sanitary), where it will be staged, and ultimate disposition plans Discuss unknowns and need for flexibility and possible change due to uncertainties with final destinations (Waste Process Flow Chart recommended)
  - Duration of storage or staging

## 939 COMPLIANCE W/ ARARS

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## ENVIRONMENTAL CONSEQUENCES OF THE ACTION

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## 961 QUALITY ASSURANCE/QUALITY CONTROL

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## IMPLEMENTATION SCHEDULE

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- Includes list of applicable laws, orders, regulations, and Clean Water Act (CWA) or Clean Air Act (CAA) permit requirements, Chemical-, Action- and Location Specific and To-Be-Considered Requirements and Considerations, and RFCA building cleanup criteria and standards

- Include description of environmental, socioeconomic and cumulative impacts as a result of the project to geology and soils, air quality, water quality, human health, plants and animals, historic resources, noise levels and the local economy, mitigation measures, unavoidable adverse effects, short-term uses in effect during decommissioning and long-term productivity after the actions are complete, and irreversible and irretrievable commitments of resources
- Address NEPA and relative impact on human health, worker safety, and the environment
- Address how the requirements have been met for compliance with the National Historic Preservation Act and the programmatic agreement with the Colorado State Historic Preservation Office<sup>6</sup>

- Include a general description of the quality assurance and control issues
- Include the training process to assure worker training is adequate, include a matrix of training requirements specific to the decommissioning project

- Include a schedule with level of detail addressing room by room (or set) logic and activities (may not need to be to the level identifying individual glovebox, tank or equipment item removal for equipment or sets whose remediation is not complex) This schedule will include anticipated document review times by the LRA

---

<sup>6</sup> Sixty-four facilities of the former Rocky Flats Plant have been listed in the National Register of Historic Places as an historic district. A Programmatic Agreement with the Colorado State Historic Preservation Officer requires that the facilities be documented using the Historic American Engineering Record (HAER) format before the facilities are significantly altered or demolished. The initial documentation was completed in March, 1998. The HAER documentation packages are submitted to the National Park Service for approval. Acceptance of the entire documentation package by the National Park Service is expected in the summer of 1998.

977 NOTE This information will be supplied to add clarity to the  
 978 decision document and to identify the general planned schedule if  
 979 full funding is available The schedule is not an enforceable part of  
 980 the document, and DOE or its contractors may deviate from it  
 981 without penalty and without having to notify or obtain the approval  
 982 of the LRA in advance  
 983

#### 984 PROJECT ORGANIZATION

- 985
- 986 • Includes organization chart of project team, and a description of how  
 987 project fits into larger facility disposition effort  
 988

989 NOTE This information will be supplied to add clarity to the  
 990 decision document and to identify reporting relationships and  
 991 responsibilities The organizational structure is not an enforceable  
 992 part of the document and DOE or its contractors may deviate from  
 993 the organization without penalty and without having to notify or  
 994 obtain the approval of the LRA in advance  
 995

#### 996 COMMENTS AND COMMENT RESPONSIVENESS SUMMARY

#### 998 REFERENCES

- 999
- 1000 • Include references to other documents used as information sources in  
 1001 the DOP, such as, RFCA, DPP, any RSOPs that would be used, RLCR,  
 1002 project specific health and safety plan  
 1003  
 1004

1005 3 3 7 2 Submit Draft DOP for public comment and regulatory review and approval  
 1006

1007 The Site drafts the DOP and DOE submits it to CDPHE (as the LRA) and releases it for  
 1008 public comment pursuant to the RFCA IM/IRA approval process DOE and CDPHE will  
 1009 agree in advance to the length of the public comment period  
 1010  
 1011

1012 3 3 8 Notify of Readiness Evaluation Schedule  
 1013

1014 The LRA will be notified of the schedule for the readiness evaluation for Type 2 and 3  
 1015 buildings including but not limited to management reviews and environmental readiness  
 1016 evaluations and of the time and location of the initial meeting of the evaluation team  
 1017 designated for each decommissioning project The LRA may designate a participant for  
 1018 regulatory oversight and to accompany the team and attend its meetings It is anticipated  
 1019 that the participant will be the LRA project lead A copy of the readiness evaluation

1020 team's final report will be made available to the LRA upon request of its designated  
1021 participant

1022  
1023

1024 3 3 9 Perform Physical Work of Disposition Operations

1025

1026 These activities include, for example, dismantling and removing equipment,  
1027 decontamination of walls, floors, and ceilings, utility system shutdown, and removing  
1028 internal building components. After demonstration that the building meets the  
1029 established criteria, it will be demolished or reused. The requirements and procedures  
1030 referenced in RFCA decision documents will be followed by workers performing  
1031 decommissioning. This includes lower tier as well as first tier contractor workers

1032  
1033

1034 3 3 10 Perform and Validate Final Characterization

1035

1036 At the end of the decommissioning, Site personnel will confirm that their activities have  
1037 achieved the release standard for buildings destined for reuse or the completion of  
1038 building disposition for buildings that are demolished such that only environmental  
1039 restoration activities remain. After strip out, further characterization of radioactive areas  
1040 will be undertaken, where necessary

1041

1042 After the building is demolished, the final characterization will occur. The demolition  
1043 survey will be conducted in accordance with the Site's characterization protocols, and  
1044 will provide sufficient data to demonstrate that the Site has successfully completed  
1045 decommissioning in conformance with the governing RFCA decision document. The  
1046 post-demolition survey may result in a loop of activity for Site decommissioning  
1047 personnel, because if the survey reveals insufficient decommissioning to meet the  
1048 requirements of the governing decision document, the Site will have to take additional  
1049 action. Only at such time as the Site project point of contact is satisfied that the post-  
1050 demolition survey shows that decommissioning is complete, will the survey be deemed  
1051 final

1052

1053

1054 3 3 11 Notify Regulators of Completion of Decommissioning

1055

1056 Upon completion of the relevant final characterization, DOE will notify CDPHE, EPA  
1057 and the public in writing of the completion of decommissioning for a building or group of  
1058 buildings. DOE will accomplish notification to the public with a letter to the Rocky Flats

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<sup>7</sup> Decontamination is performed routinely to control exposure levels so that conditions mandating remedial decontamination do not occur or are significantly delayed/retarded

1059 Citizen Advisory Board A close out report will be prepared for Type 2 and 3 building  
1060 decommissioning projects

1061  
1062

1063 3 3 12 Regulatory Oversight and Enforcement

1064

1065 Consistent with RFCA ¶ 272 and 273, throughout the decommissioning process,  
1066 regulatory personnel will have the ability to inspect Site activities and records for  
1067 consistency with the requirements of both the governing decision-documents and RFCA  
1068 generally Also, consistent with RFCA ¶ 176, CDPHE, or in the case of a site-wide issue,  
1069 EPA, may issue a stop work order for RFCA-regulated decommissioning activities at any  
1070 time for the reasons provided therein

1071

1072

1073 3 3 13 Document Review Schedule

1074

1075 The following documents will be submitted for review by the LRA The suggested  
1076 review times are included as guidelines The actual review times should be negotiated  
1077 during or soon after the scoping meeting The review times are the calendar days from  
1078 receipt of the document As stated in RFCA and elsewhere in this DPP, some of the  
1079 following documents are submitted for LRA approval, some for concurrence, and others  
1080 are for review and, at the LRA's discretion, for comment

1081

DOCUMENT	SUGGESTED REVIEW TIME (calendar days)
Reconnaissance Level Characterization Report and Building Typing Notification	14 (see section 3 3 4 for specific information)
Draft RFCA decision document	Follow time table in RFCA
Post-strip out/pre-demolition survey	10
Post demolition survey	10

1082

#### 1083 **4 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) VALUES**

1084

1085 Because the DPP does not, itself, authorize any specific actions at the Site, the discussion  
1086 of NEPA values which follows will, of necessity, be general

1087

1088

#### 1089 **4.1 Relative Impacts on Human Health, Worker Safety, and the Environment**

1090

1091 Specific cleanup and closure activities at the Site will either be covered by project  
 1092 specific NEPA documents<sup>8</sup> or RFCA documents, unless the activity is only in the  
 1093 planning stage in which case it would be premature for a formal NEPA evaluation. Many  
 1094 of the key cleanup and closure decisions facing the Site at this time are in fact subject to  
 1095 DOE complex-wide decisions, such as the movement of waste and SNM from the Site.  
 1096 Consequently, these decisions will be made in the context of broader programmatic  
 1097 environmental impact statements.<sup>9</sup> Consistent with the Secretarial Policy Statement on  
 1098 NEPA (DOE 1994), the Site will rely on the CERCLA process for review of specific  
 1099 actions to be taken under RFCA and will address NEPA values and public involvement  
 1100 procedures through the RFCA document review process to the extent practicable. In  
 1101 addition, the Cumulative Impacts Document (CID) (DOE 1997) for the Site has been  
 1102 prepared to provide an updated baseline of the cumulative impact to the worker, public,  
 1103 and environment due to Site operations, activities, and environmental conditions based on  
 1104 the Site's change in mission from nuclear weapons production to materials and waste  
 1105 management, accelerated cleanup, consolidation, reuse, and Site closure. The CID serves  
 1106 as an update of the baseline activities and associated environmental impacts reflected in  
 1107 the April 1980 Final Environmental Impact Statement for the Rocky Flats Plant Site  
 1108 (DOE 1980). The CID complements existing NEPA and RFCA documents by making  
 1109 this cumulative impact information available for referencing in future NEPA and RFCA  
 1110 documents.

1111

1112

#### 1113 4.2 Incorporation of NEPA Values

1114

1115 Pursuant to the Secretarial Policy Statement on NEPA, NEPA values for the individual  
 1116 building disposition process will be incorporated as follows:

1117

1118 Type 1 (Buildings free from contamination) In general, the disposition activities  
 1119 conducted for Type 1 buildings will be actions which normally do not require preparation  
 1120 of an environmental assessment or an environmental impact statement. Specifically,

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<sup>8</sup> Rocky Flats Environmental Technology Site Environmental Assessments since the end of 1994: *Consolidation and Interim Storage of Special Nuclear Materials Environmental Assessment, Rocky Flats Solid Residue Treatment, Repackaging, and Storage Environmental Assessment, Rocky Flats Actinide Solution Processing Environmental Assessment, Radioactive Waste Storage Environmental Assessment, Surface Water Drainage System Environmental Assessment, Rocky Flats Protected Areas Reconfiguration Environmental Assessment, New Sanitary Landfill Environmental Assessment, and National Conversion Pilot Project Stage III Environmental Assessment*. Findings Of No Significant Impact have been issued for each of these environmental assessments.

<sup>9</sup> Department of Energy Headquarters Programmatic Environmental Impact Statements: *Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement, Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapons Components, Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste, Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada, and, Supplemental Environmental Impact Statement Waste Isolation Pilot Plant*

1121 these disposition activities fall within the scope of the categorical exclusions listed in 10  
1122 CFR 1021, Appendix B <sup>10</sup>

1123

1124 Type 2 (Buildings without significant contamination or hazards, but in need of  
1125 decontamination) Many of the disposition activities conducted during the deactivation  
1126 phase for Type 2 buildings will be actions which normally do not require preparation of  
1127 an environmental assessment or and environmental impact statement Specifically, these  
1128 disposition activities fall within the scope of the categorical exclusions listed in 10 CFR  
1129 1021, Appendix B <sup>11</sup> There may be some disposition activities conducted during  
1130 deactivation which go beyond the scope of a categorical exclusion, therefore, the Site will  
1131 ensure there is appropriate NEPA coverage prior to conducting these activities <sup>12</sup> While  
1132 many of the disposition activities conducted during decommissioning fall within the  
1133 scope of the categorical exclusions listed in 10 CFR 1021, Appendix B, the incorporation  
1134 of NEPA values relative to the analysis of impacts to human health, safety, and the  
1135 environment will be included in the appropriate RFCA decision document (e g , as one  
1136 of the three types of accelerated actions listed in RFCA ¶ 96)

1137

1138 Type 3 (buildings with significant contamination and/or hazards) Just as with Type 2  
1139 buildings, many of the disposition activities conducted during the deactivation phase will  
1140 be actions that do not require preparation of a NEPA decision document And, some  
1141 disposition activities conducted during deactivation will go beyond the scope of a  
1142 categorical exclusion, thereby requiring that the Site ensure appropriate NEPA coverage  
1143 by the incorporation of NEPA values relative to the analysis of impacts to human health,  
1144 worker safety, and the environment will be included in its DOP

1145

1146

#### 1147 **4.3 Cumulative Impacts Document Analysis**

1148

1149 The CID describes Site operations with respect to the program areas of SNM  
1150 Management, Facility Disposition, Waste Management, Environmental Restoration, and  
1151 Site Support Services for both current activities (e g , the baseline case) and the Site's

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<sup>10</sup> The following categorical exclusions listed in 10 CFR 1021, Appendix B, Subpart D, will most commonly apply to Type 1 buildings B1 3 - Routine maintenance activities, B1 16 - Removal of asbestos-containing materials, B1 17 - Removal of polychlorinated biphenyl (PCB)-containing items, B1 27 - Disconnection of utility services, and B1 23 - Demolition and subsequent disposal of buildings, equipment, trailers, and support structures

<sup>11</sup> In addition to the categorical exclusion which apply to Type 1 buildings, the following categorical exclusions listed in 10 CFR 1021, Appendix B, Subpart D, will most commonly apply to deactivation activities for Type 2 buildings B1 28 - Minor activities to place a facility in an environmentally safe condition, and B6 1 - Small-scale, short-term cleanup actions, under RCRA, CERCLA, Atomic Energy Act, or other authorities

<sup>12</sup> Prior to conducting deactivation activities which exceed the scope of a categorical exclusion the Site will ensure that the proposed activity has been adequately evaluated (a) in an existing site-specific environmental assessment or environmental impact statement, a broader programmatic environmental impact statement, or (b) by preparing a new site-specific environmental assessment or environmental impact statement

1152 draft Site closure scenario (e.g., the closure case) The closure case is detailed in a draft  
 1153 planning document prepared in 1996 for the DOE Office of Environmental Management  
 1154 and updated in 1997 as the *Accelerating Cleanup Focus on 2006*

1155  
 1156 The following are some of the insights gained from the CID impacts analysis and risk  
 1157 assessments relative to human health, safety, and the environment

- 1158
- 1159 • Radiological and non-radiological risk to the workers, co-located workers, and  
 1160 the public during normal Site operations are lower than during the weapons  
 1161 production years
  - 1162
  - 1163 • Radiological and non-radiological risk to the workers, co-located workers, and  
 1164 the public during normal Site operations is minimal and well below the  
 1165 requirement of Clean Air Act
  - 1166
  - 1167 • Activities associated with SNM Management, residue stabilization, and  
 1168 building disposition of the "plutonium facilities" (Type 3 buildings) pose the  
 1169 most radiological risk to the workers, co-located workers, and the public  
 1170 during normal Site operations. The risk of excess doses and latent cancer to  
 1171 the workers, co-located workers, and the public activities once these activities  
 1172 are completed becomes significantly less
  - 1173
  - 1174 • Risk from radiological accidents. This is a significant risk to the workers, co-  
 1175 located workers, and the public for the baseline case. This risk to the workers,  
 1176 co-located workers, and the public during the closure case is dominant until  
 1177 around the year 2006 when residue stabilization, SNM consolidation, and  
 1178 deactivation activities associated with SNM holdup are completed and all  
 1179 SNM has been moved off-site
  - 1180
  - 1181 • Risk from seismic event. This risk contributes over 90% of the overall risk to  
 1182 workers, co-located workers, and the public that are within 50 miles of the  
 1183 Site for both the baseline and closure cases
  - 1184
  - 1185 • Risk from hazardous chemical accident. This risk of an accident is low for  
 1186 both the baseline and closure case. The risk to workers and co-located  
 1187 workers could be significant if effective emergency measures fail or are not  
 1188 implemented. Specific chemicals that offer the greatest risk are ammonia,  
 1189 chlorine, sulfur dioxide, nitric acid, and propane
  - 1190
  - 1191 • Closure operations and activities contributing the most to reducing the risks  
 1192 from accidents to workers, co-located workers, and the public are (a)  
 1193 consolidating plutonium oxides into building 371, (b) repackaging the  
 1194 dispersible residues into the pipe/drum component for storage in building 371,  
 1195 (c) removal of plutonium holdup, (d) shipping transuranic and transuranic  
 1196 mixed waste drums to the Waste Isolation Pilot Plant, (e) shipping SNM from

- 1197 building 371 off-site, and (f) shipping low-level and low-level mixed waste  
1198 off-site  
1199
- 1200 • Risk to Site ecology There may be some short-term impacts on wetlands,  
1201 sensitive habitats, wildlife, and species of special concern There is, however,  
1202 expected to be no natural resource injury Closure and building disposition  
1203 activities are not expected to result in the irretrievable or irreversible  
1204 commitment of any natural resource of the Site  
1205
  - 1206 • Potential cumulative impacts (a) increased surface water runoff and  
1207 decreased groundwater recharge associated with on-site landfill or correction  
1208 action management unit caps, (b) short term impacts to wetland and riparian  
1209 habitat if a flow-through surface water management system for on-site water  
1210 management ponds is used, but once the ponds are converted to wetlands,  
1211 biodiversity is expected to increase, (c) periodic increases in vehicle traffic  
1212 along roadways near the Site's two gates, (d) increased traffic accidents  
1213 associated off-site shipments of SNM and waste disposal, and (e)  
1214 socioeconomic impacts from reductions in Site workforce, although this  
1215 impact is expected to be more than offset by the expanding local economy  
1216