RFCA Stakeholder Focus Group
June 20, 2001
Meeting Minutes

INTRODUCTION AND ADMINISTRATIVE

A participants list for the June 20, 2001 Rocky Flats Cleanup Agreement (RFCA) Stakeholder Focus Group meeting is included in this report as Appendix A.

Reed Hodgin of AlphaTRAC, Inc., meeting facilitator, reviewed the purpose of the RFCA Stakeholder Focus Group. Introductions were made.

Reed reviewed the meeting agenda, which included:

RSAL Working Group Update

End State: Baseline Cost Projections - Basis and Uncertainties

End State: Surface Water - QA and Group Discussion

RFCA Parties Feedback - What Heard, How Used, Decisions / Choices Made

Administration

Reed asked if there were any questions or comments regarding the June 6, 2001 meeting minutes.

A member of the Focus Group asked that a question and answer regarding the anticipated use scenario for establishing the Radioactive Soil Action Level (RSAL) be reflected in the meeting minutes. The questioner asked about the scenario the agencies were heading toward - the wildlife refuge worker. The answer from DOE stated that the agencies were working under constraints, restrictions, and limitations.

Facilitator's note:

The conversation referred to was extracted from the rough meeting transcription as:

Joel Selbin: It's my understanding that the RSALs will be based on a refuge worker scenario. A resident rancher calculation spends 4 times the time onsite. RAC used the resident rancher scenario because it was the most conservative. Is the resident rancher scenario dead?

Jeremy Karpatkin (following responses to the question from other agency representatives): The agencies are constrained by laws and regulations. The RAC study, as commissioned by the oversight panel, explicitly ... unconstrained ... They were told explicitly, "Don't be constrained. Use 15 mrem dose limit. In other respects, you're not limited by CERCLA." We do not have the freedom. We are constrained by public policy, laws, and regulations.

A member of the Focus Group asked Reed if the meeting minutes were screened by any sources other than AlphaTRAC prior to issuance. Reed responded that the minutes were not screened.

A member of the Focus Group noted that the Focus Group asked for a copy of the Anaconda, Montana study on soil ingestion. Reed promised to have the request reflected in the minutes and to provide the study to the Focus Group.

Introductions of meeting participants were then made.

RSAL WORKING GROUP UPDATE

Reed listed the objective of the discussion as:

Keep up to date on the dose / risk analysis for RSALS.

Bob Nininger updated the group about the RSAL working group meetings, with support from Russell McAllister.

Bob indicated that the Working Group is finalizing choices for input parameters and is close to performing dose and risk calculations.

One parameter issue worked recently was the dose conversion factor(s) for children. The Working Group found a wide range of values and decided to apply the most conservative factor identified.

He noted that the Working Group was reevaluating the choice of plutonium solubility class for selecting cancer risk slope factors and dose conversion factors. The Group is

examining both how the factors were derived and what the best choice among the factors would be for Rocky Flats.

A group discussion developed on the subject of solubility class and dose conversion factors. It was noted that higher dose conversion factors are associated with greater plutonium solubility. It was also noted that the inhalation dose conversion factor being considered for the RSAL analysis is more conservative than that published in the ICRP and than the one used in the RAC analysis.

The fate of plutonium of different solubilities once introduced into the body was also discussed. A dialog developed among members concerning whether plutonium would be dissolved by stomach acid. One member had heard that plutonium did not interact with hydrochloric acid. Another member stated a need for definitive literature references. The agencies indicated that the RSAL Working Group is reviewing the literature on this topic and agreed to provide a copy of the Group's report to the Focus Group. Reed suggested that the topic of plutonium uptake in the body could be added to the Focus Group's agenda if interest existed among the members once the Working Group's paper was reviewed.

The RSAL Working Group has developed a methodology for treating mass loading and has calculated a mass loading factor. The Group is now working to make the application consistent between the RESRAD and RAGS models. A report documenting the mass loading factor will be prepared and attached to the Task 3 report. Reed asked that the Mass Loading report be provided to the Focus Group as soon as it is ready.

The RSAL Working Group is also examining ingestion factors and ensuring consistency between the RESRAD and RAGS models.

It was noted that Dr. Chatten Cowherd of Midwest Research Institute would attend the upcoming RSAL Working Group meeting to discuss the Institute's wind tunnel and its application to this study.

END STATE: BASELINE COST PROJECTIONS - BASIS AND UNCERTAINTIES

Reed identified the objectives for the discussion as:

-Understand

-Basis for baseline budget
-Uncertainties in baseline budgets
-Impacts of under or over-runs.

Joe Legare of DOE introduced Alan Parker, Chief Executive Officer of Kaiser-Hill (see Appendix B for Joe's introductory slides). He indicated that the $4 billion planned for cleanup of Rocky Flats was not guaranteed - the year-to-year appropriation would depend on the site's success in achieving accelerated cleanup. He said that the site was addressing end state issues in order to establish priorities for achieving compliant closure. The best balance among community acceptance, contract compliance, and RFCA compliance would have to be achieved. Part of this process would be to negotiate the balance of priorities within the scope of the Kaiser-Hill contract.

Joe then turned the presentation over to Alan Parker, with support from Nancy Tuor of Kaiser-Hill. A copy of Alan's presentation is provided in Appendix C.

Alan noted that the $3.9 billion budget assumed optimistic outcomes in all areas of uncertainty for the closure plan. No conservatisms were built into the budget - contingencies are at a minimum.

Alan described the Rocky Flats end state as incorporated in the baseline:

No buildings are left standing

All IHSSs are remediated

All waste is removed from the site except that left in place

Closure caps are in place if needed.

A member of the Focus Group asked about the relationship between RSAL and Kaiser-Hill's contract. Alan stated that the contract and baseline assumed the current tiered RSALs. Incorporation of any changes in the RSALs that result from the RSAL review would require a cost, scope, and schedule negotiation between Kaiser-Hill and DOE.

A question was asked about the uncertainty regarding under-building contamination and its effect on the contract / baseline. Mr. Parker stated that the contract requires Kaiser-Hill to remediate all under-building contamination down to a specified level below grade (approximately five feet). The contamination must be removed even if more is found than planned for in the baseline. Removal of contamination below the

specified depth would require a scope change in the contract. Mr. Parker emphasized that no slabs would be left in place with contamination underneath.

A Focus Group member asked how the under-building conditions would be determined without removing the slabs. Alan replied that investigation of conditions under building slabs is being conducting through drilling of sample holes through the slabs. Initial results from sixteen holes drilled through the Building 771 slab show less contamination than expected. Laboratory analysis of the samples is in progress.

A question was asked about trade-offs, specifically if Kaiser-Hill agreed that the community would need to relax expectations in some areas in order to get a lower RSAL and still stay within the $4 Billion budget. Alan replied that he was aware of the concept but that little discussion had occurred between Kaiser-Hill and DOE. He indicated that Kaiser-Hill would wait for guidance from DOE.

A question was asked about the cost of soil remediation to different cleanup levels and the uncertainties in those estimates. Alan and Lane Butler replied that the estimates are well understood for the 903 Pad area, but that much uncertainty still exists for the Industrial Area, due to gaps in characterization.

A member of the Focus Group asked about problems with moving low level waste offsite. Alan and Nancy Tuor responded that a focus on other areas and higher costs for some shipments have resulted in a lower rate of low level waste shipping than expected. There is no real problem - this year will end up being the largest year ever for low level waste shipments from Rocky Flats.

It was noted that other waste shipment issues existed, include shipments to Tennessee and progress at the Nevada Test Site in obtaining a RCRA permit for accepting high level mixed waste.

A member of the Focus Group asked about an apparent discrepancy between the Kaiser-Hill contract and RFCA regarding meeting the surface water quality standard. Dave Shelton replied that water quality standards will have to be met at the terminal ponds because there will be no further protection downstream. The water across the site will also have to meet the standard. The issue to be discussed and resolved is where the standard will be monitored (points of compliance) and how measurements will be conducted.

The project-by-project cost estimates in the baseline were discussed. It was noted that remediation costs were spread through several of the topic areas. A member of the Focus Group asked for a break-out of all costs associated with remediation (the total should equal the $400 million value which has been stated previously to the Focus Group).

A discussion developed around the concept of scope trade-offs to compensate for cost overruns. A concern was expressed that cost overruns now being experienced in D&D would result in less money being available for remediation, and thus less cleanup. Alan responded that there would be no trade-offs with clean-up scope. Nancy added that the Kaiser-Hill contract was incentivized to find efficiencies in some areas in order to balance overruns in other areas. Some examples were discussed, including the idea of getting the South Side and some other areas cleaned up quickly and efficiently so that more money and time could be focused on the Plutonium buildings. Alan noted that it wasn't impossible for remediation scope to be impacted, but that there were a large number of checks and balances in place to prevent that from occurring.

A member of the Focus Group asked if the apparent underruns in safety programs were an indication that safety was being sacrificed and impacting the project overall. Alan and Nancy responded that safety activities were mostly built directly into the project budgets and were reflected there.

There was a discussion of material stewardship and its impact on overall project cost. It was noted that delays in the PUSPS system, safety shutdowns, and unanticipated RCRA permit requirements were causing delays and cost overruns in waste shipping. Nancy noted that a strong lesson learned was the benefit of operating with no safety or regulatory compliance shutdowns. She stated that this was a strong driver for the site to operate at a high level of safety and compliance. Alan stated that another key strategy was to move the waste directly offsite without interim storage. He noted that the site was having more success in this area.

The subject of orphan waste was also discussed. There are wastes that do not yet have a designated receiver site. Both the Savannah River Site and the Nevada Test Site are candidates. Efforts continue to resolve the issue. It was noted that a receiver site must be identified - if no site is ever designated, then by law the waste must remain at Rocky Flats.

Joe Legare noted that there is a great deal of interest in the project performance against budget. He stated that monthly summaries are provided to DOE by Kaiser-Hill. He

indicated that one-page summaries could be provided to the Focus Group if desired. The Focus Group members indicated an interest in having such summaries.

A discussion next developed concerning the possibility of using overall cost savings to perform additional cleanup. A member of the Focus Group noted that the idea had been raised that savings achieved in D&D could be applied to additional cleanup. He noted that today's presentation on the Kaiser-Hill contract indicated that that would not occur. Alan responded that the contract included a defined scope for D&D and a defined scope for remediation. He stated that Kaiser-Hill was incentivized under its contract to bring in the defined scope for as low a cost as possible and do the job safely. He further stated that there is an ability to add additional cleanup scope to the contract.

Jeremy Karpatkin of DOE emphasized that most of the efficiencies that could be envisioned were already assumed to occur in order to stay within the planned budget. Any efficiencies gained in the near future must be returned to the existing scope in order to meet these assumptions. He stated that it will not be known until later in the project if enough efficiency has been achieved for DOE to consider additional cleanup scope.

A member of the Focus Group asked DOE and Kaiser-Hill to include in their discussions with Congress that the community wants to see a more comprehensive cleanup (e.g. RSALS) than now exists in the Kaiser-Hill contract and that such a cleanup should be achievable.

A member of the Focus Group noted that a 10% savings had been achieved in the Safety, Environmental Engineering, and Quality area and asked how that had been achieved. Alan responded that the work was labor-driven, that efficiencies had been achieved, and that the work had been conducted with less effort than originally projected. He assured the Focus Group that everything included in the scope for this area had been fully accomplished.

A member of the Focus Group asked about the use of onsite versus offsite laboratories. Dave Shelton replied that there are two onsite laboratories analyzing samples with high levels of radioactivity. Other samples are sent offsite to 25 different laboratories for analysis. A challenge later in the program will be onsite capacity to handle the load of higher radioactivity samples. It may be necessary to augment Rocky Flats capacity by sending samples to other DOE sites for analysis.

A member of the Focus Group asked if efficiencies had been achieved in "keeping the lights on and the doors open" at Rocky Flats. Nancy responded that significant advances had been made in reducing these overhead costs and cited several examples.

The discussion closed with the Focus Group expressing thanks to Alan and Nancy for their presentation.

END STATE: SURFACE WATER - QUESTION / ANSWER AND GROUP DISCUSSION

Reed opened the end state discussion on surface water with a note that the session was a continuation of the presentation and discussion that had begun at the last Focus Group meeting. He set objectives for the discussion:

Clarification / understanding of issues and options

ID of other issues and options (Are the questions right?)

ID of key issues and options for focus and holistic discussion

AlphaTRAC, Inc. handed out End State Notebooks for use by the Focus Group members in maintaining and organizing their materials over the several meetings of discussion.

The floor was then opened for discussion.

A member of the Focus Group suggested that the baseline could serve as a starting point for comparing surface water end state options. If the baseline surface water option and its cost were defined, then other options could be costed and compared to the baseline.

Dave Shelton responded that the site could sort that out for the Focus Group. He cautioned, however, that the surface water management analysis conducted for the baseline involved a number of assumptions that recognized the uncertainties in the final design. The intent was to build in enough funding to ensure that water quality leaving the site (terminal ponds) would meet the water quality standard. He emphasized that the job of determining the right water management system is a RFCA decision that is

beginning now. He urged the Focus Group to concentrate on defining the right thing to do, starting from scratch rather than examining the baseline as a defined starting point.

A member of the Focus Group indicated that the baseline should provide bounds for the funding envisioned for surface water management, and that this could serve as a starting point for examining end state trade-offs. DOE stated that this was a reasonable request and agreed to provide the baseline assumptions and budget for each end state topic, organized by sections in the End State Workbook. Joe Legare cautioned that there would be varying levels of uncertainty in the results, and even some unknowns that are waiting for study results.

A member of the Focus Group urged that trade-offs be discussed with a view toward minimizing the total risk. He cautioned against trading off actions across media (e.g. exposure to soil vs ingestion of surface water) in a way that would give up a large risk reduction in order to gain a small risk reduction.

Another member of the Focus Group emphasized his desire to protect at the 10-6 risk level.

A discussion was held on the active water management systems currently on site and how a passive system might differ. The current active system involves monitoring of flow and water levels in the ponds. When the water in a pond reaches a specified level, the water is monitored for water quality and, if water quality criteria are met, a controlled release of water from the pond is performed. In a passive system, the system would be designed to fill, hold water, and release downstream without human intervention. In this case, the water quality would be monitored at points of compliance to ensure that the passive system is protective of water quality.

The concept of soil stabilization was also discussed. It was noted that stabilization of contaminants could be as effective as removal in protecting surface water quality. Kaiser-Hill discussed initial thoughts on recontouring and its role in soil stabilization. It was noted that recontouring would take place in the 903 pad area and throughout the industrial area. It was suggested that specific soil stabilization activities (e.g., fill cover and vegetation) might be used in areas where slopes are or will be steep (for instance, the hillside below the 903 pad).

Kaiser-Hill noted that the land configuration study would provide specific answers to these questions.

A member of the Focus Group stated that the concept of recontouring was not sufficiently defined to allow the conversation to start. He noted that completion of the land configuration study was two years away and asked if the site's current conceptual thinking could be presented now in the form of sketches and conceptual cross-sections. Kaiser-Hill committed to produce such a conceptual product for the Focus Group.

The discussion next moved to the ecological impacts of shutting off imported water at Rocky Flats. It was noted that much of the surface flow at Rocky Flats is associated with water purchased by the site, and eventually released downstream. This enhanced water budget has helped to produce wetland ecosystems at locations on the site. DOE was asked how the impact of shutting down this source of water was being considered. DOE responded that there were no plans to continue importing water to protect these ecosystems, and that some damage would have to be accepted when water importing stops. It was noted that design of passive systems (e.g., recontouring) could include enhancement of such wetlands.

The discussion then moved to engineered controls and the lifetime of such controls. A member of the Focus Group expressed concern that engineered controls would be put in place that would have lifetimes much smaller than the contamination being controlled. He questioned the viability of engineered controls at Rocky Flats for this reason. DOE responded that, with regard to surface water management, there would be engineered controls. The question to be decided is what kind of controls will be used and where will they be placed. DOE further stated that, since the lifetimes of such controls would not be infinite, it would be essential to put in place effective institutional controls to detect and address failures. This issue should be addressed within the framework of the RFCA 5-year reviews and as part of the stewardship planning.

A member of the Focus Group stated that, since engineering control would eventually fail, a focus should be placed on obtaining the most cleanup possible now.

Reed noted to the Site representatives that expected lifetimes would be useful to the Focus Group in comparing different end state options involving engineered controls.

The discussion moved to the relationship between water quality protection and human risk protection. A member of the Focus Group noted that water quality protection could drive the cleanup in some areas. DOE responded that that might happen in some areas, but reminded the group that excavation (cleanup) was not the only means being considered to protect water quality (note the discussion on active and passive engineered controls). Members of the Focus Group expressed the need to balance water

quality protection with human risk protection when tradeoffs were discussed. DOE responded that a balance had to be struck that sufficiently protected both.

A member of the Focus Group emphasized the need to meet water quality standards onsite as well as offsite.

Based on the discussion, Reed listed a set of end state questions and issues to track through the future discussions:

What assumptions exist in the baseline

What are the baseline $?

What is current $ estimate?

How good is estimate?

Lifecycle and lifetime of options

Reed then led a brainstorming style discussion on community priorities for the surface water management end state. He compiled a list of priorities from individuals. The list was not discussed or prioritized and did not represent a group opinion or consensus. The individual priorities identified were:

Target Risk level should be 10 -6

Water quality standard should be met offsite

Water quality standard should be met onsite

The program should address long -term failures of controls

The program should produce the most clean up at the beginning so that there will be less reliance on institutional controls

The program should include long-term maintenance and upgrades of engineered controls

Ground water should be addressed as a contributor to surface water quality.

ADJOURNMENT

LeRoy Moore made an administrative note that additional comments on the revised Task 2 report should be sent directly to Russell McAllister.

The RFCA Stakeholders Focus Group meeting was adjourned at 6:35 p.m.

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Appendix A
Participants List

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Appendix B
Joe Legare, U. S. Department of Energy:
Presentation: Engaging in Baseline Discussions

Engaging in Baseline Discussions

- There are fiscal constraints on this project
  - DOE, Congress providing ~$4 billion
  - Continuing financial support based on continuing progress towards closure

- DOE believes that the project has sufficient funding for a safe and compliant cleanup, but not necessarily enough to address all community concerns in all areas.

- The Focus Group is discussing broad end state issues in order to set priorities and make choices.

Balancing Resources, Scope and Implementation Approach

- Baseline is best estimate of how to achieve the contract scope of work.
  - DOE believes the cost estimates are about right
  - Cost and Schedule are a stretch, but achievable

- Contract sets the terms and conditions of the scope of work
  - KH is responsible and accountable for the scope of work

- Contract reflects complex balance
  - getting the target cost and schedule right
  - tough goals; high fee for meeting those goals
  - safety

- DOE has flexibility to negotiate changes to contract scope

The Bottom Line

- Achieving contract scope at target cost and schedule is challenging
  - several independent validations have agreed it will be a tough challenge; KH's actual performance verifies this
- DOE and this community have an interest in getting the core scope of work achieved, on time and on budget
- DOE and this community have an interest in seeing any efficiencies or cost savings used to achieve the core scope, not in expanding the scope
- Finding ways to do more work will involve creativity and setting priorities

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Appendix C
Alan Parker, Kaiser-Hill LLC:
Closure Contract and Baseline

Closure Contract and Baseline

Alan Parker
President & CEO
RFCA Focus Group Meeting
June 20, 2001

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Contract vs. Baseline

- Baseline is Kaiser-Hill's best estimate for the activities, cost, and schedule to achieve scope of work defined in contract
- Contract lays out scope of work that the DOE is asking Kaiser-Hill to perform
- Contract places emphasis on performing work safely and at the lowest cost
  - Significant impacts from safety or compliance issues
  - KH incentivized to reduce cost

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Uncertainties in Baseline

- Complexity and type of work has never been done in the DOE complex
- Kaiser-Hill responsible for "as is" condition and any unexpected conditions
- Baseline contains range of costs estimates that vary from activities that are well understood to activities that are not
  - Many activities are well understood, such as:
    - Support costs
  - Other activities not well understood, such as:
    - Underbuilding contamination
    - Total waste quantities

Total project cost can vary up or down and KH must accommodate

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Key Areas of Uncertainty

Nuclear Operations:

- PuSPS production schedule

D&D:

- Nature and extent of contamination in buildings
- Assumptions regarding learning curve

Government Furnished Services & Items(GFS&I):

- Receiver sites available in timely manner
- Certified containers delivered in timely manner

ER:

- Subsurface contamination (UBC, process lines, etc.)

Waste Management:

- Total waste volumes and types
- Orphan waste
- TRU Waste shipping schedule

Administrative:

- Benefits costs

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Key Efficiencies Needed

Nuclear Operations:

- Achieve planned PuSPS schedule (at least 8 cans per week)
- Close PA as soon as possible

D&D:

- No "serious" surprises
- Uninterrupted D&D operations (no shutdowns)
- Develop more efficient decontamination techniques
- Develop improve size reduction methods

Government Furnished Services & Items(GFS&I):

- Find appropriate receiver sites for orphan waste
- Certified containers
- Adequate transportation

ER:

- Simultaneous characterization using field instruments and remediation
- Early resolution of outstanding open issues

Waste Management:

- Direct waste shipping from project to receiver site (no storage)
- Increase TRU waste shipping capability by building new loading facility

Administrative:

- Consistent benefits costs

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Basis for the $3.9 Billion Estimate for Closure Contract

- Optimistic outcome for all areas of uncertainty
- Closure contract scope is derived from the RFCA, the May 1999 Baseline, and other DOE requirements
- The $3.9 billion target cost represented negotiated judgement of DOE and KH at the signing of contract to achieve contract scope of work
- Contract allows for negotiated changes

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Basis for the $3.9 Billion Estimate

Physical Completion of Contract is defined as:

- Buildings demolished
- IHSSs remediated / dispositioned
- Wastes removed (expect materials left in place)
- Closure caps completed (if required)
- Buildings foundations, utilities, pavement covered by minimum 3 feet of fill
- On-site surface water meets standards for open space use
- Water leaving site meets Colorado Water Standards as of 10/99

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Total Cost Projection

Project	Cost (in Thousands)
371 Complex Project	367,339
707 Complex Project	265,983
B771/774 Closure Project	229,826
B776/777 Closure Project	268,913
Industrial and Site Services Project	734,542
Material Stewardship Project	946,494
Remediation Project	296,408
Engr, Environ, Safety & Quality Programs	262,767
Support Project	590,389
TOTAL	**3,962,662**

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Current Project Performance

Project Performance to Date (Cumulative)

Project	Cost Variance (In Millions)	Cost Variance %	Schedule Variance (In Millions)	Schedule Variance %
371 Complex Project	-7,445	-8.8%	-5,052	-5.6%
707 Complex Project	-1,868	-3.0%	-2,726	-4.2%
B771/774 Closure Project	-5,128	-7.2%	-2,870	-3.9%
B776/777 Closure Project	477	1.0%	3,658	7.9%
Industrial and Site Services Project	9,001	9.5%	2,095	2.3%
Material Stewardship Project	-12,567	-5.5%	-22,763	-9.1%
Remediation Project	51	1.1%	-548	-10.8%
Engr, Environ, Safety & Quality Programs	6,506	9.5%	0	0.0%
Support Project	2,031	1.9%	0	0.0%
Totals:	**-8,942**	**-1.2%**	**-28,206**	**-3.5%**

Cumulative total May 2001

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Current Performance (cont.)

Key contributors to the cost and schedule variance:

- Building shutdowns/slowdowns due to safety and compliance issues
- Delay in PuSPS start-up
- Delay in PA Reconfiguration
- Less than planned TRU shipments
- Less than planned low-level mixed waste shipments

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Is the $3.9B Estimate reasonable for Scope of Work?

Several independent audits have been conducted including Ernst &Young (Sept. 1999), Burns and Roe (June 2001), the GAO (1999, 2001) and they all concluded:

- Estimating this type of work is extremely difficult and has never been done before
- Timely delivery of the GFS&I requirements will be a significant challenge
- The total cost of the project is integrated with the schedule and appears to be reasonable

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Summary

- Successful completion of closure work is in our collective best interest and will create an asset for the community
- Completing the work on schedule and on budget will be an incredible challenge, but is possible
- We will not know the final cost until the end of the project
- We are currently behind schedule but optimistic about future

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