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**ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE**

**Decommissioning  
Program Plan**

**October 8, 1998**

**Revision 1 – June 21, 1999**

ELECTRONIC COPY

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80 **1 INTRODUCTION**

81  
82 As required by the Rocky Flats Cleanup Agreement (RFCA), this Decommissioning  
83 Program Plan (DPP) establishes the regulatory steps to be used for decommissioning  
84 buildings at the Rocky Flats Environmental Technology Site (Site). The  
85 decommissioning process is only one part of a building's disposition; disposition starts  
86 when the building's mission ends and may encompass deactivation, decommissioning,  
87 including decontamination and release for reuse or dismantlement, demolition and  
88 environmental restoration. Different areas within a single building can be at different  
89 phases in the disposition approach, e.g., one room can be undergoing deactivation, while  
90 the rest of the building is in post-deactivation. For those buildings where Special Nuclear  
91 Materials (SNM) activities never took place, the disposition process will begin with post-  
92 deactivation.

93  
94 Decommissioning is a series of activities that commences with the conclusion of  
95 deactivation and follows through to environmental restoration. For a more detailed  
96 definition of decommissioning, see §1.1.2 . During the decommissioning phase, all  
97 buildings, utility systems, infrastructure systems and related facilities at the Site will be  
98 dismantled and/or demolished safely and efficiently using appropriate procedures and  
99 work controls.

100  
101  
102 **1.1 RFCA Framework**

103  
104 On July 19, 1996, the Department of Energy (DOE), Environmental Protection Agency  
105 (EPA) and Colorado Department of Public Health and Environment (CDPHE) executed  
106 RFCA. RFCA is the Federal Facility Agreement pursuant to the Comprehensive  
107 Environmental Response Compensation and Liability Act (CERCLA) and Consent Order  
108 under the Resource Conservation and Recovery Act (RCRA) and Colorado Hazardous  
109 Waste Act (CHWA). RFCA replaces the Interagency Agreement between these parties  
110 that had been in place since 1991. RFCA regulates the Site cleanup under the three  
111 statutes. The Rocky Flats Vision (Vision), RFCA Appendix 9, guides virtually all  
112 activities at the Site, including those required by RFCA. Among other things, the Vision  
113 for Rocky Flats is to achieve accelerated cleanup and closure of the Site in a safe,  
114 environmentally protective manner and in compliance with applicable state and federal  
115 environmental laws. All work done at the Site to achieve the Vision is scheduled through  
116 a unified planning process that is captured in the Integrated Site-wide Baseline (which is  
117 now called the "Closure Project Baseline" or "CPB"), as described in RFCA ¶¶s 136 to  
118 141.

120 RFCA coordinates DOE's response obligations under CERCLA, closure obligations  
121 under CHWA and corrective action obligations under CHWA and RCRA, as well as the  
122 remedial activities regulated under the Federal Facility Compliance Act for treatment of  
123 mixed wastes generated by RFCA-regulated activities. RFCA §§ 11 and 12. DOE's  
124 decommissioning activities will be conducted as CERCLA removal actions, consistent  
125 with RFCA §96, the joint DOE-EPA May 22, 1996 policy regarding decommissioning of  
126 DOE facilities, and RFCA attachment 9. RFCA also established a consultative process  
127 among the parties to ensure the efficient implementation of Site closure. See RFCA Part  
128 7. Also, RFCA divides the Site into two major operable units--the Industrial Area and the  
129 Buffer Zone, and designated a Lead Regulatory Agency (LRA) for each. The LRA has  
130 primary authority to review and approve regulatory decision documents throughout the  
131 cleanup and closure of the Site until the end of the process at which time both EPA and  
132 CDPHE need to agree that the Site has been cleaned up to the degree required by their  
133 respective authorities. See RFCA §§ 67 to 69.

#### 136 1.1.1 Working Relationships

137  
138 All parties to this DPP recognize that the decommissioning of buildings at the Site,  
139 especially former plutonium production buildings, will be a lengthy and complicated  
140 process. The parties also recognize that the work to be performed in dispositioning  
141 buildings at the Site is unprecedented in many respects. This includes the establishment  
142 of working relationships among DOE, its contractors, the regulators and the general  
143 public. It is the intent of the parties to this DPP to establish and maintain working  
144 relationships that encourage information sharing and effective dialogue among all persons  
145 with an interest in the Site building disposition program.

146  
147 In implementing the DPP, the parties commit themselves to working collaboratively with  
148 one another and with the public. The parties explicitly recognize and support RFCA  
149 Appendix 2, "Principles for Effective Dialogue and Communications at Rocky Flats,"  
150 and agree to use their best efforts to employ these principles in their respective roles in  
151 implementing the Site decommissioning program.

152  
153 More specifically, the parties intend to use the following principles to implement this  
154 DPP:

- 155  
156 1) Timely sharing of information – All parties will use their best effort to share  
157 project and program information in a timely manner. DOE will inform the  
158 regulators on an ongoing basis of building disposition activities sitewide,  
159 including decommissioning and pre-decommissioning activities. Information  
160 sharing efforts may include but need not be limited to: updates of the overall  
161 Site closure baseline, briefings on the development of annual work plans and  
162 budgets, briefings on changes to approved baselines affecting building

163 disposition activities, invitations to attend project status briefings, and  
164 consultations on decommissioning strategy. DOE will notify CDPHE and  
165 EPA in writing at the start of each fiscal year of those buildings in which DOE  
166 intends to conduct decommissioning activities. If DOE intends to perform  
167 decommissioning in additional buildings during the year, it will notify  
168 CDPHE and EPA in writing of those additional buildings. CDPHE and EPA  
169 recognize their responsibility to provide timely comments on decision  
170 documents and other documents for which their comments have been  
171 requested, and agree to raise concerns regarding the Site building disposition  
172 program and projects in a timely manner. DOE will share decommissioning  
173 project-related information in a timely manner with the LRA's project points  
174 of contact. This project-related information may include written information  
175 that the DOE and LRA project points of contact agree is relevant to the  
176 ongoing regulatory oversight of the project, such as IWCP's, site procedures,  
177 data, etc. DOE will also use good faith efforts to ensure that the LRA points  
178 of contact are aware of significant project meetings, including management  
179 reviews, which will be open to LRA representatives. The LRA point of  
180 contact may provide DOE with comments regarding project planning and  
181 execution. CDPHE and EPA recognize that decommissioning projects will  
182 proceed as scheduled, whether or not the LRA point of contact has taken the  
183 opportunity to attend meetings or read the written information provided.

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184  
185 2) Collaborative discussions of program changes – All the parties to the DPP  
186 recognize that changes in program and project approach will occur on an  
187 ongoing basis as buildings are dispositioned at the Site. These changes may  
188 arise due to unforeseen conditions, because of the Site's desire to continually  
189 attempt to accelerate closure, or for other reasons. As an example, the Rocky  
190 Flats Field Office (RFFO) Site Change Control Board, which controls the Site  
191 baseline, has recently adopted a policy for certain plutonium buildings  
192 undergoing closure. This policy gives preference for funds saved in these  
193 buildings' baselines to be redirected within those buildings to accelerate  
194 closure activities there. Changes in program or project approach may be  
195 necessary or desirable despite DOE's best efforts to present the regulators and  
196 the public with a comprehensive plan for building disposition activities. In  
197 such circumstances, DOE intends to consult with the regulators and inform the  
198 stakeholders as soon as possible of significant changes to its building  
199 disposition program, especially those that would necessitate formal regulatory  
200 or public involvement (such as actions that would require a new decision  
201 document, or would substantially modify an existing one). In turn, CDPHE  
202 and EPA agree to work with DOE to review and provide input on changes in a  
203 timely manner. The goal of all parties in this regard shall be to raise and  
204 resolve issues without delaying building disposition activities.

205  
206 3) Designation and use of project points of contact for information exchange and  
207 resolution of issues – All parties agree to designate points of contact for

208 disposition activities occurring in individual buildings or building clusters as  
209 appropriate. DOE will additionally provide project point of contact  
210 designations for its integrating contractor. All parties anticipate that ongoing  
211 interactions among project points of contact will be the primary means of  
212 exchanging project information, for the review of regulatory documents [such  
213 as, Decommissioning Operations Plans (DOP's), Interim Measure/Interim  
214 Remedial Action (IM/IRA's) and Proposed Action Memorandums (PAM's)]  
215 while they are in development, for answering questions and resolving issues,  
216 and for seeking and receiving regulatory decisions as described elsewhere in  
217 this DPP. All parties believe that frequent, open communication among  
218 project points of contact is critical to effective implementation of the Site's  
219 building disposition program.  
220

- 221 4) Respect for the roles and responsibilities of the parties – Per RFCA Appendix  
222 2, all the DPP parties have “distinct roles and independent decision-making  
223 responsibilities” in implementing the Site building disposition program. In  
224 general, DOE's role is to oversee program and project planning, to approve  
225 baselines and changes to these baselines, to prioritize and select work to be  
226 performed, and to oversee its contractors. As part of the latter function, DOE  
227 staff may review and comment on documents prepared by its contractors prior  
228 to their dissemination to the regulators or the public while remaining  
229 cognizant of issues, resolutions, and agreements identified in prior  
230 consultative interactions. In general, it is the regulators' role to oversee the  
231 planning and implementation of building disposition work to ensue the  
232 protection of human health and the environment; to monitor compliance with  
233 RFCA and other environmental statutes, regulations and enforceable  
234 agreements; and, to approve documents and make decisions as outlined herein  
235 and in RFCA. All parties additionally recognize the oversight role of the  
236 Defense Nuclear Facilities Safety Board (DNFSB), as described in RFCA  
237 Appendix 1, “Memorandum of Understanding Governing Regulation and  
238 Oversight of Department of Energy Activities in the Rocky Flats  
239 Environmental Technology Site Industrial Area.” Recognition of these  
240 respective roles, however, is not intended to in any way restrict the open flow  
241 of information among DOE, CDPHE, EPA and the DNFSB regarding the  
242 building disposition program. Similarly, discussions of specific roles and  
243 responsibilities within this DPP are not intended to abrogate any parties'  
244 authorities or responsibilities under RFCA or any other applicable statute,  
245 regulation or agreement.  
246

- 247 5) Training – The parties to this agreement agree to develop and provide joint  
248 training for their respective staffs, DOE contractors and interested member of  
249 the public to assist in the implementation of this DPP.  
250

251 Finally, all parties recognize that informing the public, and meaningfully responding to  
252 public input and public concern, is integral to the success of the Site building disposition

253 program. All parties intend to be active in informing the public in an open and timely  
254 manner regarding planned and ongoing program activities. All parties will try to inform  
255 the public and seek their input regarding planned activities well in advance of prescribed  
256 comment periods. When disagreements among the parties are discussed in a public  
257 forum, the parties agree to discuss such disagreements in an objective, professional and  
258 informative manner, and to consider public input in resolving such disagreements.  
259  
260

#### 261 1.1.2 Definition of Decommissioning and Deactivation

262  
263 In ¶ 25(z), RFCA defines decommissioning as:

264  
265 for those buildings, portions of buildings, structures, systems or components (as  
266 used in the rest of this paragraph, "building")<sup>1</sup> in which deactivation occurs, all  
267 activities that occur after the deactivation. It includes surveillance, maintenance,  
268 decontamination and/or dismantlement for the purpose of retiring the building  
269 from service with adequate regard for the health and safety of workers and the  
270 public and protection of the environment. For those buildings in which no  
271 deactivation occurs, the term includes characterization as described in Attachment  
272 9, surveillance, maintenance, decontamination and/or dismantlement for the  
273 purpose of retiring the building from service with adequate regard for the health  
274 and safety of workers and the public and protection of the environment. The  
275 ultimate goal of decommissioning is unrestricted use, or if unrestricted use is not  
276 feasible, restricted use of the buildings.  
277

278 Deactivation (as defined in RFCA ¶ 25(y)) means the process of placing a building, portion  
279 of a building, structure, system, or component (as used in the rest of this paragraph,  
280 "building") in a safe and stable condition to minimize the long-term cost of a surveillance  
281 and maintenance program in a manner that is protective of workers, the public, and the  
282 environment. Actions during deactivation could include the removal of fuel, draining  
283 and/or de-energizing of nonessential systems, removal of stored radiological and hazardous  
284 materials and related actions. As the bridge between operations and decommissioning,  
285 based upon Decommissioning Operations Plans (DOPs) or the Decommissioning Program  
286 Plan (DPP), deactivation can accomplish operations-like activities such as final process  
287 runs, and also decontamination activities aimed at placing the building in a safe and stable  
288 condition. Deactivation does not include decontamination necessary for the dismantlement  
289 and demolition phase of decommissioning, i.e., removal of contamination remaining in  
290 fixed structures and equipment after deactivation. Deactivation does not include removal of  
291 contaminated systems, system components, or equipment except for the purpose of  
292 accountability of SNM and nuclear safety. It also does not include removal of

---

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

293 contamination except as incidental to other deactivation or for the purposes of  
294 accountability of SNM and nuclear safety.

295  
296 The following are examples of potential end points for deactivation. Not all end points  
297 will apply in all buildings which go through a deactivation process:

- 298
- 299 • a determination that the probability of a criticality event in the building is  
300 considered not credible;
- 301 • removal of all combustibles that are not integral parts of the building;
- 302 • removal of all classified materials;
- 303 • a shift in primacy from Atomic Energy Act oversight of the Defense Nuclear  
304 Facility Safety Board to CERCLA regulation through RFCA by EPA and  
305 CDPHE.
- 306

307 Activities such as waste chemical removal, disposition of excess property, chemical  
308 hazards reduction and placement of RCRA units into RCRA stable condition or their  
309 closure may occur either during deactivation or decommissioning.  
310

### 311 1.1.3 DPP

312  
313 The DPP is the RFCA document that describes the steps for accomplishing the Vision of  
314 closing Rocky Flats, in terms of decommissioning buildings for their removal or reuse. It  
315 establishes the overall framework for decommissioning a building leading up to either its  
316 release for reuse or its demolition and disposal. It elaborates on the relevant portions of  
317 the building disposition process described in RFCA Attachment 9. For each building on  
318 Site, the DPP describes a process that starts with a scoping meeting, proceeds to a  
319 reconnaissance level survey for contamination and a hazard assessment, follows the  
320 report of these activities' findings with the removal of contamination or physical hazards  
321 identified and ends, for those buildings requiring decontamination, with a final  
322 characterization survey to document that the building is ready for reuse or dismantlement  
323 and demolition. Depending on the level of contamination, decontamination may be  
324 required for the buildings, or parts of the building. In some instances, decontamination  
325 may not be practicable and the building may be dismantled and demolished as low level  
326 or low level mixed waste. Consistent with Section 3.3.4, buildings determined after the  
327 reconnaissance level characterization to be free of contamination may go directly to  
328 reuse, dismantlement or demolition using applicable federal property disposition rules.  
329 The Site will also follow, as necessary, any other applicable legal requirement associated  
330 with the disposal of excess federal property, including the remediation of hazards  
331 associated with materials containing polychlorinated biphenyls (PCBs) and asbestos.  
332 Pursuant to RFCA ¶ 119(k), the DPP is a site-wide decision document subject to the  
333 review and approval of both EPA and CDPHE.  
334  
335

336 **1.1.4 Requirements for DOPs and Other Decision Documents**

337  
338 Pursuant to RFCA Attachment 9, "Building Disposition," a DOP will be developed for  
339 any building found, as a result of reconnaissance level characterization, to have  
340 significant radioactive contamination or hazards. The DOP will present an activity-based  
341 program to decontaminate the locations identified in that building's reconnaissance  
342 characterization study as contaminated or presented a physical hazard. The DOP will  
343 include risk, economic and engineering assessments. Pursuant to RFCA ¶ 118(l), DOPs  
344 for major nuclear facilities are decision documents subject to the review and approval of  
345 the LRA. Since all of the Site's major nuclear facilities are located in the Industrial Area,  
346 the practical outcome of this direction is that CDPHE, the LRA in the Industrial Area,  
347 will be the agency reviewing and approving DOPs. Also, since it appears likely that the  
348 decommissioning of each building needing a DOP will take at least six months to  
349 complete, the Site intends to develop and seek approvals for the DOPs through the RFCA  
350 IM/IRA process.

351  
352 If DOE proposes to take actions that appear to require consultation with the LRA or  
353 require a RFCA decision document, the Site project point of contact will seek  
354 concurrence from the LRA before performing the actions. In seeking this concurrence,  
355 DOE will provide the LRA with data and a description of work which demonstrate that  
356 the work can be performed without a threat of release of a hazardous substance. DOE  
357 will discuss the relationship of the proposed activity to the overall CPB and the  
358 disposition plans for the buildings as they are known at the time. This demonstration  
359 may be made informally to the LRA project point of contact, with concurrence  
360 documented for the building administrative record. The Site and LRA point of contact  
361 will use the "RFCA Decision Document Requirement Method" (see next paragraph) to  
362 determine if the actions require preparation of a RFCA decision document. The parties to  
363 this DPP anticipate that this and other questions regarding the necessity of decision  
364 documents for performing building disposition work will be resolved through ongoing  
365 consultation among the respective project points of contact. (This section of the DPP  
366 governs fixed equipment such as gloveboxes that are connected to building systems such  
367 as ventilation or plumbing, but which DOE believes are not contaminated. Section 1.1.5,  
368 below, governs fixed equipment, such as machinery, that is not connected to building  
369 systems such as ventilation or plumbing, and to equipment such as gloveboxes or tanks  
370 that have never been connected to building systems such as gloveboxes or plumbing.)

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371  
372 The following method provides the screen the Site and LRA project points of contact will  
373 use in determining if a RFCA decision document is needed for a specific activity or  
374 related group of activities.

375  
376 RFCA Decision Document Decision Method

377  
378 I Purpose:

- 379 A. Provide a decision method (screen) to facilitate determining if an activity  
 380 or related set of activities would be classified as requiring a RFCA  
 381 decision document, that is, a DOP, PAM, IM/IRA or RFCA Standard  
 382 Operating Protocol (RSOP).
- 383 II The method facilitates:
- 384 1. implementing the consultative process;
  - 385 2. project planning at an early stage (scope, schedule, budget);
  - 386 3. determining if waste is “process” or remediation waste;
  - 387 4. determining National Environmental Policy Act (NEPA) document  
 388 requirements;
  - 389 5. stakeholder involvement and schedule;
  - 390 6. determining if consultation with the LRA or preparation of a  
 391 RFCA decision document is needed.
- 392 III The method is for use by:
- 393 A. the project points of contact;
  - 394 B. oversight organizations internal and external to the Site.
- 395 IV Method:
- 396 A. The Site project point of contact will determine the initial scope and  
 397 schedule for the activity and related activities.
  - 398 B. The Site project point of contact will do an initial screen to determine if  
 399 activity is decommissioning using the following screen.
- 400
- 401 A RFCA decision document (such as a PAM, IM/IRA or DOP) is  
 402 required, will be prepared, and regulatory approval received before an  
 403 activity is undertaken that meets all of the following criteria:
- 404
  - 405 1. is not considered “maintenance”<sup>2</sup> or process waste management<sup>3</sup>; and
  - 406 2. does not support SNM removal for the purpose of deactivation or other  
 407 pre-decommissioning actions; and
  - 408 3. involves work that is likely to impact systems or equipment  
 409 contaminated with radiological or other hazardous substances; and
  - 410 4. relates to the building proper (that is, removal of fixed equipment and  
 411 structural components) but exclude follow-on environmental  
 412 remediation activities.
- 413
- 414 Activities that meet the above criteria, and that are otherwise regulated (for  
 415 example, RCRA closure, asbestos and polychlorinated biphenyl removal,  
 416 underground storage tank closures, etc.) may be regulated either under a  
 417 RFCA decision document or under the other regulatory process.

---

<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.

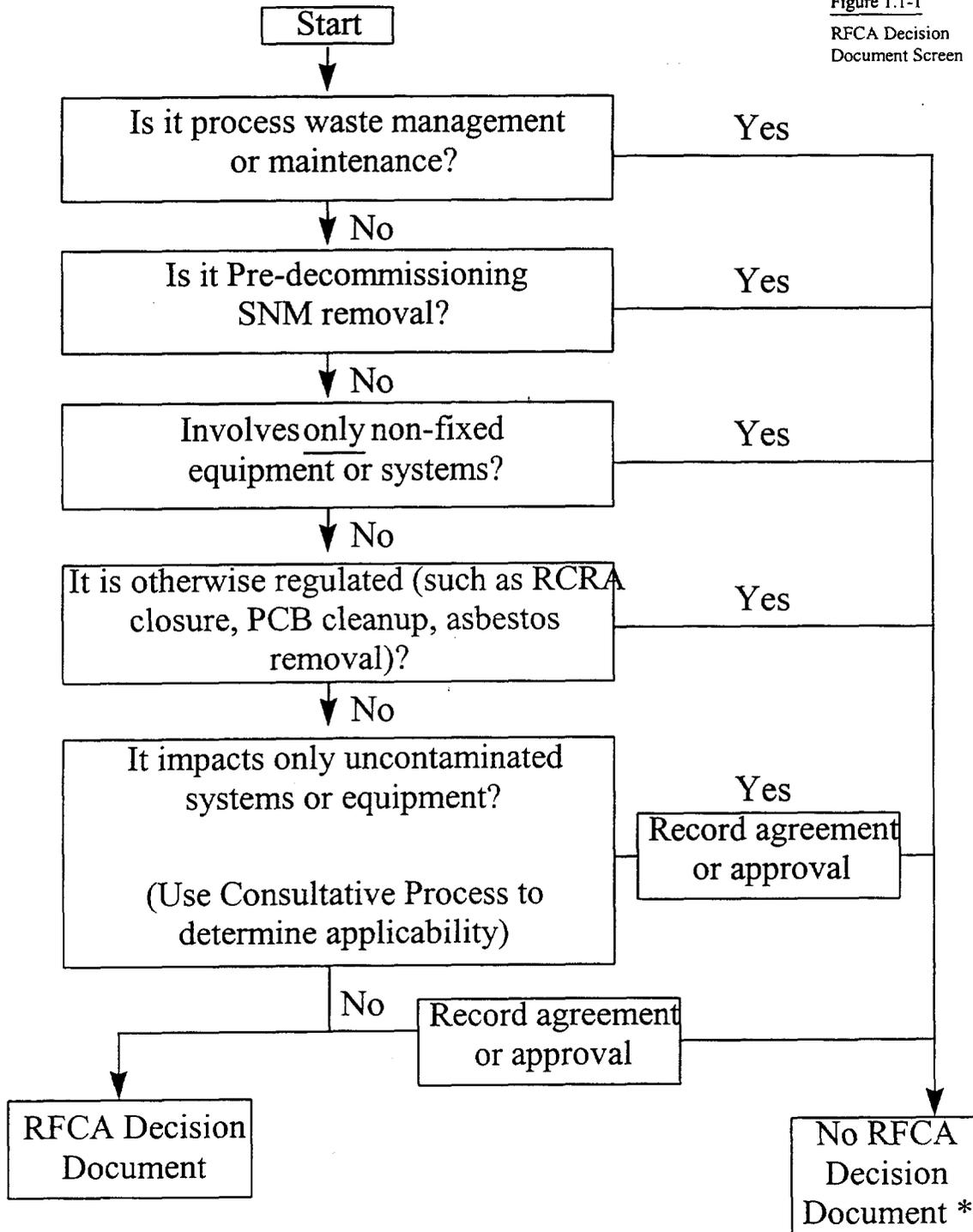
418 Figure 1.1-1 provides a flowchart of the above criteria. DOE expects open  
419 communication and consultation between the project points of contact.  
420

421 Some activities that do not meet all of these criteria may be included for  
422 information in some decision documents.  
423

- 424 C. If the initial screen shows the activity may require a RFCA decision or is in  
425 the “gray area” between what may or may not need a RFCA decision  
426 document, the Site project point of contact will arrange a consultative briefing  
427 of the regulators. The briefing will include a discussion of the scope and  
428 schedule for the project. The briefing should follow the format established in  
429 the DPP for DOP content to ensure the discussion is focused and the  
430 information typically needed by the LRA is presented in a reasonably  
431 consistent format. The graded approach should be used in determining the  
432 level of detail for the briefing.
- 433 D. The LRA will review the results of the Site’s screen to determine if it  
434 agrees with the Site determination.
- 435 E. If the collaborative agreement is that the activity does not require a RFCA  
436 decision document, the Site project point of contact will:  
437
  - 438 • document the agreement in the manner agreed to during the
  - 439 • document the decision in the Administrative Record; and
  - 440 • monitor the project scope to ensure it remains within that agreed
  - 441 to; and
  - 442 • notify the LRA before the project goes out of scope if possible, in
  - 443 sufficient time to initiate consultation with the LRA on the issue.
  - 444 A changed or invalid assumption that changes the scope would be
  - 445 part of the consultation discussions.
- 446 F. If the collaborative agreement is that the activity does require a RFCA  
447 decision document, the following actions will occur.
- 448 1. The consultative process will follow the requirements in RFCA  
449 and the DPP to determine what type of decision document is  
450 needed. The LRA will identify as specifically as possible what, if  
451 any, additional information is needed for approval of the activity.  
452 This will include information needed by the Support Regulatory  
453 Agency.
  - 454 2. A schedule will be agreed to for:
    - 455 a) the Site to provide the additional information;
    - 456 b) the LRA to complete its review of the information;
    - 457 c) the public comment period and review times;
    - 458 d) any other schedule issues involving both the Site and the
    - 459 LRA; and,
    - 460 e) the Site to provide any additional information.

461 The Site will then draft the decision document and involve the regulators as the document  
 462 is drafted.  
 463  
 464

Figure 1.1-1  
 RFCA Decision  
 Document Screen



\* Consultation will occur, as appropriate, under applicable statute(s), such as, RCRA, CHWA, TSCA, etc.

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467 **1.1.5 Removal of Certain Fixed Equipment or Systems under the DPP**

468  
469 This section describes the removal of certain fixed equipment and systems from Type 1,  
470 2, and 3 buildings undergoing the disposition process. Fixed equipment or systems  
471 removal conforming with this section reflects agreement that no other RFCA decision  
472 document or RFCA decision as described in Section 1.1.4. and Figure 1.1-1 is needed for  
473 this work. However, DOE and the LRA, will continue the consultative process regarding  
474 the removal of fixed equipment from buildings. The purpose of removing fixed  
475 equipment and systems as described in this section is to facilitate performance of the  
476 reconnaissance level characterization survey, to promote the timely disposition of excess  
477 useable equipment or the disposition of waste and to use available building manpower in  
478 an efficient manner.

479  
480 For the purposes of this section, fixed equipment and systems means those items that are  
481 attached to the floor or walls or ceiling of a building, but which are not connected to  
482 building systems, such as plumbing or ventilation, that could reasonably be expected to  
483 provide a pathway for contaminants to reach the environment. Fixed equipment may be  
484 connected to utilities that do not provide such a pathway, such as electrical or telephone  
485 systems. As examples, fixed equipment includes machinery that is bolted or otherwise  
486 attached to floors or walls, cabinets, lockers, benches and electrical panels. Fixed  
487 equipment under this section also includes items such as hoods, gloveboxes and tanks  
488 that may have been attached to the building but never connected to building ventilation or  
489 plumbing systems. On a case-by-case basis, fixed equipment that is connected to  
490 building systems may be removed pursuant to this section of the DPP, with the agreement  
491 of the parties. Otherwise, the need for a RFCA decision or decision document for  
492 systems that have been connected, but which are uncontaminated, and for attached  
493 equipment inside of gloveboxes will be determined per Section 1.1.4.

494  
495 Pursuant to this section, DOE may remove fixed equipment and systems as defined  
496 herein, regardless whether or not such equipment is contaminated with radiological or  
497 hazardous substances.

498  
499 DOE shall follow a removal process for fixed equipment and systems that ensures that  
500 such material is appropriately described, characterized and dispositioned. The fixed  
501 equipment and systems removal process will consist of the following documented steps:

- 502
- 503 1) A preliminary radiological/hazardous substance evaluation, taking into  
504 account such factors as the operating history of the equipment and the area or  
505 building in which the equipment is located, will determine the need to perform  
506 additional characterization of the equipment.
  - 507 2) If indicated by the preliminary radiological/hazardous substance evaluation, a  
508 radiological survey and /or hazardous substance characterization will be  
509 performed to determine if the equipment fits the criterion for free release.
- 510

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1

- 511 3) If the equipment is to be dispositioned as waste, the characterization is  
512 properly performed to ensure conformance with the waste acceptance criteria  
513 for storage and/or disposal.  
514 4) Removal of fixed equipment will be in accordance with Site radiological,  
515 hazardous substance and hazardous waste control procedures to control  
516 contamination.

517 (The decision to re-use fixed equipment and systems, as defined in this section, either on-  
518 site or elsewhere, is solely DOE's. Removal of fixed equipment for re-use on-site or  
519 elsewhere in the DOE complex is mission-related work not subject to regulation under  
520 this DPP.)  
521

522 By implementing the process outlined above, DOE will ensure that fixed equipment will  
523 be characterized and dispositioned appropriately. Equipment containing greater than the  
524 free release limits of radionuclides or other hazardous substances will not be shipped to a  
525 sanitary landfill, nor released for unrestricted public use.  
526

527 DOE will ensure that site procedures are developed and maintained to govern the  
528 characterization and removal of fixed equipment. In general, the following documents  
529 establish the procedures or conditions under which the removal of fixed equipment takes  
530 place.

- 531 - Health and Safety Procedure 18.10 governs the characterization and release of  
532 property and waste.  
533 - The Site Integrated Work Control Program Manual governs work planning  
534 and hazards analysis and work package development process.  
535 - The Site Radiological Safety Practices Manual establishes methods for the  
536 control of radioactive contamination.  
537 - The Site transportation manuals establish the procedures for packaging and  
538 shipment of equipment and waste.  
539 - Individual authorization basis documents (such as Safety Analysis Reports)  
540 establish the safety envelopes for individual buildings.

541 DOE will make these and other Site procedures available to the LRA. These documents  
542 are not, however, subject to LRA approval.  
543

544 Per Section 1.1.1 of this DPP, DOE, CDPHE and EPA encourage and expect an open  
545 dialogue among regulator, DOE and contractor project points of contact regarding the  
546 removal of fixed equipment, and will use the RFCA consultative process to share project  
547 information on an ongoing basis. DOE will make available to the LRA on request any  
548 and all documentation relating to the characterization and removal of fixed equipment  
549 and systems, subject to classification requirements. Key meetings and evolutions will be  
550 open to LRA representatives. If management reviews are performed prior to the removal  
551 of fixed equipment, the LRA will be given the opportunity to attend these reviews.  
552  
553

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554 **1.1.6 RSOPs**

555  
556 RFCA Standard Operating Protocols are defined in RFCA as “approved protocols  
557 applicable to a set of routine environmental remediation and/or decommissioning  
558 activities regulated under this Agreement that DOE may repeat without re-obtaining  
559 approval after the initial approval because of the substantially similar nature of the work  
560 to be done.” Currently, DOE intends to incorporate the information necessary for the  
561 approval of decommissioning work into project-specific decision documents such as  
562 DOPs, PAMs or IM/IRAs. As the decommissioning program matures, the Site and the  
563 regulatory agencies may decide to adopt the use of RSOPs which would be developed  
564 through the RFCA process, including public review and comment.  
565  
566

567 **2 BUILDING DISPOSITION**

568

569 **2.1 Goal of Building Disposition**

570

571 Building disposition is the sequence of activities required to take a facility from its  
572 existing condition to final disposition. The goal of disposition is for the Site to  
573 accomplish all of the activities necessary either to demolish the building and dispose of  
574 the resulting waste or to release the building for reuse.

575

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

579

- 580 a) containerized waste and materials removed;
- 581 b) liquid waste and processing systems drained;
- 582 c) RCRA units closed or have a closure plan integrated with building disposition  
583 plan
- 584 d) all transuranic (TRU) waste, defined as materials in excess of 100 nanocuries  
585 per gram, removed;
- 586 e) equipment, piping, ducts, glove boxes, and major electrical components  
587 removed (e.g., strip out)
- 588 f) radioactive hot spots and hazardous substances removed; and
- 589 g) easily removed contamination removed.

590

591

592 **2.2 Building Classification**

593

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

597

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

599

600 “Free of contamination” means that the following conditions have been met:

601

- 602 • Hazardous wastes, if any, generated and/or stored in the facility have been  
603 previously removed in accordance with CHWA and RCRA requirements and  
604 any RCRA units have been closed or, if partially closed, the parts of the unit  
605 within the facility have been certified as being clean closed; (It will be  
606 insufficient to have RCRA units simply in a RCRA stable configuration.);  
607 AND
- 608 • Routine surveys for radiological contamination performed pursuant to the  
609 RFETS radiological protection program show the building is not  
610 contaminated; AND
- 611 • Surveys, if required, for hazardous substance contamination show the building  
612 is not contaminated, AND
- 613 • If any hazardous substances including polychlorinated biphenyls (PCBs) or  
614 asbestos are present, they are an integral part of the building’s structural,  
615 lighting, heating, electrical, insulation or decorative materials. As such, they  
616 are not “contamination.”

617

618 Since the presence or absence of physical or safety hazards, while important to the Site in  
619 terms of how to proceed with a building’s disposition, is not a determinant of whether it  
620 will be regulated pursuant to RFCA, DOE will not consider such hazards in categorizing  
621 a building as Type 1.

622

623 *Type 2 Buildings without significant contamination or hazards, but in need of*  
624 *decontamination.*

625

626 Type 2 buildings contain some radiological contamination or hazardous substance  
627 contamination. The extent of the contamination is such that routine methods of  
628 decontamination should suffice and only a moderate potential exists for environmental  
629 releases during decommissioning. Some buildings in this category, e.g., 865, 886 and  
630 991, are now undergoing, or will undergo deactivation in certain areas prior to  
631 decommissioning. The mere fact that deactivation will occur does not push a building

---

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

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

634

635

636 *Type 3 Buildings with significant contamination and/or hazards:*

637

638 Type 3 buildings contain extensive radiological contamination, usually as a result of  
639 plutonium processing operations or accidents. Contamination may exist in gloveboxes,  
640 ventilation systems, or the building structure. Site personnel expect those buildings that  
641 were used for plutonium component production, along with the major support buildings  
642 for such production, will have significant contamination, and are therefore expected to be  
643 classified as Type 3. These buildings include:

644

645                                 · 371/374                                 · 559                                 · 771/774

646                                 · 707   · 776/777                                 · 779

647

648

649 **2.3 Project Approach**

650

651 A “project” approach is the most effective way to disposition a building. To handle a  
652 single building or cluster of buildings as a project means to encompass deactivation and  
653 decontamination, if necessary, and preparation for reuse or dismantlement/demolition and  
654 environmental restoration for under-building contamination in a unified work package  
655 and planning effort. While the Site will apply the project approach to disposition all  
656 buildings, for regulatory purposes the DPP governs the disposition of all buildings in  
657 accordance with RFCA until preparation for non-DOE reuse or dismantlement/demolition  
658 is complete.

659

660 Facility characterization activities need to be consistent throughout the facility disposition  
661 process. To meet this goal, the site will follow *The RFETS Decontamination &*  
662 *Decommissioning Characterization Protocol* developed for that purpose, unless it is  
663 modified through individual decision documents. *The RFETS Decontamination &*  
664 *Decommissioning Characterization Protocol* will adapt the *Multi-Agency Radiation*  
665 *Survey and Site Investigation Manual (MARSSIM)* for use in radiation surveys during  
666 decommissioning. DOE will consult with CDPHE and EPA to reach concurrence on *The*  
667 *RFETS Decontamination & Decommissioning Characterization Protocol*.—If concurrence  
668 is not reached within a reasonable timeframe and it appears unlikely that the consultative  
669 process will result in concurrence, the parties agree to use the dispute resolution process  
670 in RFCA Part 15, subpart E, Disputes Regarding Site-Wide Issues.

671

672

### 673 2.3.1 Pre-Decommissioning Activities

674

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

676 Prior to decommissioning, certain building operations will continue, for example:

677

- 678 • to disposition excess chemicals or equipment,
- 679 • to perform surveillance and maintenance, and
- 680 • to provide risk reduction from Site hazards to the worker, the public and the
- 681 environment.

682

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

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

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

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

687 until the buildings they support are through the disposition process.

688

689

### 690 2.3.2 Building Decommissioning

691

692 RFCA's definition of decommissioning is quoted above in § 1.1.2. Decommissioning

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

694 end points are discussed in section 1.1.2 is complete. In non-nuclear buildings,

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

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

697 identify how the Site will manage each suite of activities.

698

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

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

701 and is therefore covered by this DPP.

702

- 703 • characterization of contamination
- 704 • hazards identification
- 705 • decontamination in preparation for release for reuse or dismantlement
- 706 • strip out and removal of glove boxes, ducts and tank/process equipment
- 707 • size reduction of glove boxes, ducts and tank/process equipment
- 708 • waste minimization activities associated with decommissioning
- 709 • dismantlement
- 710 • demolition

711

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

713 deactivation. However as stated above in § 1.1.2, certain activities may occur either

714 during deactivation or decommissioning. These include: waste chemical removal,

715 disposition of excess property, reduction of chemical hazards and the placement of  
716 RCRA units into RCRA stable condition or their closure.

717  
718 The Site has more than 200 buildings that supported nuclear weapons production, but  
719 were never defined as defense nuclear facilities. Their total floor area is estimated to be  
720 nearly two million square feet. Many contaminated buildings where SNM activities  
721 never took place are ready for the decommissioning phase now with surveillance and  
722 maintenance as the current activity. These buildings will be decommissioned pursuant to  
723 this DPP and available PAMs or IM/IRAs, and possibly RSOPs, if used in the future.

724  
725

### 726 2.3.3 Waste Management

727  
728 RFCA provides that process wastes and wastes generated during deactivation are  
729 CHWA/RCRA-regulated, whereas wastes generated during decommissioning are  
730 CERCLA-regulated. RFCA §§ 70-71. However, as described in §§ 2.3.2 and 2.3.3  
731 above, there will be times when the Site will be engaged simultaneously in deactivation  
732 and decommissioning in some buildings. At such times, it may prove safer, more cost  
733 effective and more expeditious from an operational stance, to manage the wastes  
734 generated from both activity in the same manner. For example, if Site personnel engaged  
735 in deactivation and decommissioning in different rooms of the same building are both  
736 generating mixed transuranic wastes, the project point of contact may choose to store all  
737 such waste in a single area and commingle such wastes in common containers. If this  
738 practice occurs, the wastes will be managed under CHWA/RCRA, although the RFCA  
739 decision document would discuss the proposed waste management strategy.

740  
741

### 742 2.3.4 Environmental Restoration

743  
744 Environmental Restoration constitutes those activities necessary to characterize, assess  
745 and remediate contamination in soils, sediments, surface and ground water from past  
746 nuclear weapons production activities. One goal of environmental restoration is to follow  
747 the CERCLA process so that a DOE property like the Site is ultimately removed from the  
748 National Priorities List. Typically, the Site removes contamination to satisfy a risk-based  
749 standard or environmental requirement for the medium affected. Environmental  
750 restoration at the Site will include remediation of all under building contamination after  
751 the removal of building foundations or slabs. Such remediation will conform to the  
752 standards established in RFCA Attachment 5 and the final applicable or relevant and  
753 appropriate requirements (ARARs) selected for the Site. This DPP does not regulate  
754 environmental restoration; however this discussion has been included to make clear that,  
755 while the decommissioning that the DPP does regulate is part of a broader process, other  
756 phases in that process are regulated elsewhere.

757  
758

## 759 3 BUILDING DECOMMISSIONING

760

### 761 3.1 Maintaining the Administrative Record

762

763 As a CERCLA decision document, upon approval, the DPP will be placed into the Site-  
764 wide Administrative Record. Subsequent decommissioning actions requiring regulatory  
765 approval, e.g., RSOPs, PAMs, IM/IRAs and DOPs, will have separate Administrative  
766 Records. The DOE will also place documents used in the regulatory decision-making  
767 process, such as, the Reconnaissance Level Characterization, in the Administrative  
768 Record. For RSOPs, the Administrative Record will remain open until the record is  
769 closed for the Industrial Area Operable Unit so that all notifications made pursuant to the  
770 RSOP will become part of a single Administrative Record file. Since the Administrative  
771 Record will otherwise be closed at the time of a decision document's, i.e., a PAM',  
772 IM/IRA' or DOP's, approval, operational documents generated after the administrative  
773 record has been closed, e.g., a Demolition Closure Report, will be incorporated into a  
774 Post-Decisional File for the action that will be part of the Industrial Area Administrative  
775 Record File. The DOE will follow the Site Level 1 Procedure regarding administrative  
776 records.

777

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

786

787

### 788 3.2 Closure Project Baseline

789

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

797

798

799 **3.3 Decommissioning Activities**

800

801 Once DOE has decided to proceed with decommissioning a particular building or group  
802 of buildings, has completed any precursor activities (such as deactivation), and has  
803 scheduled the work on the CPB, the decommissioning process begins. Figure 3.3-1 is a  
804 flowchart showing the regulatory path for each Site building.

805

806

807 3.3.1 Scoping

808

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

815

816

817 3.3.2 Facility Walk Down

818

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



825 3.3.2.1 *Perform Hazard Assessment*

826

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

832

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

838

- 839 • define the scope of work
- 840 • identify and analyze hazards associated with the work
- 841 • develop and implement hazard controls
- 842 • perform the work within such controls, and
- 843 • provide feedback on the adequacy of the controls.

844

845

846 3.3.2.2 *Reconnaissance Level Characterization*

847

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

855

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

866

867

868 3.3.4 Prepare Reconnaissance Level Characterization Report

869

870 Based on the Reconnaissance Level Characterization, the Site will prepare a report for  
871 transmission to the LRA that summarizes the results of the Reconnaissance Level  
872 Characterization and provides an analysis of the risks presented in the building. The Site  
873 will use the methods and characterization protocols in *The RFETS Decontamination &*  
874 *Decommissioning Characterization Protocol*, routine surveys for radiological  
875 contamination performed pursuant to the RFETS radiological protection program,  
876 process knowledge, the facility walkdown, and historical information to develop the  
877 RLCR. The RLCR will be compared against proposed decommissioning activities to  
878 determine if those activities are feasible and to identify the need for quantitative in  
879 process sampling and analysis, through application of *The RFETS Decontamination &*  
880 *Decommissioning Characterization Protocol*. DOE will use the information from the  
881 RLCR to confirm its typing of the building, and will transmit the RLCR and a  
882 notification letter to the LRA for concurrence. The notification letter will include DOE's  
883 determination as to the building type. The LRA will have fourteen days to concur with  
884 DOE's determination or to non-concur and state in writing its reasons for non-  
885 concurrence. For Type 1 buildings, if the LRA does not transmit its written non-  
886 concurrence (along with the reasons for non-concurrence) within fourteen days, DOE  
887 may begin decommissioning of the building(s) in question. If the LRA does not concur  
888 with DOE's determination, DOE and the LRA will meet to attempt to resolve the reasons  
889 for the LRA's non-concurrence, using the consultative process. If these differences  
890 cannot be resolved, the RFCA dispute mechanism may be invoked by any party. DOE  
891 will provide the RLCR and notification letter for a building sufficiently in advance of  
892 decommissioning to allow for the fourteen day concurrence cycle by the LRA, and to  
893 allow for consultative resolution of disagreements should they arise.

894

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

903

904

---

<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.

905 3.3.5 Type 1 Buildings Decommissioning

906

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

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

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

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

923

924 No further regulatory involvement for Type 1 buildings will be required for buildings  
925 containing asbestos provided the Site follows the requirements of the Site asbestos  
926 management program.

927

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

931

932

933 3.3.6 Type 2 Buildings Decommissioning

934

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

943

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

947  
948 DOE anticipates conducting one or more readiness evaluations prior to and during the  
949 course of decommissioning projects. The LRA will be notified of the schedule for the  
950 readiness evaluation including but not limited to management reviews and environmental  
951 readiness evaluations and of the time and location of the initial meeting of the evaluation  
952 team designated for each decommissioning project. The LRA may designate a  
953 participant for regulatory oversight and to accompany the team and attend its meetings. It  
954 is anticipated that the participant will be the LRA project lead. A copy of the readiness  
955 evaluation team's final report will be made available to the LRA upon request of its  
956 designated participant. *(Note: this language also appears in Sec. 3.3.7.3)*  
957  
958

959 *3.3.6.1 Release, Review and Approval of RSOPs*

960  
961 Prior to being able to perform work pursuant to an RSOP, the Site must have obtained  
962 approval for such RSOP pursuant to RFCA. This requires the Site to scope the RSOP  
963 through the consultative process, draft an RSOP for public comment and the review and  
964 approval of EPA and CDPHE, prepare a formal response to public comment and obtain  
965 EPA's and CDPHE's approval through the IM/IRA process described in RFCA ¶107.  
966

967

968 *3.3.6.2 Notification of Intent to Proceed under RSOP*

969  
970 If the planned decommissioning activities fall within the scope of one or more approved  
971 RSOPs, then the Site will notify EPA, CDPHE and the public in writing of its intent to  
972 proceed with such activities. This notification letter will become part of the  
973 Administrative Record for the RSOP(s).  
974

975

976 *3.3.6.3 Decommissioning Type 2 buildings prior to RSOP approval*  
977 *or where activities contemplated are not covered by an RSOP*

978  
979 Until such time as the Site has an approved RSOP(s) for decommissioning activities, the  
980 Site may only perform decommissioning in a Type 2 building pursuant to an approved,  
981 building-specific (or building cluster-specific) PAM or IM/IRA. The process for  
982 approval of PAMs and IM/IRAs along with the required contents for each are set forth in  
983 RFCA ¶¶s 106 and 107. Even at such time as the Site has obtained regulatory approval  
984 for an RSOP, some Type 2 buildings may require decommissioning activities that fall  
985 outside its scope, thereby requiring building-specific regulatory approval for those non-  
986 covered activities.  
987

988

989 3.3.7 Type 3 Buildings Decommissioning

990

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

994

995

996 3.3.7.1 Preparation of DOPs, and RFCA Decommissioning IM/IRAs

997

998 The DOP will be prepared and approved in accordance with the RFCA IM/IRA approval  
999 process. The DOP will contain sufficient information so the regulators can be satisfied  
1000 that the project can proceed compliantly, with a high probability of success. Support  
1001 buildings associated with a major project may be included in its DOP if they would be  
1002 managed in the same project. A graded approach will be followed to determine the level  
1003 of detail in the table of contents for PAMs. Using a graded approach, a DOP or IM/IRA  
1004 at a minimum will contain the following information.

1005

1006

DOP AND IM/IRA PLAN TABLE OF CONTENTS

1007

1008

EXECUTIVE SUMMARY

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1010

INTRODUCTION

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1012

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

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BUILDING/CLUSTER DESCRIPTION

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1021

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

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1030 ALTERNATIVES ANALYSIS & SELECTION

- 1031
- 1032 • Include an alternatives analysis and an impact analysis.
- 1033

1034 PROJECT APPROACH

1035

- 1036 • Description of project including: a description of project activities and work  
1037 and emission controls; performance standards; any included RCRA closure  
1038 activities; any separate environmental management or compliance approvals  
1039 needed; and a description of the on-going plan for facility characterization.
- 1040 • Include: Identification of hazards from the RLCR and how they will be  
1041 addressed (The use of tables is recommended for summarizing data).
- 1042 • Identification of activities to address hazards, including  
1043 Work/Environmental/Spill(emphasize)/ Effluent controls.
- 1044 • Identify Decontamination approach.
- 1045 • Identify need for a Final Radiation Survey Plan and a Decontamination Plan.
- 1046 • Identify monitoring requirements.
- 1047 • Identify cleanup levels.
- 1048 • Discuss Authorization Basis (reference documents that identify surveillance  
1049 and equipment maintenance requirements) and Work Authorization
- 1050

1051 NOTE: Prior to proceeding with decommissioning, a management  
1052 review of the project's infrastructure, procedures and personnel  
1053 will be completed by DOE, the LRA and the IMC; such review, to  
1054 verify that the conditions exist to support the activities safely, may  
1055 result in changes to the project as described in this document.

1056

1057 HEALTH AND SAFETY

1058

- 1059 • Include a description of the health and safety issues (worker and  
1060 environmental)
- 1061 • Include ISM discussion and how safety is built into approach.
- 1062 • Address emergency response
- 1063 • Summary of hazards from Project Approach above
- 1064

1065 WASTE MANAGEMENT

1066

- 1067 • Include a summary of the waste management issues, including those related to  
1068 disposal.
- 1069 • Identify waste quantities to be generated (TRU, low level waste, and sanitary),  
1070 where it will be staged, and ultimate disposition plans. Discuss unknowns and  
1071 need for flexibility and possible change due to uncertainties with final  
1072 destinations. (Waste Process Flow Chart recommended).
- 1073 • Duration of storage or staging.

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#### COMPLIANCE W/ ARARS

- 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.

#### ENVIRONMENTAL CONSEQUENCES OF THE ACTION

- 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>

#### QUALITY ASSURANCE/QUALITY CONTROL

- 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.

#### IMPLEMENTATION SCHEDULE

- 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.

NOTE: This information will be supplied to add clarity to the decision document and to identify the general planned schedule if

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<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 was submitted to the National Park Service for approval. Acceptance of the entire documentation package by the National Park Service occurred in the summer of 1998.

1112 full funding is available. The schedule is not an enforceable part of  
1113 the document, and DOE or its contractors may deviate from it  
1114 without penalty and without having to notify or obtain the approval  
1115 of the LRA in advance.  
1116

#### 1117 PROJECT ORGANIZATION

- 1118
- 1119 • Includes organization chart of project team, and a description of how project  
1120 fits into larger facility disposition effort.  
1121

1122 NOTE: This information will be supplied to add clarity to the  
1123 decision document and to identify reporting relationships and  
1124 responsibilities. The organizational structure is not an enforceable  
1125 part of the document and DOE or its contractors may deviate from  
1126 the organization without penalty and without having to notify or  
1127 obtain the approval of the LRA in advance.  
1128

#### 1129 COMMENTS AND COMMENT RESPONSIVENESS SUMMARY

#### 1130 REFERENCES

- 1131
- 1132
- 1133 • Include references to other documents used as information sources in the  
1134 DOP, such as, RFCA, DPP, any RSOPs that would be used, RLCR, project  
1135 specific health and safety plan.  
1136  
1137

#### 1138 3.3.7.2 *Submit Draft DOP for public comment and regulatory review and approval*

1139  
1140 The Site drafts the DOP and DOE submits it to CDPHE (as the LRA) and releases it for  
1141 public comment pursuant to the RFCA IM/IRA approval process. DOE and CDPHE will  
1142 agree in advance to the length of the public comment period.  
1143  
1144

#### 1145 3.3.8 Notify of Readiness Evaluation Schedule

1146  
1147 The LRA will be notified of the schedule for the readiness evaluation for Type 2 and 3  
1148 buildings including but not limited to management reviews and environmental readiness  
1149 evaluations and of the time and location of the initial meeting of the evaluation team  
1150 designated for each decommissioning project. The LRA may designate a participant for  
1151 regulatory oversight and to accompany the team and attend its meetings. It is anticipated  
1152 that the participant will be the LRA project lead. A copy of the readiness evaluation

1153 team's final report will be made available to the LRA upon request of its designated  
1154 participant.  
1155  
1156

### 1157 3.3.9 Perform Physical Work of Disposition Operations

1158  
1159 These activities include, for example, dismantling and removing equipment;  
1160 decontamination of walls, floors, and ceilings; utility system shutdown; and removing  
1161 internal building components. After demonstration that the building meets the  
1162 established criteria, it will be demolished or reused. The requirements and procedures  
1163 referenced in RFCA decision documents will be followed by workers performing  
1164 decommissioning. This includes lower tier as well as first tier contractor workers.  
1165  
1166

### 1167 3.3.10 Perform and Validate Final Characterization

1168  
1169 At the end of the decommissioning, Site personnel will confirm that their activities have  
1170 achieved the release standard for buildings destined for reuse or the completion of  
1171 building disposition for buildings that are demolished such that only environmental  
1172 restoration activities remain. After strip out, further characterization of radioactive areas  
1173 will be undertaken, where necessary.  
1174

1175 After the building is demolished, the final characterization will occur. The demolition  
1176 survey will be conducted in accordance with the Site's characterization protocols, and  
1177 will provide sufficient data to demonstrate that the Site has successfully completed  
1178 decommissioning in conformance with the governing RFCA decision document. The  
1179 post-demolition survey may result in a loop of activity for Site decommissioning  
1180 personnel, because if the survey reveals insufficient decommissioning to meet the  
1181 requirements of the governing decision document, the Site will have to take additional  
1182 action. Only at such time as the Site project point of contact is satisfied that the post-  
1183 demolition survey shows that decommissioning is complete, will the survey be deemed  
1184 final.  
1185  
1186

### 1187 3.3.11 Notify Regulators of Completion of Decommissioning

1188  
1189 Upon completion of the relevant final characterization, DOE will notify CDPHE, EPA  
1190 and the public in writing of the completion of decommissioning for a building or group of  
1191 buildings. DOE will accomplish notification to the public with a letter to the Rocky Flats  
1192 Citizen Advisory Board. A close out report will be prepared for Type 2 and 3 building  
1193 decommissioning projects.

1194  
1195

1196 3.3.12 Regulatory Oversight and Enforcement

1197

1198 Consistent with RFCA ¶ 272 and 273, throughout the decommissioning process,  
1199 regulatory personnel will have the ability to inspect Site activities and records for  
1200 consistency with the requirements of both the governing decision-documents and RFCA  
1201 generally. Also, consistent with RFCA ¶ 176, CDPHE, or in the case of a site-wide  
1202 issue, EPA, may issue a stop work order for RFCA-regulated decommissioning activities  
1203 at any time for the reasons provided therein.

1204

1205

1206 3.3.13 Document Review Schedule

1207

1208 The following documents will be submitted for review by the LRA. The suggested  
1209 review times are included as guidelines. The actual review times should be negotiated  
1210 during or soon after the scoping meeting. The review times are the calendar days from  
1211 receipt of the document. As stated in RFCA and elsewhere in this DPP, some of the  
1212 following documents are submitted for LRA approval, some for concurrence, and others  
1213 are for review and, at the LRA's discretion, for comment.

1214

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

1215

1216 4 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) VALUES

1217

1218 Because the DPP does not, itself, authorize any specific actions at the Site, the discussion  
1219 of NEPA values which follows will, of necessity, be general.

1220

1221

1222 4.1 Relative Impacts on Human Health, Worker Safety, and the Environment

1223

1224 Specific cleanup and closure activities at the Site will either be covered by project  
1225 specific NEPA documents<sup>7</sup> or RFCA documents, unless the activity is only in the  
1226 planning stage in which case it would be premature for a formal NEPA evaluation. Many  
1227 of the key cleanup and closure decisions facing the Site at this time are in fact subject to  
1228 DOE complex-wide decisions, such as the movement of waste and SNM from the Site.  
1229 Consequently, these decisions will be made in the context of broader programmatic  
1230 environmental impact statements.<sup>8</sup> Consistent with the Secretarial Policy Statement on  
1231 NEPA (DOE 1994), the Site will rely on the CERCLA process for review of specific  
1232 actions to be taken under RFCA and will address NEPA values and public involvement  
1233 procedures through the RFCA document review process to the extent practicable. In  
1234 addition, the Cumulative Impacts Document (CID) (DOE 1997) for the Site has been  
1235 prepared to provide an updated baseline of the cumulative impact to the worker, public,  
1236 and environment due to Site operations, activities, and environmental conditions based on  
1237 the Site's change in mission from nuclear weapons production to materials and waste  
1238 management, accelerated cleanup, consolidation, reuse, and Site closure. The CID serves  
1239 as an update of the baseline activities and associated environmental impacts reflected in  
1240 the April 1980 Final Environmental Impact Statement for the Rocky Flats Plant Site  
1241 (DOE 1980). The CID complements existing NEPA and RFCA documents by making  
1242 this cumulative impact information available for referencing in future NEPA and RFCA  
1243 documents.

1244

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<sup>7</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>8</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.*

1245 **4.2 Incorporation of NEPA Values**

1246  
1247 Pursuant to the Secretarial Policy Statement on NEPA, NEPA values for the individual  
1248 building disposition process will be incorporated as follows:  
1249

1250 Type 1 (Buildings free from contamination): In general, the disposition activities  
1251 conducted for Type 1 buildings will be actions which normally do not require preparation  
1252 of an environmental assessment or an environmental impact statement. Specifically,  
1253 these disposition activities fall within the scope of the categorical exclusions listed in 10  
1254 CFR 1021, Appendix B.<sup>9</sup>  
1255

1256 Type 2 (Buildings without significant contamination or hazards, but in need of  
1257 decontamination): Many of the disposition activities conducted during the deactivation  
1258 phase for Type 2 buildings will be actions which normally do not require preparation of  
1259 an environmental assessment or and environmental impact statement. Specifically, these  
1260 disposition activities fall within the scope of the categorical exclusions listed in 10 CFR  
1261 1021, Appendix B.<sup>10</sup> There may be some disposition activities conducted during  
1262 deactivation which go beyond the scope of a categorical exclusion, therefore, the Site will  
1263 ensure there is appropriate NEPA coverage prior to conducting these activities.<sup>11</sup> While  
1264 many of the disposition activities conducted during decommissioning fall within the  
1265 scope of the categorical exclusions listed in 10 CFR 1021, Appendix B, the incorporation  
1266 of NEPA values relative to the analysis of impacts to human health, safety, and the  
1267 environment will be included in the appropriate RFCA decision document (e.g., as one  
1268 of the three types of accelerated actions listed in RFCA ¶ 96).  
1269

1270 Type 3 (buildings with significant contamination and/or hazards): Just as with Type 2  
1271 buildings, many of the disposition activities conducted during the deactivation phase will  
1272 be actions that do not require preparation of a NEPA decision document. And, some  
1273 disposition activities conducted during deactivation will go beyond the scope of a  
1274 categorical exclusion, thereby requiring that the Site ensure appropriate NEPA coverage

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<sup>9</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>10</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>11</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.

1275 by the incorporation of NEPA values relative to the analysis of impacts to human health,  
1276 worker safety, and the environment will be included in its DOP.  
1277  
1278

#### 1279 4.3 Cumulative Impacts Document Analysis

1280  
1281 The CID describes Site operations with respect to the program areas of SNM  
1282 Management, Facility Disposition, Waste Management, Environmental Restoration, and  
1283 Site Support Services for both current activities (e.g., the baseline case) and the Site's  
1284 draft Site closure scenario (e.g., the closure case). The closure case is detailed in a draft  
1285 planning document prepared in 1996 for the DOE Office of Environmental Management  
1286 and updated in 1997 as the *Accelerating Cleanup: Focus on 2006*.

1287  
1288 The following are some of the insights gained from the CID impacts analysis and risk  
1289 assessments relative to human health, safety, and the environment.

- 1290  
1291 • Radiological and non-radiological risk to the workers, co-located workers, and  
1292 the public during normal Site operations are lower than during the weapons  
1293 production years.
- 1294  
1295 • Radiological and non-radiological risk to the workers, co-located workers, and  
1296 the public during normal Site operations is minimal and well below the  
1297 requirement of Clean Air Act.
- 1298  
1299 • Activities associated with SNM Management, residue stabilization, and  
1300 building disposition of the "plutonium facilities" (Type 3 buildings) pose the  
1301 most radiological risk to the workers, co-located workers, and the public  
1302 during normal Site operations. The risk of excess doses and latent cancer to  
1303 the workers, co-located workers, and the public activities once these activities  
1304 are completed becomes significantly less.
- 1305  
1306 • Risk from radiological accidents: This is a significant risk to the workers, co-  
1307 located workers, and the public for the baseline case. This risk to the workers,  
1308 co-located workers, and the public during the closure case is dominate until  
1309 around the year 2006 when residue stabilization, SNM consolidation, and  
1310 deactivation activities associated with SNM holdup are completed and all  
1311 SNM has been moved off-site.
- 1312  
1313 • Risk from seismic event: This risk contributes over 90% of the overall risk to  
1314 workers, co-located workers, and the public that are within 50 miles of the  
1315 Site for both the baseline and closure cases.
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- Risk from hazardous chemical accident: This risk of an accident is low for both the baseline and closure case. The risk to workers and co-located workers could be significant if effective emergency measures fail or are not implemented. Specific chemicals that offer the greatest risk are ammonia, chlorine, sulfur dioxide, nitric acid, and propane.
  - Closure operations and activities contributing the most to reducing the risks from accidents to workers, co-located workers, and the public are: (a) consolidating plutonium oxides into building 371; (b) repackaging the dispersible residues into the pipe/drum component for storage in building 371; (c) removal of plutonium holdup; (d) shipping transuranic and transuranic mixed waste drums to the Waste Isolation Pilot Plant; (e) shipping SNM from building 371 off-site; and (f) shipping low-level and low-level mixed waste off-site.
  - Risk to Site ecology: There may be some short-term impacts on wetlands, sensitive habitats, wildlife, and species of special concern. There is, however, expected to be no natural resource injury. Closure and building disposition activities are not expected to result in the irretrievable or irreversible commitment of any natural resource of the Site.
  - Potential cumulative impacts: (a) increased surface water runoff and decreased groundwater recharge associated with on-site landfill or correction action management unit caps; (b) short term impacts to wetland and riparian habitat if a flow-through surface water management system for on-site water management ponds is used, but once the ponds are converted to wetlands, biodiversity is expected to increase; (c) periodic increases in vehicle traffic along roadways near the Site's two gates; (d) increased traffic accidents associated off-site shipments of SNM and waste disposal; and (e) socioeconomic impacts from reductions in Site workforce, although this impact is expected to be more than offset by the expanding local economy.