Comment Response Industrial Area Characterization and Remediation Strategy

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Comment		Response
City of Westminster		
1	Westminster has reviewed the Industrial Area Characterization and Remediation Strategy and congratulates the Department of Energy and Kaiser-Hill for the innovative approach that they have taken to address the cleanup of this highly contaminated area. The Strategy appears to be well thought out and planned. The City realizes that it is not a decision document, but rather a living document which provides a framework for the closure of the Industrial Area, and that its goal is to achieve an endstate that is protective of human health and the environment and surface water quality. However, the document does not address measures that will be taken to protect worker and community safety and protection.	Text was added to Section 1.1, page 3 and Section 4.5, page 31, and a new Section 5.1, was added to address this comment.
2	The Strategy is lacking in contingency planning. Many assumptions related to the Industrial Area cleanup are based on decisions and actions that will not occur at Rocky Flats. Key to these decisions is Savannah River's ability to receive, treat, and store the plutonium that is in building 371 at the Site, as well as provide an adequate packing can for the material. Transuranic waste removal to WIPP could also negatively impact the schedule. Westminster urges the Department of Energy to keep Congress informed as to the progress in reaching the 2006 goal in order to ensure that funding for cleanup will not dry up if assumptions in the 2006 Baseline are not realized.	The U.S. Department of Energy (DOE) Rocky Flats Field Office is cognizant of external issues that have the potential to impact the Rocky Flats Environmental Technology Site (RFETS) closure schedule. The offsite disposition of nuclear materials and remediation wastes are certainly important schedule factors. These issues are national in scope and continue to command the attention of DOE Headquarters and Congress.
3	The document has many methods for streamlining processes for regulatory approval and decision document development, and notes that many key policy decisions will be developed. The public process seems to be left out on many of the important decisions that will be made related to Industrial Area cleanup. Of the 21 items listed under the Industrial Area Decision Framework on Page 9, Stakeholder review is only listed under the final elements, which include developing a closeout report and a CAD/ROD.	Through the provisions of the Rocky Flats Cleanup Agreement (RFCA), and supported by other planning tools including the Industrial Area (IA) Characterization and Remediation Strategy (IA Strategy), DOE intends to provide the public with opportunities for timely participation in closure decisions and strategies for the IA. RFCA is explicit regarding requirements for stakeholder input to all remedial action plans prior to approval by the regulatory agencies. The Closure Project Baseline (CPB) provides for stakeholder

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		review in the preparation of these documents, and stakeholder participation is implied where the documents are described in the IA Strategy. As the comment points out, the IA Strategy describes many streamlining options that will be examined, as well as policy issues that will require resolution. Just as with the IA Strategy document itself, DOE intends to involve the public in these important efforts. Opportunities for involvement will occur through forums including focus groups, the Citizens Advisory Board, the Water Working Group, and the Rocky Flats Coalition of Local Governments.
4	The Department of Energy is urged not to bypass important community and local government input in order to achieve the 2006 Accelerated Cleanup goal. Including stakeholders in the integration strategy is not sufficient. The Department of Energy is reminded that including stakeholders on the front end of decisions, rather than on the back end, results in public acceptance, and saves time and money. Westminster requests that the Rocky Flats Coordinator be allowed to observe and provide comments at the meetings of the Industrial Area Group Remediation Project teams.	See response to Comment 3.
5	See Figure 5, entitled Industrial Area Decision Framework under the section entitled Final Land Configuration. The chart does not contain a circle for the radionuclide soil action levels which are currently under review. It would seem that this important circle should be contiguous to the Actinide Migration circle. The final cleanup levels for the Industrial Area will be impacted not only by the Actinide Migration studies, but also the outcome of the current Radionuclide Soil Action Level Oversight Panel review.	Figure 5, which is Figure 4 in the final document, represents a technical decision framework. While other inputs such as policy, regulatory changes, and oversight conclusions certainly influence the direction of closure, they are assumed within the context of data inputs, activities, and decisions. RFCA Tier I and Tier II cleanup levels apply regardless of assigned values.
6	One of the strategies listed for accelerating the cleanup of the Industrial Area is to optimize sampling by only sampling once, avoiding sampling activities that do not contribute to remedial planning, and to use innovative sampling technologies where appropriate. Westminster urges the Department of	DOE does not intend to "short cut" the sampling process. However, DOE will continue to focus on maximizing the efficiency and effectiveness of the sampling process. Accordingly, DOE will develop a comprehensive sampling

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	Energy not to take short-cuts on remediation sampling even though we realize it is costly. Standard sampling and analysis protocols should be utilized for characterization and documentation of completed actions.	and analysis plan for the IA to minimize redundancy and ensure the quality of analytical data. The standard Data Quality Objectives (DQO) process will be used to develop the IA Sampling and Analysis Plan (SAP). This SAP will provide a standard sampling and analysis process for pre-remedial sampling and confirmatory sampling following completion of the remedial action.
7	Under the Industrial Area Strategy, section 1.2, paragraph 1, the last sentence states that the final CAD/ROD will include post-closure monitoring and operations requirements, including 5 year requirements for reviews of the Site, as necessary, to evaluate whether the remedies, including any institutional controls are effective. Westminster is under the impression that the 5-year review was required under CERCLA and would be performed. Please provide further information.	Text was corrected in Section 1.2, page 5.
8	Under the Waste Management Program section, paragraph 3, the strategy states that onsite treatment of waste may be considered in certain circumstances. Mixed RCRA characteristic wastes may be pretreated onsite to meet the various low-level disposal facility waste acceptance criteria. The City of Westminster requests that it be provided an opportunity to comment on proposed new methods for the onsite treatment of wastes other than those currently in use at the site.	Onsite waste treatment methods, if applicable, as well as the storage, management, and final disposition of remediation waste must be addressed in remedial action decision documents under RFCA. These documents are subject to public review prior to approval by the regulatory agencies.
9	Section 6.3 under Remediation Strategy states that remediation options will be selected based on effectiveness in achieving remediation goals, availability and cost effectiveness. There is no mention of worker safety, downwind community or environmental protection as being one of the important considerations in the selection of remediation options.	The remediation approach in Section 6.3 (Section 4.5 in the final document) was modified to incorporate the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process for evaluating remedial actions. See response to Comment 1 regarding safety.
10	The City of Westminster does not support use of caps and covers in lieu of remediating contaminated areas. A cost benefit analysis including the cost of alternatives and the long-term cost of institutional controls associated with	Capping or covering areas of the Site, in combination with other remediation, is a potential strategy for achieving the endstate goal. As a remedial action, the decision document

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	all cleanup alternatives needs to be included for any remedy selection at Rocky Flats.	for a proposed cap or cover would address the cost and effectiveness of the preferred remedial action, as well as alternative actions. The analysis includes long-term considerations.
11	Decision documents under section 6.3.5 states that the potential options for streamlining the decision document process include developing an RSOP for remediation similar to the current Rocky Flats Cleanup Agreement RSOPS. The strategy further states that a letter to the regulatory agencies would identify the location of remediation areas, depth of remediation, and confirmation sampling activities. A RFCA decision document will be required only for those remediation issues not already addressed in the approved RSOP. The community was very concerned about the lack of supporting documents for the rubbleization RSOP process. In order to accelerate cleanup the public must be provided with supporting documentation and involved in decisions at the beginning of a process. Decide, disseminate and defend cleanup decisions is not an acceptable process. Remedy selection decisions need to have community and local government review and input.	DOE understands that a RFCA Standard Operating Protocol (RSOP) for remediation of the IA would be a major decision document. It is anticipated that if DOE pursues the RSOP option, significant predevelopment planning would be required. DOE intends to provide opportunity for public input in the up-front planning process.
12	Remediation strategies for the original process waste lines, new process waste line, sanitary sewer system and storm drains are to remediate contaminated soil, process lines, and other pipelines and stabilize in place those segments with contaminant concentrations below RFCA Action Levels. The Industrial Area Task Force final recommendation was that all utility and process lines be removed so that Rocky Flats was available for any future use that the community deemed appropriate. Westminster does not support leaving contaminated piping in place.	See response to Comment 42.

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13	The Industrial Area Strategy is ambitious and provides a framework to begin working on the most difficult and costly part of the cleanup of Rocky Flats. The City of Westminster considers itself as a partner with the Department of Energy for the safe, accelerated cleanup and closure of the Site and looks forward to working with you to achieve this goal.	No response is required.
Rocky Flats Citizens Advisory Board		
14	The Industrial Area Characterization and Remediation Strategy (IACRS) is a document that must be finalized to meet an end of the Fiscal Year milestone. The strategy is meant to provide a roadmap to the closure of the Industrial Area. The strategy target is closure by 2006 with an endstate that is protective of human health and the environment. The site hopes to achieve this goal by maximizing cost/schedule efficiency using project integration, optimizing characterization and remediation by consolidation of contaminated sites and by minimizing waste generation.	No response is required.
15	The Industrial Area Characterization and Remediation Strategy (IACRS) states that the Data Quality Objectives for the Integrated Monitoring Plan for Rocky Flats will be used as the basis for developing the objectives for the Industrial Area Sampling and Analysis Plan (IASAP). The strategy does not provide information as to how this task will be accomplished. RFCAB requests further information from the Department of Energy as to how this will be accomplished.	The IA Strategy was modified to clarify the DQO relationship between IA remediation and the Integrated Monitoring Plan (IMP). An Environmental Restoration (ER)-IMP Special Projects team will develop the IASAP DQOs early in Fiscal Year (FY) 2000.
16	The document does not identify the IASAP as a document for which the site will seek stakeholder input. RFCAB recommends that the IASAP be distributed to stakeholders to receive their input, in addition to decision documents, RFCA Standard Operating Protocols, proposed plans, milestones, and the CAD/ROD.	DOE understands that an IASAP represents a major element of IA closure documentation. DOE intends to provide opportunity for public input in the up-front planning phase, as well as during document development.
18	RFCAB recommends that the document discuss how the site will address worker safety, downwind community protection, and environmental protection when making remedial action decisions.	See response to Comment 1.
19	Remediation technical strategies for the original process waste lines, new	See response to Comment 42.

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	process waste lines, sanitary sewer systems, and storm drains are to remediate contaminated soil, process lines, and other pipelines and stabilize in place those segments with contaminant concentrations below RFCA Action Levels. RFCAB recommends that the possibility of removal of all utility and process lines from the site be evaluated, as necessary, with regulator and stakeholder participation.	
20	The decision framework lists the Actinide Migration Studies, the Site Water Balance Study, and the Land Configuration Design Basis as key data inputs into decisions. RFCAB recommends that the independent review of the Soil Action Levels by the Radionuclides Soil Action Level Oversight Panel be included as a data input into the decision framework.	See response to Comment 5.
21	The strategy states that onsite treatment of waste may be considered in certain circumstances. Mixed RCRA characteristic waste may be pretreated onsite to meet the various low-level disposal facility waste acceptance criteria. RFCAB requests that it be provided an opportunity to comment on proposed new methods for the onsite treatment of wastes.	See response to Comment 8.
22	The document suggests that the site will use existing data to the maximum extent possible to cut down on characterization requirements for new samples. RFCAB recommends that the site not rely solely on historical data for the characterization of any IA group. New samples should be taken at each remediation site.	See response to Comment 6.
23	In the introduction, the document states that the CERCLA five-year reviews for the site will be conducted "as necessary" and will be included as post-closure monitoring and operations requirements in the CAD/ROD. It is the understanding of RFCAB that CERCLA requires five-year reviews for all contaminated sites with residual contamination, and would not be performed "as necessary." RFCAB requests that the site explain the use of "as necessary" in this context.	See response to Comment 7.
24	Monitored Natural Attenuation (MNA) is suggested as the third stage to groundwater plume remediation. The Industrial Area is known to have	Section 4.5.4, pages 32 and 33 was modified to address this comment.

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	groundwater plumes, and it is understood by RFCAB that the site intends to install a single passive reactive barrier to treat the plumes before they become available to surface water. RFCAB also understands that the source of the contaminated plumes will be removed to reduce the continued contribution of more contaminants. And finally, what remains in the plume will be remediated using MNA. The site does not however indicate what guidelines will be used for the decisions to use MNA as a remedial action. Should the site deem MNA necessary, RFCAB recommends that the site select or create guidance on the use of MNA as a remedial option, and that the selection or creation of such guidance be open to review, comment and participation by regulators and stakeholders.	
25	The document also suggests that the site intends to assemble multi-organization IA Group Remediation Project Teams with representatives from a number of the site organizations (i.e.; the Waste Management Program, the Analytical Services Division, Procurement, and others). RFCAB recommends that the site include in those groups individuals responsible for post-closure maintenance and monitoring planning. It is important that each of the remediation plans that are developed consider the post-closure implications of the actions. An individual from the Site Technology Coordination Group should also be included to identify relevant new technologies. The use of new technologies, as they are appropriate, could help to reduce expenditures on cleanup, minimize waste generation, and accelerate schedules while also allowing greater cleanup.	The IA Strategy was modified to include the stewardship function in the project interface section. Figures 2 and 6 illustrate stewardship and other activities associated with remediation and post-closure maintenance and monitoring. Examination of new technologies with potential advantages to the Site is an important element of the remediation strategy. Interfacing with the Site Technology Coordination Group representative, as well as staff from the DOE Office of Science and Technology, is ongoing and will continue. The IA Project Teams will rely on the Site Technology Coordination Group to keep them informed about potential new technologies. For remediations in which new or innovative technologies will be considered, a Site Technology Coordination Group member will be represented on the IA Project Team. Annual Updates to the IA Strategy will summarize all new-technology activities for the reporting year, as well as planned activities for the upcoming year.

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26	RFCAB also recommends that the site involve stakeholders in the meetings of the IA Group Remediation Project Teams. Just as the participation of regulators in the planning of activities will assist in the streamlining of the regulatory approval process, so too will the involvement of stakeholders throughout the planning processes assist in the streamlining of the public comment process. This attendance will allow stakeholders to view the same information as those that propose remedial actions in decision documents.	The project teams are composed of technical, regulatory and other support staff charged by DOE with the responsibility of performing the day-to-day tasks necessary to achieve closure of the Site. One of the tasks is to ensure opportunities for public participation in the decisionmaking process as described in RFCA. See the response to Comment 3 for a discussion of these opportunities.
Colorado Department of Public Health and the Environment		
27	The Colorado Department of Public Health and Environment has reviewed the above document and finds it to be well written and organized. Our responses to this document are captured in general comments noted below and specific comments in the attachment to this letter. We are encouraged that RFETS is attempting to develop strategies for implementing closure of Rocky Flats by FY06, and have directed our comments to successful implementation of closure. Our general comments fall under four topics: the data quality objectives process, the groundwater remediation strategy, use of action levels, and basis of evaluation for remediation. Concerns related to each of these topics are presented below and in the specific comments attached.	No response is required.
28	**Data Quality Objectives Process.** This draft of the strategy reflects a greater integration of the IA Strategy with the ongoing data quality objectives (DQO) process used to determine the monitoring necessary at the site. However, we are concerned that the strategy reflects the implementation of a DQO process as an additional step to be performed rather than an integral component of the strategy. As we envision this process, and believe it to be used currently, the DQO process is the vehicle for identifying and prioritizing drivers for characterization, remediation and post-remediation activities. Linkage of the drivers to characterization defines the data required for remediation decision-making, which is also the	DOE understands the DQO process and the importance of developing DQOs that serve characterization and remediation objectives, as well as pre- and post-closure requirements. DQOs for characterization and remediation of the IA will be linked to those for compliance monitoring for surface water. The drivers for characterization, remediation, and monitoring will integrate at the appropriate levels to ensure that they support the Comprehensive Risk Assessment (CRA) and the final Corrective Action Decision/Record of Decision (CAD/ROD).

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	basis for determining post-remediation monitoring and controls. We suggest that rather than changing specific parts of the document, CDPHE staff will emphasize this issue in the early stages of DQO implementation this fall.	
29	**Groundwater Remediation Strategy**. Section 6.4 discusses the plume remediation strategy and reflects an advanced state of decision making regarding groundwater remediation. The decisions reflected in this section need to be compiled into a coherent strategy for groundwater that can be reviewed and approved by the regulators and possibly the public. The approach reflects an understanding of the site hydrogeology that may not be substantiated until the water balance study is completed, and appears to determine specific remediation alternatives prior to identification of problems, and development and evaluation of alternatives. This information would be an appropriate appendix to the IA Strategy.	The IA Strategy does not contain decisions. DOE is aware of the current state of understanding of the hydrology of the Site, as well as the decisionmaking process for implementing remedial actions. The plume remediation strategy reflects responses to groundwater problems that have already been identified and addressed, as well as DOE's best engineering judgment based on current knowledge. As the IA Strategy describes, the plume remediation strategy is subject to modification as new information is developed.
30	**Use of Action Levels**. There is some confusion in the document about the use of Tier I and II action levels. Specific comments attached suggest the correct use of these levels: however; an additional set of action levels will be defined from those levels needed to protect surface water. We suggest that the document reflect that several action levels could be determined to apply to a given contamination problem, and that in different cases, different action levels would be the controlling driver. The DQO process will provide structure for this relationship.	Table 1 and Figure 4 were modified to correct the confusion regarding Tier I and Tier II action levels. Although it may be necessary to perform remediation beyond action levels in soil for radionuclides to protect surface water, this issue will be addressed as measurement uncertainties within the DQO process for the IASAP. Several different action levels can be addressed in the DQO process.
31	**Basis of Evaluation for Remediation**. The document concludes that the basis for evaluation of remediation alternatives will be the IHSS Groupings. While this is expected to be the case for source-driven action levels, surface water protection action levels may need to be evaluated on a watershed basis. Until the surface water action levels are defined, it would be prudent to provide some flexibility in alternative development and evaluation, specifically in areas where surface soil contamination may be a contributor to surface water.	The remediation approach in Section 4.5 was modified to incorporate the CERCLA process for evaluating remedial options. The IA Strategy does not identify grouping of individual hazardous substance sites (IHSSs) as a basis for evaluation of remedial alternatives. Rather, grouping of IHSSs, potential areas of concern (PACs), and under building contamination (UBC) sites acknowledges the influence of the decommissioning effort on remediation of the IA. Release sites are grouped to facilitate and enhance

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		scheduling, decisionmaking, characterization and remediation. Grouping of release sites does not preclude evaluation of other factors such as surface water protection that might influence development of remedial alternatives.
32	Table 1 (page 10) This table identifies "characterize IA Groups" as a framework element. As stated in Section 6.2, another characterization requirement is to provide data for the CRA, which may become the driver for much of any additional sampling.	Requirements for characterization of areas outside IA Groups will be addressed within the DQO process for the IASAP.
33	Table 1 (pages 9-12) The responsibilities for the following framework elements should be modified since all three documents require agency approval: • Develop IA DQOs and SAP — DOE with Regulatory Agency Approval • Develop Closeout Report — DOE with Regulatory Agency Approval and Stakeholder Review • Develop CAD/ROD — DOE with Regulatory Agency Approval and Stakeholder Review	Text was modified as suggested in Table 1, pages 9 – 12 to address this comment.
34	Table 1 (Page 10) The framework element, "Are PCOCs>RFCA Tier I values?, should be revised to state, "Compare PCOCs to RFCA action levels." The second column could state, "Exposure areas with PCOCs>Tier I values will trigger an action decision. Exposure areas with PCOCs<Tier II values will trigger the NFA process. Exposure areas with PCOCs<Tier I and >Tier II values will be evaluated for potential action decisions." NFA justification for exposure areas below Tier II levels is mentioned in Section 6.3.1, but is ignored in this table. This table implies that no actions are required for areas below Tier I levels when in fact, RFCA specifies requirements for Tier II exceedences.	Text was modified as suggested in Table 1, page 10, to address this comment.
35	Figure 5 (page 8) The concepts mentioned in Comment # 2 also need to be captured in the flow diagram in Figure 5. This diagram should also include a box labeled, "Post-Closure Activities" below or in place of the "IA Closure	Text was modified as suggested in Figure 4, page 8, to address this comment.

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	Complete" box. This could also be added as a final framework in Table 1.	
36	Table 1 (page 11) The final framework element, "Develop CAD/ROD," should state that, "The CAD/ROD will describe closure and post-closure activities of the IA and the Site,…."	Text was modified as suggested in Table 1, page 12, to address this comment.
37	Section 3.1 (page 14) The No-Further-Action justification process should be identified as a "requirement of the RFCA process".	Text was modified as suggested in Section 3.1, page 13, to address this comment.
38	Section 3.2 (page 14) The statement referring to the 78 acres identified on Figure 6 as industrial use is accurate, but is inconsistent with the recent decision by the RFCA Project Coordinators. That decision should be documented and reference here.	Text was modified in Section 3.2, page 13, to address this comment.
39	Section 6.3 (page 39) Three remediation selection criteria are stated here. It would be more appropriate to include CERCLA's 9 Evaluation Criteria for Analysis of Remedial Alternatives.	Text was modified as suggested in Section 4.5, page 31, to address this comment.
40	Section 6.3.3 (page 40) The last paragraph in this section should state that the decision to cap or cover parts of the IA will include consideration of the need for perpetual maintenance.	Text was modified as suggested in Section 4.5.3, page 32, to address this comment.
41	Section 6.2.4 (page 40) The final sentence in the third paragraph in this section presupposes the remedy for the IA plume complex. As stated in the previous sentence, the data to support a remedy selection are not yet available (or at least has not been presented to the regulatory agencies). It is also preliminary to assume that a single reactive barrier will suffice to remediate a complex plume that appears to be heading in several different directions.	Section 4.5.4, pages 32 and 33 was modified to address this comment.
42	Section 6.4 (page 46) This section mentions employing "innovative sampling and remediation technologies" to address the underground pipeline systems. Removing most or all of this piping seems to be a much more efficient and cost-effective plan. Once the pipes are removed, efforts can focus on characterizing the fill material in the utility corridors and assessing this material's potential to serve as future pathways for contaminated groundwater. This strategy is also consistent with the concept of leaving the	DOE will continue to examine innovative sampling and remediation technologies that have the potential to enhance achievement of remediation goals in the most cost-effective manner. There is no evidence at this time that removal of most or all of the tens of thousands of feet of pipeline is necessary to achieve an endstate that is protective of human health and the environment. Also, there is no evidence that

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	Site available for the most future uses possible.	removal of most or all of the pipelines is a more efficient and cost-effective plan. If substantiated by future information, removal of most or all underground pipelines (original process waste lines [OPWL], new process waste lines [NPWL], storm drains, and sanitary sewers) as a remediation strategy is not precluded. See the response to Comment 53 regarding future uses.
43	Section 6.4.2 (page 52) Modify the sixth bullet to state, "Basements or foundations below the water table or top of bedrock,".	Text was modified as suggested in Section 4.6.2, page 44, to address this comment.
44	Section 6.5.4 (page 54) This section should include the idea that an accurate and complete data base must be maintained beyond the CAD/ROD for post-closure activities.	Text was modified in Section 4.7.4, page 47, to address this comment.
Additional Comments – CDPHE		
45	Section 4.2 (page 17) The 2nd paragraph in this section states that, "the exposure scenarios evaluated will include the residential exposure scenario." This implies that the CRA will include a residential scenario along with industrial and open space scenarios. This statement should be explained to clarify whether DOE intends to use CRA to justify unrestricted release of portions of the Site.	Text was modified in Sections 4.3, page 26; and 4.3.2, page 27 to address this comment.
46	Section 5.1 9 (page 19) Because the D&D activities described in this section will involve contact with soils, the timing and frequency of soil sampling must be sufficient to adequately protect the workers. This sampling must also adequately characterize excavated soils that may be moved during D&D activities.	Sampling required to ensure worker or community safety at and near decommissioning projects is assessed in two ways: (1) the project-specific health and safety plan that describes potential site hazards and mitigation measures; and (2) the readiness review process, which includes management and independent review of the project before it is implemented. Additionally, sampling will be conducted as part of IA Group characterization.
47	Section 6.2 (p.38) The list of elements in the IASAP includes QA, but should also include "QC". Unvalidated data has been a problem in the past and should be specifically addressed in the IASAP.	Text was modified as suggested in Section 4.4, page 30 to address this comment.

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48	Section 6.4.1 (page 51) The groundwater study, to be completed in 2002, will provide important information to help determine migration pathways and contaminant migration pathways and contaminant migration direction. This study should be included in the discussion of potential strategies.	Text was modified in Section 4.6.1, page 43 to address this comment.
49	Section 6.4.2 "Storm drains/foundation drains" are left out of the 4th sentence of the first paragraph (p.51) and the 4th sentence of the 2nd paragraph (p.52).	Text was modified as suggested in Section 4.6.2, page 44, and 45 to address this comment.
City of Broomfield		
50	The City of Broomfield appreciates the opportunity to review and comment on the Draft Industrial Area Characterization and Remediation Strategy (IA Strategy). A number of the assumptions contained in the strategy do not yet have regulator or stakeholder buy-in for various reasons. What is the process by which assumptions become decisions? How can Broomfield be involved in that process? As the site develops these assumptions and provides the details necessary to fully evaluate the planned activities, the City of Broomfield expects that the IA Strategy will be modified as necessary to incorporate the needs and concerns of the community.	The IA Strategy does not contain explicit assumptions. However, the IA Strategy is reflected in the CPB that does contain Site assumptions that address the spectrum of closure activities. Rather than these Site assumptions becoming decisions, assumptions influence the evolution of strategies into closure actions by means of the RFCA decisionmaking process. As DOE implements the IA Strategy, opportunity for public input to the decisionmaking process will be provided. See the response to Comment 3 for further discussion. The IA Strategy will be modified as necessary to reflect changes implemented through RFCA processes including public participation. Closure actions pursuant to the IA Strategy as well as modifications, will be summarized and issued as annual updates to be inserted in Appendix C of the document.
51	The IA Strategy states that some streamlining of the review process is needed in order to meet the accelerated cleanup schedule. The City of Broomfield is concerned that this will compromise the public's ability to provide meaningful review and comment. For example, even though the City of Broomfield specifically requested the customary 45-day comment period for review of this draft IA Strategy, DOE was only able to provide a 30-day comment period due to their obligation to meet a regulatory milestone. This places a substantial burden on local governments, RFCLOG,	See response to Comment 3.

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	and stakeholders. In most cases, it does not allow entities, especially those with a board or council, to adequately review and comment on these important documents. Broomfield believes that this compromises meaningful public involvement and violates the intent of paragraph 281 of the Rocky Flats Cleanup Agreement (RFCA). Allowing community representatives to attend and provide comments during development meetings for the various IA Strategy-related documents would allow for the community's concerns to be evaluated and incorporated earlier in the decision-making process, thus streamlining the review process. The public must continue to be involved, informed, and allowed to participate in the revisions to the IA Strategy as it is updated.	
52	3.1 Site Closure Broomfield believes that specific requirements of the RFCA closure process must also include: • Removal of all hazardous and radioactive wastes from the site. • No long-term burial of hazardous and radioactive waste of any kind at the site. • No exceedance of water quality standards off the site, and no exceedances on site after closure.	As expressed in RFCA Attachment 9, DOE expects to reach a closure endstate that generally achieves the goals of the Rocky Flats Vision. The Vision and the main body of RFCA address the disposition of waste and protection of water quality. The RFCA provisions and processes, including public participation, will be applied to develop specific decisions related to these important items.
53	3.2 Future Land Use The City of Broomfield is concerned about the final end state of the Industrial Area and Buffer Zone at the Rocky Flats Environmental Technology Site (RFETS). Due to the large degree of uncertainty regarding the ability of engineering and institutional controls to prevent future generations from inadvertently becoming exposed to residual contamination at the site, the site must be cleaned up to be protective of all uses. RFCA and the IA Strategy must be fundamentally revised from the current cleanup goal of supporting limited industrial and open space uses to the community's cleanup goal of all uses. The current plan of leaving contaminated soils in place and designating up to 2,000 acres as "restricted use open space" is not	DOE recognizes that future land use for the Site requires additional consultation with stakeholders. The IA Strategy was modified (Figure 4 and Section 3.2) to indicate this recognition.

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	acceptable. The continued migration of plutonium to adjacent off-site properties and the community is not an acceptable remediation endstate.	
54	4.0 Dose and Risk Assessment Strategy The City of Broomfield can not support eliminating the Industrial Area and Buffer Zone baseline risk assessments since no justification to eliminate them has been provided. How can risk reduction be measured with no baseline to compare it with?	In a traditional CERCLA approach, baseline risk assessments are performed as part of the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) prior to initiation of remedial action. Under the RFCA approach at RFETS, all remediation is performed as accelerated actions prior to the RFI/RI. Action levels, which are related to risk, are mediated by consideration of surface water protection to form the basis for action. The modified RFI/RI, prepared after all remedial actions are completed, will contain a comprehensive risk assessment that measures the effectiveness of the actions.
55	4.3 Data Quality Objectives The IA Strategy states that Data Quality Objectives (DQOs) will be the basis of the IA Sampling and Analysis Plan (IASAP). The IASAP is a document that will have a major impact on how the IA is characterized, but is not listed as one of the documents that will be made available for public review and comment. The City of Broomfield believes that a document of this importance should at a minimum, be subject to public review and comment. Furthermore, Broomfield believes that this process could be streamlined by involving stakeholders in the development of the DQOs and IASAP.	See response to Comment 16.
56	5.2.1 Waste Management Current plans show that the majority of waste will be generated during FY05 and FY06 (figure 9). This plan seems to increase the likelihood that waste could be stored onsite after 2006. Broomfield believes that the final CAD/ROD for the site should not be adopted until all waste has been removed from the site.	Both RFCA and the 2006 CPB assume that all waste will be removed from the Site. However, it is recognized that waste disposal facilities are not currently available for some RFETS wastes. Although DOE and the RFCA Parties are and will continue to jointly pursue identification of disposal facilities for RFETS waste, it is possible that receiver sites for all waste will not be identified prior to completion of all

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		required response actions. If this occurs, waste without a receiver site will be stored at RFETS until such time as a site is identified. If waste is left onsite, the final CAD/ROD will address this condition and state that waste will be removed offsite for disposal when an appropriate facility becomes available.
57	5.3 Stakeholder Involvement The inclusion of stakeholders in the meetings of the IA Group Remediation Project Teams would help streamline the public comment process by allowing stakeholders the opportunity to obtain relevant information and buy-in before decisions are finalized. Development of the detailed documents referenced by the IA Strategy and revisions to the IA Strategy should be made by a Working Group which includes representatives from each of the local governments.	See responses to Comments 3 and 25.
58	6.2 Characterization Strategy The characterization strategy is very brief and makes providing detailed comments difficult at this time. Apparently the details regarding how the Industrial Area will be characterized will be provided later in the IA Sampling and Analysis Plan (IASAP). Issues such as how under-building foundation contamination will be detected and remediated remain major topics of discussion but have not been addressed here. Broomfield requests that stakeholders have an opportunity to review and comment on the IASAP.	See response to Comment 16.
59	6.3 Remediation Strategy Protective soil action levels must be established to prevent any additional airborne contamination from migrating offsite. The City of Broomfield expects that once the RSAL review has been completed that the results will be formalized in the ALF of RFCA. Cleanups should be conducted in such a way that does not constrain future cleanup efforts if soil action levels are lowered or new technology becomes available.	DOE's current remediation strategy does not constrain future cleanup options.
60	The City of Broomfield supports the IA Strategy of removing contaminated	All RFETS remediation wastes are disposed at appropriately

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	soils for immediate off-site disposal. Contaminated soils should only be placed in permitted radiological waste facilities.	permitted facilities.
61	The City of Broomfield can not support the use of caps or covers at this time because DOE has not yet developed much of the information needed to make decisions regarding the use of caps at the site. The City of Broomfield needs more information from DOE regarding: (1) the situations in which caps or covers will be considered, (2) the design criteria for caps and covers, and (3) the anticipated operation and maintenance requirements.	As Section 4.5.3 of the IA Strategy points out, the decision to employ a cap(s) or cover(s) in the IA has not been made. As the comment correctly points out, there is insufficient information at this time to make that decision. The Solar Evaporation Ponds in the IA is a RCRA unit, and is mandated under RFCA to be closed by means of capping. DOE believes that a cap or cover, in combination with other remediation, is a potential strategy for the 700 Area. Section 4.5.3 describes the information still required before a decision and/or conceptual design can be considered for either project.
62	Monitored natural attenuation is planned as the remedial method for contaminated groundwater that poses no threat to surface water. USEPA natural attenuation guidance has additional requirements that have not been provided in the IA Strategy. One of the major elements of the USEPA program that is not included in the IA Strategy is that ongoing groundwater monitoring must demonstrate that contaminant levels in the groundwater are decreasing. During development and release of the monitored natural attenuation guidance, USEPA stressed that to get public acceptance for just monitoring groundwater and not conducting cleanup activities, entities must demonstrate that groundwater cleanup goals would still be achieved in a reasonable amount of time. USEPA stated that a "reasonable amount of time" would be approximately the same amount of time that it would take for a more active remedial approach to achieve cleanup. Have all of the elements of DOE's Monitored Natural Attenuation program been provided in the IA Strategy?	Section 4.5.4, pages 32 and 33 was modified to address this comment.
63	The majority of remediation activities will occur after most buildings have been dismantled. Remediation activities are planned for FY04, FY05, and	DOE and RFETS contractors understand the resource challenges that will be faced over the next several years, and

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	FY06 as shown in the Decision Document Schedule (Figure 11). Delaying the majority of remediation until the last 3 years of the project may place an enormous burden on available resources including qualified personnel, equipment, and transportation. How has DOE addressed these issues? Is there a document that outlines this information. Broomfield would like to request a copy of this information.	are formulating plans to address this issue.
64	6.4 Remediation Challenges The City does not support the IA Strategy of stabilizing non-contaminated buried pipes in place. All buried utilities should be removed. Even if the pipes content are not contaminated, the pipes themselves can act as conduits for groundwater and contaminant migration. The City of Broomfield does not support the IA Strategy to not determine the integrity and location of each leak along each pipeline. Broomfield could support this strategy if all piping is uncovered, screened for contamination, and removed. Then leak detection becomes irrelevant.	See response to Comment 42.
65	Although Under Building Contamination has a designated sub-section under the Remediation Challenges section, this information should have been provided in the Characterization Strategy section and there is no discussion on potential remediation approaches. There is no UBC remediation information to comment on at this time. Broomfield requests that stakeholders have an opportunity to review and comment on the UBC remediation plans as the information becomes available.	The title of Section 6.4 (Section 4.6 in the final document) was changed to Characterization and Remediation Challenges. UBC sites primarily present a characterization challenge, which is why detail regarding the integration of characterization with the decommissioning effort is included. The Characterization Approach (Section 4.4) confines discussion to the planned overall strategy for IA characterization with a focus on cost effectiveness in support of remediation goals. Remediation of UBC sites is a strategic issue related to cost, schedule and health and safety. The IA Strategy acknowledges this issue in the various narratives, figures, and plates that demonstrate the integration of remediation with the decommissioning effort. UBC site remediation planning will be a component of the decision documents for their respective IA Groups.

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65	6.5 Data Management The City of Broomfield supports the integration of all analytical data into a common platform as long as existing information is not compromised. The proposed common platform is intended to allow the integration of information among decommissioning, ER and other Site organizations.	Integration of all analytical data will not compromise existing information.
66	Thank you for the opportunity to comment on this important document. The City of Broomfield expects that we will continue to be involved, informed, and allowed to participate in the revisions to the IA Strategy as it is updated annually.	No response is required.

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