

J. M. Roberson
March 25, 1994
94-RF-03555
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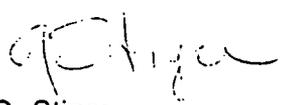
- delay discussion on milestones impacted by stop work until resolution of this issue is reached.
- request extension of the near term milestones for OU 9 and OU 12 for which we have a solid basis for the request.

In addition, we recommend DOE consider the following, particularly if the regulators do not appear willing to forego fines and penalties for the remaining Industrial Area (IA) milestones based on the above:

- Offer accelerated actions as options for no more Notices of Violations (NOVs). Also, request development of an interagency team to scope schedule and develop milestones for recommended accelerated actions.
- Offer resolution of issue items, as good faith effort, to improve time and cost of remediation.
- Do not negotiate any current IAG milestone past the Proposed Plan on OUs 1 and 2.
- Add Technical Memorandum Milestones To Schedule — This will give intermediate steps between the Table 6 milestones. These probably shouldn't carry as much weight as the Table 6 milestones.

Attachment 5 presents more detailed OU-specific strategies related to missed milestones.

Direct any questions to me at extension 8540 or digital page 6150 or Wanda Busby at extension 8522 or digital page 5129.


S. G. Stiger
Associate General Manager
Environmental Restoration Management
EG&G Rocky Flats, Inc.

WSB:tjr

Orig. and 1 cc – J. M. Roberson

Attachments:
As Stated

cc:
F. R. Lockhart – DOE/RFO
M. H. McBride – “ “
R. J. Schassburger – “ “
M. N. Silverman – “ “
L. W. Smith – “ “

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IAG COMPLIANCE STATUS REPORT - TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
1	Submit Final Phase III RFI/RI			5/25/94		5/25/94	Potential to be missed if changes are required in Risk Assessment
1	Submit Draft CMA/S- Report	3/31/93	8/25/94	11/11/94		11/14/94	Extension request being negotiated, date to be revised
1	Submit Draft PP	9/27/93	11/22/94	2/8/95		9/14/95	Extension request being negotiated, date to be revised
1	Submit Final CMA/S- Report	9/27/93	11/22/94	2/8/95		3/31/95	Extension request being negotiated, date to be revised
1	Submit Final PP	1/4/94	2/24/95	8/8/95		4/1/96	Schedule being revised
1	Submit Draft Responsiveness Summary	5/6/94	6/23/95	1/28/95		9/17/96	Schedule being revised
1	Submit Final Responsiveness Summary	8/3/94	9/22/95	3/8/96		2/25/97	Schedule being revised
1	Submit Draft CAD/RKD	8/3/94	9/22/95	4/12/96		2/25/97	Schedule being revised
1	Submit Final CAD/RKD	11/1/94	12/22/95	7/12/96		10/27/97	Schedule being revised
1	Submit CDR/RI Work Plan	11/1/94		7/12/96		10/27/97	Estimated date, scope as yet unknown
1	Submit Draft Title II Design	7/5/95		3/14/97		2/3/98	Estimated date, scope as yet unknown
1	Submit Final Title II Design	10/3/95		8/21/97		6/3/98	Estimated date, scope as yet unknown
1	Begin Corrective/Remedial Action Construction	5/7/96		8/11/98		5/24/99	Estimated date, scope as yet unknown
1	Complete Corrective/Remedial Action Construction	11/4/97		8/12/99		5/24/01	Estimated date, scope as yet unknown
1	Submit Performance Assessment Report	2/10/98		11/11/00		8/22/01	Estimated date, scope as yet unknown
2	Submit Draft Phase II RFI/RI Report	3/12/93		12/16/93	XX	10/31/94	Missed because of prior year funding shortfall and other issues, as attached
2	Submit Final Phase II RFI/RI Report	8/9/93		5/22/94	XX	3/13/95	Missed because of prior year funding shortfall and other issues, as attached
2	Submit Draft CMA/S- Report to agencies	11/4/93		8/7/95	X	8/15/95	Will be missed as above and because of Stop Work Order
2	Submit Final CMA/S- Report to agencies	5/10/94		12/13/95		10/11/95	Will be missed as above and because of Stop Work Order
2	Submit Draft PP	5/10/94		3/22/96		4/29/96	Will be missed as above and because of Stop Work Order
2	Submit Final PP	8/9/94		6/25/96		11/4/96	Will be missed as above and because of Stop Work Order
2	Submit Responsiveness Summary	12/13/94		11/12/96		4/30/97	Will be missed as above and because of Stop Work Order
2	Submit Final Responsiveness Summary	3/16/95		11/17/97		10/1/97	Will be missed as above and because of Stop Work Order
2	Submit Draft CAD/RKD	3/16/95		2/17/97		10/1/97	Will be missed as above and because of Stop Work Order
2	Submit Final CAD/RKD	6/15/95		4/15/97		6/10/98	Will be missed as above and because of Stop Work Order
2	Submit CDR/RI Work Plan	6/15/95		4/15/97		6/10/98	Estimated date, scope as yet unknown
2	Submit Draft Title II Design	2/15/96		6/15/97		9/9/98	Estimated date, scope as yet unknown
2	Submit Final Title II Design	6/14/96		8/15/97		1/15/99	Estimated date, scope as yet unknown
2	Begin Corrective/Remedial Action Construction	1/20/97		8/1/98		1/6/00	Estimated date, scope as yet unknown

IAG COMPLIANCE STATUS REPORT – TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Due Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
2	Complete Corrective/Remedial Action Construction	7/20/98		3/20/02		1/8/02	Estimated date, scope as yet unknown
2	Submit Performance Assessment Report	10/15/98		5/12/02		4/5/02	Estimated date, scope as yet unknown
2	Subsurface IM/IRA Begin Test 1		2/28/94	2/28/94			Anticipated to be met
2	Subsurface IM/IRA Complete Test 1		5/30/94	5/30/94			Anticipated to be met
2	Subsurface IM/IRA Site 2 Final Test Plan		7/6/94	7/6/94			Anticipated to be met
2	Subsurface IM/IRA Site 1 Pilot Test Report		11/11/94	11/11/94			Anticipated to be met
3	Submit Draft Phase I RFI/RI Report	7/16/93	2/14/94	12/20/94	X	5/22/95	Missed due to Stop Work Order
3	Submit Final Phase I RFI/RI Report	12/13/93	10/21/94	7/18/95		2/7/96	Missed due to Stop Work Order
4	Submit Draft Phase I RFI/RI Report	5/21/93	DELETED	n/a			
4	Submit Final Phase I RFI/RI Report	10/18/93	DELETED	n/a			
4	Submit Draft Phase I Proposed IM/IRA Decision Document	4/14/94	4/14/94	4/13/94			43-day extension requested by CDH
4	Submit Draft Phase II RFI/RI Work Plan	4/22/94		4/13/94		4/22/94	
4	Submit Final Phase I Proposed IM/IRA Decision Document	9/12/94	6/24/94	6/2/94		6/24/94	43-day extension requested by CDH
4	Submit Final Phase II RFI/RI Work Plan	9/19/94		6/2/94		9/19/94	
4	Submit IM Design Work Plan	5/24/95	DELETED	n/a			
4	Submit IM/IRA Responsiveness Summary	1/25/95	11/1/94	8/31/94		11/1/94	43-day extension requested by CDH
4	Submit Phase I Final IM/IRA DD and Final Responsiveness Summary	4/24/95	1/13/95	11/3/94		1/13/95	43-day extension requested by CDH
4	Submit Phase I IM/IRA Implementation Document	2/26/96	DELETED	n/a			
4	Submit Draft Phase III RFI/RI Report	4/16/96		4/16/96		4/16/96	
4	Submit Final IM Title II Design	6/24/96	2/10/95	12/13/94		2/10/95	43-day extension requested by CDH
4	Submit Final Phase III RFI/RI Report	9/11/96		9/11/96		9/11/96	
4	Submit Draft Phase II CMS/FS Report	12/5/96		12/5/96		12/5/96	
4	Begin Phase I IM/IRA Construction	1/28/97	9/27/95	7/7/95		9/27/95	
4	Submit Final Phase II CMS/FS Report	6/9/97		6/9/97		6/9/97	
4	Submit Draft Phase II PP	6/9/97		6/9/97		6/9/97	
4	Submit Final Phase II PP	9/5/97		9/5/97		9/5/97	
4	Submit Draft Phase II Responsiveness Summary	1/16/98		1/16/98		1/16/98	
4	Submit Final Phase II Responsiveness Summary	4/14/98		4/14/98		4/14/98	
4	Submit Draft Phase II CAD/ROD	4/14/98		4/14/98		4/14/98	

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IAG COMPLIANCE STATUS REPORT - TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
4	Submit Final Phase II CAD/PAID	7/14/98	7/14/98	7/14/98		7/14/98	
4	Submit CID/RD Work Plan	7/14/98	7/14/98	7/14/98		7/14/98	
4	Submit Draft Title II Design	3/15/99	3/15/99	3/15/99		3/15/99	
4	Submit Final Title II Design	6/14/99	6/14/99	6/14/99		6/14/99	
4	Begin CA/RA Construction	1/18/00	1/18/00	1/18/00		1/18/00	
5	Submit Draft Phase I RFI/RI Report	11/30/93		5/11/95		5/11/95	Due to Stop Work Order
5	Submit Final Phase I RFI/RI Report	5/3/94		11/14/95		4/1/98	
6	Submit Draft Phase I RFI/RI Report	8/4/93	6/10/94	4/19/95		4/19/95	Will miss due to Stop Work Order
6	Submit Final Phase I RFI/RI Report	1/7/94	1/18/94	11/20/95		11/20/95	Will miss due to Stop Work Order
6	Submit Draft IAW/RA		1/22/93	11/22/93			
6	Submit Draft IAW/RA Decision Document		1/10/94	n/a		X	NOV issued, milestone not accepted
6	Submit Final Pond Water IAW/RA		8/11/94	n/a			Milestone not accepted
7	Submit Draft Phase I RFI/RI Report	10/12/93		12/20/93		X	Proposed to delete, under Stop Work Order
7	Submit Final Phase I RFI/RI Report	3/16/94		9/29/94			Proposed to delete, under Stop Work Order
7	Submit Draft Phase II RFI/RI Work Plan	9/13/94		8/7/95			Proposed to delete, under Stop Work Order
7	Submit Draft Phase I Proposed IAW/RA PID	11/1/94		3/5/95		5/3/95	New date due to revised scope
7	Submit Final Phase II RFI/RI Work Plan	2/15/95		4/15/96			Proposed to delete, under Stop Work Order
7	Submit Final Phase I Proposed IAW/RA PID	4/6/95		7/3/95		7/5/95	New date due to revised scope
7	Submit IAW/RA Responsiveness Summary	8/14/95		10/4/95		10/4/95	New date due to revised scope
7	Submit Phase I IAW/RA PID and Responsiveness Summary	11/9/95		2/9/96		2/9/96	New date due to revised scope
7	Submit IAW/Design Work Plan	12/13/95		8/8/95		8/8/95	New date due to revised scope
7	Submit Phase I IAW/RA Implementation Document	8/13/96		4/4/96		4/4/96	New date due to revised scope
7	Submit Draft Phase II RFI/RI Report	9/9/96		1/16/98			Proposed to delete, under Stop Work Order
7	Submit IAW Title II Design	12/12/96		9/9/96		9/3/96	New date due to revised scope
7	Submit Final Phase II RFI/RI Report	2/11/97		9/24/98			Proposed to delete, under Stop Work Order
7	Submit Draft Phase II CAIS/TS Report	5/9/97		5/25/00			Proposed to delete, under Stop Work Order
7	Begin Phase I IAW/RA Construction	7/17/97		3/5/96		3/6/96	New date due to revised scope
7	Submit Final Phase II CAIS/TS Report	11/4/97		11/4/97			Significant scope reductions
7	Submit Draft Phase II PP	11/4/97		11/4/97			Significant scope reductions

IAG COMPLIANCE STATUS REPORT – TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
7	Submit Final Phase II PP	2/10/98		2/10/98			Significant scope reductions
7	Submit Phase II Responsiveness Summary	6/15/98		6/15/98			Significant scope reductions
7	Submit Final Phase II Responsiveness Summary	9/10/98		9/10/98			Significant scope reductions
7	Submit Draft Phase II CAD/FAD	9/10/98		9/10/98			Significant scope reductions
7	Submit Final Phase II CAD/FAD	12/10/98		12/10/98			Significant scope reductions
7	Submit CDRD Work Plan	12/10/98		12/10/98			Significant scope reductions
7	Submit Draft Title II Design	8/11/99		8/11/99			Significant scope reductions
7	Submit Final Title II Design	11/9/99		11/9/99			Significant scope reductions
7	Begin CA/RA Construction	6/14/00		6/14/00			Significant scope reductions
8	Submit Draft Phase I RFI/RI Report	2/14/94		11/1/97	XX		Past due, fines and penalties are under dispute
8	Submit Final Phase I RFI/RI Report	7/12/94		2/10/98			
9	Submit Draft Phase I RFI/RI Report	4/11/94		6/15/98		10/25/02	
9	Submit Final Phase I RFI/RI Report	9/6/94		9/10/98		9/16/03	IAG milestone will not be met
9	Submit Draft Phase II RFI/RI Work Plan	3/10/95		9/10/98			Proposed deletion
9	Submit Draft Phase I Proposed IM/IRA DD	5/1/95		12/10/98			Proposed deletion
9	Submit Final Phase II RFI/RI Work Plan	8/7/95		12/10/98			Proposed deletion
9	Submit Final Phase I Proposed IM/IRA DD	9/27/95		8/11/99			Proposed deletion
9	Submit IM/IRA Responsiveness Summary	2/8/96		11/9/99			Proposed deletion
9	Submit Final Phase I IM/IRA DD and Responsiveness Summary	5/7/96		6/14/00			Proposed deletion
9	Submit CDRD Work Plan	6/7/96		6/7/05			Proposed deletion
9	Submit Phase I IM/IRA Implementation Document	2/7/97		2/7/06			Proposed deletion
9	Submit IM Title II Design	6/9/97		6/7/06			Proposed deletion
9	Submit Draft Phase II RFI/RI Report	7/9/97		5/7/07			Proposed deletion
9	Submit Final Phase II RFI/RI Report	12/1/97		1/22/08			Proposed deletion
9	Begin Phase I IM/IRA Construction	1/13/98		8/30/07			Proposed deletion
9	Submit Draft Phase II CMS/FS Report	3/10/98		6/17/09			Date not yet determined
9	Submit Final Phase II CMS/FS Report	9/3/98		2/24/10			Date not yet determined
9	Submit Draft Phase II PP	9/3/98		2/24/10			Date not yet determined
9	Submit Final Phase II PP	10/5/98		9/2/10			Date not yet determined

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IAG COMPLIANCE STATUS REPORT – TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
9	Submit Draft Phase II Responsiveness Summary	3/10/99		2/28/11			Date not yet determined
9	Submit Final Phase II Responsiveness Summary	6/7/99		8/1/11			Date not yet determined
9	Submit Draft Phase II CAD/FAD	6/7/99		8/1/11			Date not yet determined
9	Submit Final Phase II CAD/FAD	9/3/99		4/9/12			Date not yet determined
9	Submit CD/RD Work Plan	9/3/99		4/9/12			Date not yet determined
9	Submit Draft Title II Design Plans	5/5/00		12/3/12			Date not yet determined
9	Submit Final Title II Design Plans	8/4/00		3/8/13			Date not yet determined
9	Begin CA/RA Construction	3/9/01		11/11/13			Date not yet determined
10	Submit Draft Phase I RFI/RI Report	8/25/94		11/2/15		11/2/15	IAG milestone will not be met
10	Submit Final Phase I RFI/RI Report	1/30/95		7/19/16		7/7/16	IAG milestone will not be met
10	Submit Draft Phase I Proposed IM/IRA DD	5/26/95		2/26/18			IM/IRA contingent on Phase I Assessment
10	Submit Draft Phase II RFI/RI Work Plan	6/27/95		5/25/17			IM/IRA contingent on Phase I Assessment
10	Submit Final Phase I Proposed IM/IRA DD	10/24/95		10/26/18			IM/IRA contingent on Phase I Assessment
10	Submit Final Phase II RFI/RI Work Plan	11/21/95		2/2/18			IM/IRA contingent on Phase I Assessment
10	Submit IM/IRA Responsiveness Summary	3/6/96		5/24/19			IM/IRA contingent on Phase I Assessment
10	Submit Final Phase I IM/IRA DD and Responsiveness Summary	6/4/96		8/22/19			IM/IRA contingent on Phase I Assessment
10	Submit CD/RD Work Plan	7/5/96		9/24/19			IM/IRA contingent on Phase I Assessment
10	Submit Phase I IM/IRA Implementation Document	3/6/97		5/6/20			IM/IRA contingent on Phase I Assessment
10	Submit IM Title II Design	7/7/97		9/23/20			IM/IRA contingent on Phase I Assessment
10	Submit Draft Phase II RFI/RI Report	10/23/97		11/9/20			IM/IRA contingent on Phase I Assessment
10	Begin Phase I IM/IRA Construction	2/9/98		12/17/21			IM/IRA contingent on Phase I Assessment
10	Submit Final Phase II RFI/RI Report	3/30/98		7/27/21			Proposed deletion
10	Submit Draft Phase II CMS/F/S Report	6/25/98		3/28/23		1/15/02	
10	Submit Final Phase II CMS/F/S Report	12/22/98		11/29/23		3/12/02	
10	Submit Draft Phase II PP	12/22/98		11/29/23			Date not yet determined
10	Submit Final Phase II PP	3/30/99		6/13/24			Date not yet determined
10	Submit Draft Phase II Responsiveness Summary	8/3/99		12/2/24			Date not yet determined
10	Submit Final Phase II Responsiveness Summary	10/28/99		5/9/25			Date not yet determined
10	Submit Draft Phase II CAD/FAD	10/28/99		5/9/25			Date not yet determined

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IAG COMPLIANCE STATUS REPORT – TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
10	Submit Final Phase II CAD/FAD	2/1/00		1/19/26			Date not yet determined
10	Submit CD/RD Work Plan	2/1/00		1/19/26			Date not yet determined
10	Submit Draft Title II Design Plans	9/28/00		9/11/26			Date not yet determined
10	Submit Final Title II Design Plans	1/5/01		12/11/26			Date not yet determined
10	Begin CA/RA Construction	8/2/01		8/23/27			Date not yet determined
11	Submit Draft Phase I RFI/RI Report	9/20/94	5/19/95	4/18/95		5/19/95	Integrated RI covers Phase I and II
11	Submit Final Phase I RFI/RI Report	2/22/95	7/20/95	1/3/96		7/20/95	Integrated RI covers Phase I and II
11	Submit Draft Phase II RFI/RI Work Plan	8/21/95		8/21/95			Proposed for deletion assuming NA determination
11	Submit Draft Phase I Proposed IM/IRA DD	10/10/95		10/10/95			Proposed for deletion assuming NA determination
11	Submit Final Phase II RFI/RI Work Plan	1/24/96		1/24/96			Proposed for deletion assuming NA determination
11	Submit Final Phase I Proposed IM/IRA DD	3/14/96		3/14/96			Proposed for deletion assuming NA determination
11	Submit Phase I IM/IRA Responsiveness Summary	7/22/96		7/22/96			Proposed for deletion assuming NA determination
11	Submit Phase I Final IM/IRA DD and Final Responsiveness Sum.	10/17/96		10/17/96			Proposed for deletion assuming NA determination
11	Submit IM Design CD/RD Work Plan	11/18/96		11/18/96			Proposed for deletion assuming NA determination
11	Submit Phase I IM/IRA Implementation Document	7/22/97		7/22/97			Proposed for deletion assuming NA determination
11	Submit Draft Phase II RFI/RI Report	8/13/97		8/13/97			Proposed for deletion assuming NA determination
11	Submit IM Title II Design	11/18/97		11/18/97			Proposed for deletion assuming NA determination
11	Submit Final Phase II RFI/RI Report	1/16/98		1/16/98			Proposed for deletion assuming NA determination
11	Submit Draft Phase II CMS/FS Report	4/15/98		4/15/98			Proposed for deletion assuming NA determination
11	Begin Phase I IM/IRA Construction	6/24/98		6/24/98			Proposed for deletion assuming NA determination
11	Submit Final Phase II CMS/FS Report	10/9/98		10/9/98			Proposed for deletion assuming NA determination
11	Submit Draft Phase II PP	10/9/98		10/9/98			Proposed for deletion assuming NA determination
11	Submit Final Phase II PP	1/21/99		1/21/99			Proposed for deletion assuming NA determination
11	Submit Phase II Responsiveness Summary	5/25/99		5/25/99			Proposed for deletion assuming NA determination
11	Submit Final Phase II Responsiveness Summary	8/20/99		8/20/99			Proposed for deletion assuming NA determination
11	Submit Draft Phase II CAD/FAD	8/20/99		8/20/99			Proposed for deletion assuming NA determination
11	Submit Draft Phase II CAD/FAD	11/18/99		11/18/99			Proposed for deletion assuming NA determination
11	Submit CD/RD Work Plan	11/18/99		11/18/99			Proposed for deletion assuming NA determination
11	Submit Draft Title II Design Plans	7/21/00		7/21/00			Proposed for deletion assuming NA determination

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IAG COMPLIANCE STATUS REPORT – TABLE VI MILESTONES ONLY

OU	Description	Original IAG Due Date	Revised IAG Date	Expected Completion Date	Past Due (X) or Missed (XX)	ADS Date	Comments
11	Submit Final Title II Design Plans	10/19/00		10/19/00			Proposed for deletion assuming NA determination
11	Begin Phase II CA/RA Construction	5/24/01		5/24/01			Proposed for deletion assuming NA determination
12	Submit Draft Phase I RFI/RI Report	4/20/94		3/11/99		3/11/99	IAG milestone will not be met
12	Submit Final Phase I RFI/RI Report	9/15/94		11/17/99		11/17/99	IAG milestone will not be met
13	Submit Draft Phase I RFI/RI Report	8/8/94		3/24/99		3/24/99	Actual date contingent on Risk Assessment
13	Submit Final Phase I RFI/RI Report	1/11/95		12/2/99		12/2/99	Actual date contingent on Risk Assessment
14	Submit Draft Phase I RFI/RI Report	12/20/94		2/13/01		2/13/01	Actual date contingent on Risk Assessment
14	Submit Final Phase I RFI/RI Report	5/23/95		10/22/01		10/22/01	Actual date contingent on Risk Assessment
15	Submit Draft Phase I RFI/RI Report	8/1/94		8/1/94		8/1/94	
15	Submit Final Phase I RFI/RI Report	1/4/95		1/4/95		1/4/95	

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ATTACHMENT 1.1

OPERABLE UNIT (OU) SPECIFIC ASSUMPTIONS

OU 1

1. Antimony and Manganese will not be added to the contaminant list and will not require remediation. If this is not true, approximately two months and \$20,000 will be required to modify the Revised Final Phase III RFI/RI Report. In addition, millions of dollars would also potentially be required to treat these metals.
2. ARARs will be established prior to July, 1994.

OU 2

1. The schedule assumes that the Baseline Risk Assessment will take approximately 120 days after lifting the Stop Work Order. Anticipated changes in HHRA scope will require additional schedule and funding.

OU 3

1. Assume that one year's worth of air monitoring data will be required for the final RFI/RI Report to fulfill the work plan requirement.
2. Anticipated changes in HHRA scope will require additional schedule and funding.

OU 5

1. An approved process for acceleration of No Further Action (NFA) IHSSs will be in place.
2. An approved IM/IRA for soils removal including approved ARARs will be in place.

OU 6

1. An approved process for acceleration of No Further Action (NFA) IHSSs will be in place.
2. An approved IM/IRA for soils removal including approved ARARs will be in place.
3. Soils contaminated above risk based levels will be placed into a CAMU within OU 7 for IHSSs 166.1, 166.2, 166.3, and 167.1

OU 7

1. The CAMU concept will be used for removal of soils or sediments in and around the East Landfill Pond that have concentrations of contaminants above risk based levels. Soils and sediments will be placed within the Present Landfill prior to landfill closure.
2. The East Landfill Pond is not considered "waters of the U.S." under section 404 of the Clean Water Act.
3. East Landfill Pond water will be treated with the leachate water.
4. Treated water and leachate from the East Landfill Pond will be released downstream or piped to holding tanks not funded under this project.

5. ARARs will be based upon current sitewide benchmarks.

Industrial Area Operable Units - OUs 8, 9, 10, 12, 13, and 14

1. Under building contaminated areas will not be investigated as part of the Industrial Area OUs.
2. Storage of temporary equipment within an IHSS will not limit field work access and will be removed. Support for removal of materials from will be provided by Plant Support Services at the direction of ER.
3. Non-radioactive laboratory sample turnaround time will be 75 days, and radioactive sample turnaround time will be 90 days.
4. Although underground utilities will affect intrusive activities, it is anticipated that work-arounds will be available, so the presence of competing underground utilities will not entirely preclude intrusive activities.
5. Initial unvalidated results will be used for the draft writing of technical memorandums (TMs) and reports.
6. Environmental Evaluation (EE) field work, initial surveys, and EE reports are independent of one another. The EE field work will be integrated and will occur with the Integrated OUs. One EE will be conducted for the entire Industrial Area.
7. Survey location/grid layout/utility location times are built into each task that will require survey grids for sampling, radiation surveys, utility clearance, etc.
8. All field activities are integrated amongst OUs 8, 9, 10, 12, 13 and 14 with one implementing subcontractor.
9. Any additional supporting NEPA documentation (i.e. Categorical Exclusions) will be granted within 90 days of requested initiation and will not delay field activities.
10. CDH and EPA comment periods for TMs will not exceed 15 working days from the document's submittal date.
11. CDH and EPA comments on TMs will be resolved within 10 working days of official receipt.
12. DOE/RFO official review of the finalized TM will take 15 working days and transmittal of TMs to the regulatory agencies by DOE/RFO will not exceed three working days.
13. Comments on the TMs will be resolved in 5 working days and approval by CDH and EPA will require and additional 5 working days after their receipt of the finalized document.
14. Potential Areas of Concerns (PAC) and Potential Incidents of Concern (PIC) identified by EPA and CDH will not be investigated until a Technical Memorandum can be developed to amend the existing Phase I RFI/RI Work Plans. The development of this Technical Memorandum and subsequent funding for investigation of the PICs and PACs are included within the scope of the Industrial Area OUs budgets.

OU 11

1. Revised scope will be approved using accelerated Remedial Investigation (RI) concept.

2. No further action alternative will be acceptable.
3. The RI report will form the basis of the documentation to support the no action alternative.

OU 15

1. No outside building fieldwork will be required.
2. RCRA closure acceptable with NFA.

FS ASSUMPTIONS 1, 2, 3, 5, and 6

1. No new scope will be added to the Feasibility Study.
2. All OUs will require an Environmental Assessment instead of an EIS.
3. ARARs will be settled by July, 1994.
4. Baseline risk Assessment must be completed prior to start of the Phase II FS work
5. Draft COCs will be used for the first FS Tech Memo and must be completed by:
 - OU 1 – completed
 - OU 2 – completed
 - OU 3 – July 1, 1994
 - OU 5 – August 17, 1994
 - OU 6 – July 6, 1994

ATTACHMENT 1.2

ASSUMPTIONS: PROGRAMMATIC

1. The existing IAG will remain in effect. Work will be planned to minimize milestone slippage; i.e., maximize compliance with legal requirements. Identify planned accelerated actions (potential early actions, no further actions, etc.)
2. All requested funds will be obtained.
3. Approval for the Generic Soils IM/IRA will be received in FY 94.
4. The FS schedule currently in review/approval by the DOE and Agencies will be used for OUs 1, 2, 3, 5, and 6, and in out years for the Industrial Area OUs.
5. ARARs will be established and approved prior to July 1994.
6. Laboratories will have the capacity to handle all ERM samples.
7. HHRA stop work order will be lifted April 1, 1994. Additional scope requirements will require schedule and funding increases. Related scope that can't be accomplished in FY94 will slip into FY 95.
8. Storage facilities will be available for all types and quantities of waste. The Waste Management organization and the Environmental Operations Management organization will be provided with types, quantities, and time periods when waste is projected to be generated.
9. Any further major RFP labor force reductions will have minimal impact on ER Project activities.
10. Projected resources budgeted for matrix organizations will be discussed with appropriate managers and will be consistent with RFP labor restructuring plans.
11. RFP building related work scope will be in agreement with RFP strategic plan and/or will be discussed with and approved by the Transition Planning organization.
12. ERM will continue to use subcontractors for field activities/facility operations and to augment staff for peak periods.
13. An approved IM/IRA framework for surficial soils including ARARs will be available for accelerated actions.
14. Streamlined efforts for No Further Actions will be developed under a pre-approved process eliminating the IHSS from further consideration. NFAs will constitute "mini RODs" and no longer be included in the OU.
15. The OUs that are currently impacted by the stop work order will need more than a day-for-day schedule extension if scope is increased for the Human Health Risk Assessment.
16. The Baseline Risk Assessment/RFI/RI Report must be approved prior to the start of the Phase II portion of the FS.
17. The Public Comment Period including the Public Hearing will not exceed 60 calendar days.
18. The issue of Sovereign Immunity for groundwater will be resolved in May 1994.

ATTACHMENT 1.3

DOE HEADQUARTERS PLANNING ASSUMPTIONS

1. All issues narrated in the FY 96 ADSs are to be coordinated with the RF site integrated road map and the Integrated Planning Program (IPP). These issues will be tracked by the Rocky Flats and Albuquerque production division and reported by DOE Rocky Flats in the Progress Tracking System (PTS) Reports.
2. DOE Order 4700.1, Change 1 (06-02-92), will be fully implemented for the RF Environmental Restoration (ER) Major System Acquisition (MSA) project and is to be accomplished in accordance with the RF ER MSA project.

ATTACHMENT 1.4

ROCKY FLATS PLANT
ENVIRONMENTAL RESTORATION PROGRAM
ASSUMPTIONS/GUIDANCE FOR DEVELOPMENT OF FY 1996-FY 2000 ADSs

1. The general and specific guidance in the Draft Budget Formulation and Activity Data Sheet Development Field Guidance for the FY 1996 Planning and Budget Cycle (no date) is to be followed.
2. As stated in the guidance document, the FY96 Program scenario and ADS funding allocations must be based on the FY 95 ADSs that support the FY 95 President's budget that will be sent to Congress in early February. FY94 changes can be reflected in the ADSs only after the changes have received final DOE approval. Anticipated changes from activities such as the strategic planning effort and IAG renegotiations are not to be reflected in the ADSs.
3. Total RF ER target funding levels for FY 1996-FY 2000 shall be at the levels presented in the ER Program Funding Control Table dated January 13, 1994.
4. Prioritization of Program activities and assembly of activities in priority order to develop the decrement, target, and planning level scenarios for the ADSs is critical. Close attention must be paid to the guidance for development/definition of the FY96 program plans at the three different funding levels. This guidance is presented on pages 7-10 and in the Budget File and Narrative sections of attachment 7 (pg. 64-71) of the guidance document. The funding levels for the FY96 RF ER Program are:

Decrement level	\$125,902 K	(Target level less 15%)
Target level	148,120 K	
Planning level	162,932 K	(Target level plus 10%)

To develop the Program scenarios, a general priority order and strategy must first be developed, e.g. 1) fund O&M of all IRAs, 2) fully fund OUs 1-6, 3) fund IA/IRA, etc. The detailed prioritization strategy shall be developed from the general assumptions and guidance herein. After the priority strategy is developed, each ADS must be broken down into a small number of discrete major activities that stand alone. For example, an OU might be broken down into the following major activities for the planning year (FY96): 1) Complete RI Report, 2) Begin FS, 3) Complete IRA construction and start-up testing, and 4) Operate IRA. Cost estimates including contingency for each major activity must be developed. Next all program activities from all ADSs must be assembled in priority order. Activities from the top of the list are selected until the program decrement level is reached. Additional activities are selected to reach the target level and planning levels. The result may be that all activities in some ADSs are in the decrement level, while activities in other ADSs may be in the planning level or a combination of levels.

Particular attention shall be paid to the prioritization of sitewide activities in ADS 1012 and on-site surface water management activities in ADS 1264. The drivers, justification, and verification that results from the sitewide activities will be used and will be completed, in time, for use by operable unit assessment activities shall be carefully reviewed, and activities not supporting operable unit activities shall be eliminated.

The number of discrete major activities must be kept to a manageable number to keep the planning process under control. At each step of the process, RFO/ER must be kept informed of progress. The detailed prioritization strategy shall be delivered to RFO for approval by

February 9, 1994. The list of all program activities in priority order with cost estimates for each activity (including contingency) shall be delivered to RFO for approval on February 25, 1994. Individual major activities lists for each ADS shall also be delivered at this time. The lists shall be similar in appearance to Figure 1 on page 9 of the EM guidance document.

5. All ER funding is operating expense (OE).
6. Current projected milestone completion dates will be used so that funding requests are consistent with the projected completion dates. For those milestones where IAG completion dates are earlier than the projected dates, a statement stating that the IAG date cannot be met shall be included in the milestone description field. This is consistent with the FY 95-99 ADSs.
7. ER shall fund the design, construction, and operation of facilities for the treatment of contaminated material generated by ER remedial action activities. Contaminated waste/residues resulting from the operations of these facilities shall be used to the extent possible. Details of the Rocky Flats EM-30/EM-40 interface are being worked out by the committee formed to implement the HQ EM-30/EM-40 Memorandum of Understanding.
8. Funding for the Oxnard Facility (ADS 1263) shall be the same as the funding in the FY 95-FY 99 Oxnard ADS.
9. Assume that the IA IM/IRA plan will be accepted by the regulatory agencies and authorization for implementation will be granted. Cost estimate for implementation of the IA IM/IRA will be based on documented assumptions, i.e., no placeholder funds allowed.
10. Assume that the risk assessment stop work order will be lifted by a specific date.
11. Assume that all ER activities will not be hindered by lack of on-site waste/materials storage capacity.
12. Planning, monitoring, control, and reporting activities shall continue at current levels.
13. Even though the assessment activities of the IA operable units (OUs 8, 9, 10, 12, 13, and 14) are integrated, the ADSs for each of these OUs must stand alone. Each ADS must describe its specific activities and present its own funding requests. References can be made that activities are integrated, but each ADS must stand alone.
14. Careful review of the information management, quality assurance, procedure development library services, etc. activities in ADS 1233 should be made to ensure that each activity is required to support operable unit assessment and remediation activities. Non-essential activities should be eliminated, and other activities reduced to levels that meet, but do not exceed, required levels.

<u>Activity</u>	<u>Original IAG Assumption</u>	<u>Actual</u>	<u>Example</u>																		
Procurement	A single 42 day activity through life cycle: Ex. OU7 1 Procurement through construction.	OCI issues; RFI/RI implementation required different subcontractor than RFI/RI Work Plan development	<u>Ideal Procurement Lead Times (in work plans)</u> <table> <tr> <td><\$100K</td> <td>\$100K-\$1M</td> <td>>\$100 million</td> </tr> <tr> <td>16</td> <td>24</td> <td>44</td> </tr> </table> (Ideal seldom happens) (Modifications same as above)	<\$100K	\$100K-\$1M	>\$100 million	16	24	44												
<\$100K	\$100K-\$1M	>\$100 million																			
16	24	44																			
Document Review Times	Original CDH/EPA Reviews scheduled for 21 days for Work Plans, 42 days for RI reports; No review times for HHRA TMs	Review times exceed these times by up to 5 times; HHRA TM's have taken up to 4 months; Numerous review/revision cycles rather than one.	OU8 RFI/RI WP in excess of 1 year																		
7A Work Scope Increases	Table VI Milestone developed prior to detailed scoping and RFI/RI Work Plan development	Scope detailed in RFI/RI work plans is significantly greater than what was in original baselines	<table> <tr> <td><u>OU</u></td> <td><u>Additional Scope</u></td> </tr> <tr> <td>OU7</td> <td>Soil Gas surveys</td> </tr> <tr> <td>OU7</td> <td>Surficial Soil Sample</td> </tr> <tr> <td>OU5/7</td> <td>CPT</td> </tr> <tr> <td>OU5</td> <td>Additional Borings</td> </tr> </table>	<u>OU</u>	<u>Additional Scope</u>	OU7	Soil Gas surveys	OU7	Surficial Soil Sample	OU5/7	CPT	OU5	Additional Borings								
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OU7	Surficial Soil Sample																				
OU5/7	CPT																				
OU5	Additional Borings																				
Lab Turnaround	Original assumptions were 63 days for analysis and 21 days for validation	Laboratory capacities greatly exceeded, especially for rad analyses	<table> <tr> <td></td> <td colspan="2"><u>Average Number of Days</u></td> </tr> <tr> <td></td> <td><u>Analysis</u></td> <td><u>Validation</u></td> </tr> <tr> <td>1990</td> <td>377</td> <td>164</td> </tr> <tr> <td>1991</td> <td>196</td> <td>84</td> </tr> <tr> <td>1992</td> <td>90</td> <td>106</td> </tr> <tr> <td>1993</td> <td>66</td> <td>110</td> </tr> </table>		<u>Average Number of Days</u>			<u>Analysis</u>	<u>Validation</u>	1990	377	164	1991	196	84	1992	90	106	1993	66	110
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	<u>Analysis</u>	<u>Validation</u>																			
1990	377	164																			
1991	196	84																			
1992	90	106																			
1993	66	110																			
Funding	Original assumptions included full funding for compliance with IAG schedules	FY92 funding shortfalls impacted completion of technical baselines	ERM requested \$114.7 million ERM Received \$ 70.0 million																		
		FY93 funding shortfalls impacted IA OU's	<table> <tr> <td></td> <td><u>Compliance</u></td> <td><u>Received</u></td> </tr> <tr> <td>OU's, 8, 9, 10, 2, 13, 14</td> <td>36.6</td> <td>4.7</td> </tr> </table>		<u>Compliance</u>	<u>Received</u>	OU's, 8, 9, 10, 2, 13, 14	36.6	4.7												
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OU's, 8, 9, 10, 2, 13, 14	36.6	4.7																			

7A

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<u>Activity</u>	<u>Original IAG Assumption</u>	<u>Actual</u>	<u>Example</u>
HHRA	None; Scope undefined; Definition of "source" not defined TM development and review not considered	Data aggregation for exposure, COC identification still undecided; Times including stop work order impacts exceeding one year; TM reviews lasting up to four months	HHRA Stop Work Order for OUs 1-7 (OU1 has been released)
Feasibility Studies	Original assumptions call for draft reports within one year. Did not include TS Work Plans, ARARs determination taking 40 days	Current condition schedules; project two years; ARAR issues still pending	<u>IAG</u> OU6 11 months FS Projected 2 years OU1 ARARs not yet established
Nepa	Original IAG schedules did not include scope or schedule for NEPA activities for site characterization. Original EA schedules for IM/IRAs were six months	Categorical exclusions, wellands determinations are included in current schedules EA completions took one year	OU3 schedule impacted by wellands determination OU1/OU2 IM/IRA EEs
Staffing	No constraints on staffing requirements	Significant staffing shortages within EG&G, DOE, EPA, and CDH have impacted response times; EG&G, DOE hiring freezes; CDH staffing shortfalls	1993 ERM staffing shortfall 40%; 1994 ERM staffing shortfall 20%

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X
B

ATTACHMENT 2

DETAILED MILESTONE DELAY INFORMATION BY OPERABLE UNIT (OU)

OU 1

No IAG Table VI milestones have yet been missed, but many have been extended.

The IAG Milestone for the Draft CMS/FS Report will probably be missed. EPA and CDH recently approved a schedule extension request but deleted EG&G and DOE review times and extended CDH and EPA review times. In addition, disagreement over the EPA requested inclusion of manganese and antimony as contaminants have caused additional schedule slippage. If these metals are included as contaminants, millions of dollars may be needed to treat these naturally occurring metals. A new schedule is being created to streamline as much of the FS as possible.

All downstream milestones may also slip if review times for EG&G and DOE RFO are not allowed and if an extension for the amount of time spent attempting to resolve the antimony and manganese issue is not granted. In addition, duration of tasks in the Proposed Plan, ROD and later milestones are currently being reviewed and will be revised to reflect current information. These durations may not be sufficient to allow completion of the task.

OU 2

The March 12, 1993 IAG milestone for submittal of the Draft OU 2 Phase II RFI/RI Report was missed. A request for an extension of the milestone was denied by EPA. The extension request to DOE is fully described in the attachment to a letter addressed to James K. Hartman dated February 26, 1993 (93-RF-2402). In summary the delays were caused by the following:

- Extensive security requirements were in effect at plantsite during the Persian Gulf War. Mobilization of equipment and security clearances of personnel were significantly delayed. Field operations could not take place without the necessary personnel and equipment.
- The bedrock program that was required for the Phase II RFI/RI Report was not funded in FY 92. This program was streamlined using the observational approach and conducted in FY 93.
- Substantial additional work scope, including surficial soil sampling required for the HHRA, was added to the originally scheduled scope of work.
- DOE required inclusion of a NEPA categorical exclusion prior to starting field activities.

The August 9, 1993 IAG milestone for submittal of the Final OU 2 Phase II RFI/RI Report was missed because of the delays encountered in preparation of the draft report. Additionally, the Stop Work Order was in effect.

The November 4, 1993 IAG milestone for submittal of the Draft OU 2 CMS/FS Report was missed because of the delays encountered in preparation of the draft report and the Stop Work Order.

All remaining OU 2 Milestones will need to be extended because of the Stop Work Order. The time spent in the Stop Work mode is lost time and can not be recovered. Additional time will be required to define the expected new scope of work, procure subcontractors and perform all the necessary functions prior to starting work. The actual time required before resumption of 100% of the RI/FS process will be longer than that spent in the stop work mode. The attached expected completion dates assume that one risk assessment will be performed for OU 2.

There are several actions that are being performed and will be performed in the future in spite of the Stop Work Order. These are detailed in the Acceleration Attachment.

All IM/IRA milestones are anticipated to be met.

OU 3

An extension was requested and granted due to the project delay caused by difficulties in gaining access to all of the sites indicated in the approved work plan. Additional delays were caused by the presence of a pair of bald eagles which prevented full implementation of the field work.

Since the approval of these extended milestones a stop work order was implemented until issues regarding the human health risk assessment are resolved. This stop work order which was implemented on July 23, 1993 has further delayed the project.

Current schedule assumptions are that the stop work order will be rescinded by April 1, 1994. If this assumption is correct, the new milestones may be implemented as follows:

- Submit Draft Phase I RFI/RI Report December 20, 1994
- Submit Final Phase I RFI/RI Report July 18, 1995

OU 5

The major reason presented to the regulatory agencies for a 13 month extension request was the phased/staged approach to the remedial field investigations, where results from screening activities determined the scope of the next phase of work. The succeeding stage of work then had to be addressed in a technical memorandum approved by the regulatory agencies. The review cycles of these documents (a total of 9 in OU 5) ranged from 10 days to three months. The IAG schedule did not envision a phased approach to the work and did not allow adequate time for the review process or delays in the field while additional work was being scoped. The regulatory agencies have been appraised of the reasons for the extension and appeared to be willing to grant most if not all of the request.

OU 5 has not missed any milestones, however, a request for a 13 month milestone extension based on the above paragraph was submitted to the regulatory agencies on October 7, 1993, because of the HHRA SWO, the agencies have deferred any decisions until after the HHRA Stop Work Order (SWO) has been rescinded. Since the milestones are currently on hold no milestones have been missed, although the draft Phase I RFI/RI Report was due to the regulatory agencies on November 30, 1993. An additional 5 months over and above the 13 months initially requested will be sought for delays associated with the HHRA SWO. A total milestone extension of 18 months will be requested for both the draft and final RFI/RI Reports.

OU 6

OU 6 has not missed any milestones. The draft Phase I RFI/RI Report milestone has been extended to June 10, 1994 (Table VI in the IAG has a milestone date of August 4, 1993 (a 10 month extension was granted in August 1993). The reasons for the extension were:

- Although the Final Phase I RFI/RI Work Plan was submitted on schedule, September 16, 1991, the Work Plan was not approved by the regulatory until February 17, 1992, because of what the regulatory agencies viewed as major flaws in the work plan. The IAG also assumed that the Final RFI/RI Work Plan deliverable would become an approved document on receipt by the regulatory agencies.

- The IAG schedule did not allow adequate lead time from when a Work Plan was approved to when field activities began. The IAG schedule allows approximately one month for preparing a SOW, selecting a subcontractor, negotiating a contract and implementing a SOW for the RI, as well as writing and getting an approved HASP, SOP training, and mobilizing to the field.

Because of the HHRA Stop Work Order (SWO), additional delays are anticipated and another request for a milestone extension will be requested once the SWO has been rescinded. It is currently projected that the extension request because of the SWO will extend the milestone delivers to Draft RFI/RI Report to April 19, 1995 and the Final RFI/RI Report to November 14, 1995. The HHRA SWO has delayed the milestones by 12 months.

The Pond Water IM/IRA is currently in dispute resolution and an NOV has been issued. While milestones have been issued, these have not been accepted by DOE RFO.

OU 7

All current milestone impacts are a result of the HHRA stop work order issued retroactive to June 21, 1993 and still in effect. OU 7 was on schedule to meet all milestones prior to this impact. Current negotiation with the regulatory agencies are anticipated to delete several Table VI milestones as well as enhance the ability to meet remaining milestones.

OU 8

Overall, the funding limitations in FY 93 affected the performance of work for OU 8 and its ability to meet the remaining IAG Enforceable milestones (see funding summary for FY 93 following Attachment 2). However, the main issue, regardless of funding, is that the current IAG scope and schedule is unrealistic. Severe constraints exist in the IAG that never allowed for technical and logistical issues to be considered during the scheduling of the work scope for OU 8. The schedule constraints are so severe that regardless of the amount of money that could have been given to OU 8, the physical limitations, logistics, and resources that would be have been necessary to complete the work within the time frames of the IAG were unachievable. The schedules were planned out 12 years in advance utilizing no-risk considerations, i.e. no schedule contingency exists in the IAG. Examples of the IAG's lack of consideration for implementation include, unrealistic procurement leads times, no consideration towards critical buried utilities that could catastrophically affect building safety and protection of human health and the environment, limited laboratory capacities for the amount of samples to be collected (this is a nationwide situation), and the physical limitation of resources, e.g. regional drill rig availability.

There are four Table VI IAG milestones for OU 8 which are:

- Submit Draft Phase I RFI/RI Work Plan – May 1, 1992
Milestone met, however CDH issued an NOV on May 22, 1992
- Submit Final Phase I RFI/RI Work Plan – September 28, 1992
Extension requested and granted to December 1, 1992 and was met
- Submit Draft Phase I RFI/RI Report – February 14, 1994
Milestone recently missed, CDH and EPA issued IAG violation on February 15, 1994.
- Submit Final Phase I RFI/RI Report – July 12, 1994
Expect to miss, unless agencies agree to revised investigative approach, which includes NFA, PEA and linkage to T/D&D.

The CDH issued a Notice of Violation (NOV) on May 22, 1992 on the Draft Phase I RFI/RI Work Plan for OU 8. The NOV identified the Draft Phase I RFI/RI Work Plan submitted on the May 1, 1992 as deficient. The deficiencies were identified as several technical issues and EG&G's procurement process which only allowed for one month to complete the Work Plan before the IAG due date of May 1, 1992. Through the dispute resolution process DOE corrected the technical deficiencies and delivered a Final Work Plan which was acceptable by the regulatory agencies. Also, in order to resolve the procurement deficiency DOE and the regulators agreed that training would be provided concerning RCRA/CERCLA issues to both DOE and EG&G procurement staff. The training action is still pending and thus the NOV has not been formally closed out to date.

The two remaining Table VI IAG milestones for OU 8 will be missed. The IAG milestones are as follows; Submit Draft Phase I RFI/RI Report on February 14, 1994, and Submit Final Phase I RFI/RI Report on July 12, 1994. These milestones will not be met because of the inadequate funding levels provided in FY 93 and the decisions made to link OU 8 IHSSs to D D efforts. According to the newest Five-Year Plan and per the FY 94 Work Package funding guidance the revised due dated for the Draft and Final Phase I RFI/RI Report are November 2, 2015 and July 19, 2016, respectively. Efforts to link IHSSs to D&D efforts have been evaluated and 8 of the 24 IHSSs have been selected for continuation of intrusive activities for FY94. The remaining 16 IHSSs in OU 8 should be linked to D&D efforts.

OU 9

For OU 9, the preparation of the RFI/RI Work Plan was funded, completed, and submitted in accordance to Table VI in the IAG. A request for an extension on the milestone for submittal of the Draft RFI/RI Report due April 11, 1994 and the Final RFI/RI Report due September 6, 1994. These are the milestones that can not be met and, therefore, most subsequent milestones also can not be met.

Delays in the Approval of the Final RFI/RI Work Plan: Even though the report was submitted on schedule, the approval was delayed due to comments on the final and their incorporation into the work plan. The schedule was not capable of accommodating additional work plan preparation activities.

Scope of the Final RFI/RI Work Plan Did Not Match IAG Schedule: The schedule for the IAG was negotiated before the scope of the work plan was defined. The scope of the work plan is determined by the original draft and comments received on work plan after review. Comments by DOE as well as CDH/EPA have to be addressed to the satisfaction of the reviewing organization to get approval. Approval is necessary to get to next milestone. The scope of the RFI/RI work plan will take more than six years to complete a draft. Efforts will be made to reduce this, but the original schedule only allowed for approximately two years.

Work Requirements Have Changed Since the IAG Was Originally Negotiated: Requirements to subcontract work, perform work, document work, etc. have changed based on DOE orders, interpretations of quality assurance documents, health and safety requirements, and other requirements have changed.

Site Characteristics Were Unknown When Schedule Was Negotiated: The restoration portion of the schedule was written prior to knowing what there was to remediate. In other words, the schedule was not based on the physical characteristics of the site. Little was known about where there was contamination, what contaminants were there, what the data quality was of existing information, safety and security concerns, what the status of plant would be, etc. For OU 9, this is still the case since no investigation field work has been performed. Much of the contamination could be under buildings which will not be accessible.

OU 10

The near term Table VI IAG milestones (Draft and Final Phase I RFI/RI reports) for OU 10 will not be met, nor will the following milestones that are linked to the Draft and Final Phase I RFI/RI reports.

The reason for these missed milestones can be attributed to:

- Change in mission and reprioritization of the entire environmental restoration program. This resulted in unsecured funding for FY 93 and a subsequent delay in implementing the Phase I portion of the OU 10 RFI/RI work plans.
- Scope changes from when the IAG was signed to when the workplan was developed. This caused a fundamental change in the way that the IAG milestones would have to be approached and the funding required to meet all these milestones.
- Deferring certain IHSS and portions of the RFI/RI assessment activities in conjunction with D&D and transition. In particular, active units cannot be included in Phase I assessment activities until these units have developed and implemented a RCRA closure plan. Only then can work be implemented.

In order to minimize OU 10 milestone schedule impacts, the recommendation should be made to cancel all work and associated milestones beyond Phase I, and develop a Record of Decision based on Phase I data only. This would eliminate more than half of the remaining milestones for OU 10, and would provide the impetus for early closure of IHSSs within OU 10. The difficulty here, is convincing the regulators that adequate decisions can be made regarding the nature and extent of contamination at OU 10 based solely on Phase I screening level data.

OU 11

Current negotiations with the regulatory agencies to define revised scope and objectives for this project will have impacts on near term milestones. It is anticipated that the next milestones for completion of the Phase I RFI/RI report will not be met, however, the deliverable will be an integrated RFI/RI Report eliminating all Phase II milestones. The responsiveness of the Colorado Department of Health has impacted the critical path of this project due to the failure to review the proposed revised scope, in a timely manner. A draft revised scope was submitted over 10 weeks ago for review and, to date, no comments have been received.

OU 12

The two milestones that will be missed for OU 12 include the draft and final Phase I RFI/RI reports. According to Table VI of the IAG these milestones are due on April 20, 1994 and September 15, 1994, respectively. The extension was requested to DOE/RFO in August, 1993. The request cited funding issues and the IHSS linkage to D&D/Transition as the reasons for the extension. The dates requested were per last year's five year plan that assumed all IHSSs near buildings would be linked to D&D/Transition. The requested extension dates were anticipated to be March 11, 1999 for the draft report and November 17, 1999 for the final report.

OU 13

To date no milestones have been missed; however there has to date been no extension agreement granted by any of the IAG parties. These milestones will be missed if no agreement is reached. These milestones are in jeopardy because IA OUs have and continue to be a lower priority.

Resources including, but not limited to funding, are usually allocated to the lower numbered OUs because the plant was viewed as an operating facility and clean-up plans were deferred until transition/D&D. These resources include staffing and agency attention.

In addition, numerous work plan comments needed to be incorporated in to revised versions of the final work plan before it was finally approved in August 1993 – nearly a year after it was submitted. Additional requirements for approval included revision of the Benchmark Tables and preparation of a Compendium of In-situ Radiological Methods and Applications at Rocky Flats Plant; neither of which were OU specific documents. Also, the approved work plan incorporates the SAFER concepts for remedial investigation. Although this may limit the scope of the approved work plan, it prolongs schedule because the subsequent stages of sampling are based on earlier results and need to be reviewed and finalized with the agencies prior to initiation of the next round of investigations. This approach was not anticipated in the IAG.

Proposed revision of a milestones should include the adoption of the rebaselined schedule of the IA OUs. New milestones for the delivery of technical memoranda could be included.

OU 14

The preparation of the RFI/RI Work Plan was completed and submitted according to Table VI in the IAG. A request for milestone extension for Draft RFI/RI Report due December 20, 1994 and the Final Report due May 23, 1995 is being prepared and will submitted to management for transmittal to DOE. These milestones can not be met due to the reprioritization of resources in earlier years.

To date, no milestones have been missed; however, no extension agreement has been granted by any of the IAG parties. These milestones will be missed if no agreement is reached.

These milestones are in jeopardy because IA OUs have and continue to be a lower priority. Resources including, but not limited to funding, are usually allocated to the lower numbered OUs because the plant was viewed as an operating facility and clean-up plans were deferred until transition/D&D. These resources include staffing and agency attention.

Although the OU 14 Work Plan was found to be technically acceptable to the reviewing agencies it was not approved until 11/93 because they wanted to see a good faith effort at integrating the work being done in the IA OUs.

Proposed revision of a milestones should include the adoption of the rebaselined schedule of the IA OUs. New milestones for the delivery of technical memoranda could be included.

OU 15

No milestones have been missed.

No milestones will be missed if verification sampling results will not be required for the Draft Phase I RFI/RI Report IAG milestone of August 1, 1994. If necessary, verification samples will be included within the Final Phase I RFI/RI Report (i.e., if sampling is necessary).

OU 16

None will be missed and this OU will be closed in 1994.

FY93 Funding History (Thousands)

Operable Unit	Full IAG Rqmts (03/92)	Prelim IAG Compliance – NFD (04/92)	DOE Funding Guidance (04/92)	Reprioritized Funding, DOE Targets (10/92)	FY93 Rebaseline Funding (11/92)	Actual Funding Received (02/93)
OU8 – 700 Area	\$20,951	\$14,627	\$1,027	\$751	\$721	\$721
OU9 – Original Process Waste Lines	\$6,247	\$5,702	\$5,702	\$50	\$549	\$547
OU10 – Other Outside Closures	\$12,260	\$3,025	\$2,177	\$50	\$399	\$749
OU11 – 400/800 Area	\$10,652	\$5,710	\$2,910	\$150	\$466	\$730
OU13 – 100 Area	\$9,416	\$6,390	\$390	\$50	\$628	\$1,187
OU14 – Radioactive Sites	\$2,083	\$1,139	\$897	\$50	\$439	\$768

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ATTACHMENT 3

OPERABLE UNIT (OU) ACCELERATED ACTIONS AND ASSUMPTIONS

FS ACCELERATION 1, 2, 3, 5, 6

EG&G will accelerate all remaining documents by conducting concurrent DOE and EG&G reviews for the remaining deliverables for these OUs.

Savings: Up to 20 day schedule savings for each deliverable.
Impact: Potential for DOE to receive some documents requiring much editing.

EG&G will begin work on all Proposed Plans immediately after receipt of the DOE comments for the Draft CMS/FS. Schedules will be charged to reflect this assumption.

Savings: Up to a 95 day schedule savings.
Impact: \$ amounts brought forward into previous year. Some risk of redoing work at additional cost if there are major changes required between the Draft and Final CMS/FS

Assumption: No major changes will be necessary between the Draft and Final CMS/FS.

Feasibility Studies for all OUs could be streamlined and more closely directed if a decision on Land Use could be obtained now.

OUs 1, 2, 3, 5, and 6 have begun work on the FS even though the RI is not finalized. There is a certain amount of risk if COCs or Risk Assessments are not accepted, but the schedule is expedited.

The programmatic portion of the feasibility study for all OUs is in progress and templates for the TMs are being developed. This will accelerate all FS work for all OUs.

The same subcontractor is being used for the programmatic portions of the FS and the Phase I portion of the FS for OUs 2,3,5 and 6 to expedite and ensure compliance.

OU 1

The current schedule is in the process of being revised to identify any tasks that can be accelerated. These accelerations will probably include concurrent EG&G and DOE RFO review times where these are not currently specified.

OU 1 traditionally has been the first OU to complete any IAG milestone. It has had a history of having deliverables hotly debated by the Agencies. The Agencies often use OU 1 to set precedent for the rest of the OUs. Therefore, each deliverable must be carefully and thoroughly presented. There is a very high risk of failure when expediting deliverables for this OU.

However, OU 1 is currently planning for the early removal of three, well identified hot spots. There is a strong possibility that after these hot spots are removed, a no action determination can be pursued for this OU.

Assumptions:

- Approval granted to remove three hot spots
- Approved methodology available for removal
- Storage facilities available for the waste

Cost: Approximately \$100,000

In addition, a request for discontinuation of the major source of water for treatment at the OU 1 IM/IRA has been made. If this is approved, a request will be made to discontinue operations as an IM/IRA and transfer to a Sitewide Environmental Treatment system.

Assumptions: Approval to discontinue treatment of 881 Footing Drain water.

Cost impact: None as other water sources will be treated.

OU 2

The non-risk assessment portions of the Draft Phase II RFI/RI Report was completed and submitted for review in order to expedite the process after the lifting of the Stop Work Order. OU 2 can accelerate the final remedy by contracting with its current subcontractor to identify and pursue NFA determinations for all applicable hot spots.

Additional early actions such as hot spot removals, groundwater pump and treat will be pursued when better identified.

Accelerated Activities in Progress

The Soil Vapor Extraction (SVE) pilot testing has been successful and continuation of the SVE operations has been proposed to the agencies in a meeting. The response was favorable and the SVE will be formally proposed as an expedited action. The extra cost of this action is considered negligible because the cleanup would very likely be required at a later date.

A second phase of a soil gas survey has been proposed and will be performed as soon as the approval and procurement processes are complete. The survey data will be used to identify other sites where the SVE unit may be implemented. The cost is \$116,864.

Procurement is processing a Statement of Work to contract Battelle to perform six phase heating to enhance the SVE rate. Six phase heating is an innovative technology development. EM-40 cost is \$2.3 million, EM-50 cost is \$283,000.

A request to discontinue treatment of water from SW 132 and SW 61 has been proposed to the agencies. The agency verbal response has been favorable. CDH is performing their own water sampling to confirm our sample results. Elimination of these two sample locations will result in a reduction of over 90% of the water treated at OU 2. The cost savings is expected to be approximately \$400,000.

An attempt to determine the source of SW 59 seep is underway. Plant drawings of as-built underground utilities have been obtained. A preliminary survey of the area using a metal detector is planned for the last part of March. The cost for this action will be determined from data gathered during the preliminary survey.

A early removal action was proposed to remove non-aqueous phase liquids from trench T-3. This action was requested by DOE and upon an evaluation, the proposal was rejected.

Accelerated Activities Planned

Several OU 2 IHSSs are candidates for No Action. Within the next month a Statement of Work will be prepared to evaluate the No Action alternative. A report will be prepared for submittal to the agencies. An order of magnitude cost estimate is \$50,000.

A proposal for a groundwater extraction system is being prepared and will be submitted to DOE by the end of March. An order of magnitude cost estimate is \$300,000.

A few IHSSs have been identified as potential candidates for Early Removal Action. Within the next month these IHSSs will be evaluated. An order of magnitude cost estimate is \$75,000.

Owing to the small amount of water that emanates from SW 59, an engineering evaluation will be performed to determine if treatment at the present facility is reasonable. This evaluation will be made if the agencies allow DOE to discontinue treating water from SW 61 and SW 132. An order of magnitude cost estimate is \$10,000.

The above described accelerated activities are in addition to the scheduled work required in the RI/FS process. All of these activities result in expediting the clean up process.

Operations at the Subsurface IM/IRA will continue for longer than planned in order to remove more contamination.

OU 3

In general, it is felt that this OU will not benefit from an accelerated approach. The contaminant levels and the technical problems are not significant relative to the political ramifications of our efforts. The belief is that this OU will result in a No Action decision, but it is important to let the process be followed and lead us all to a consensus decision. All methodologies and calculations will be documented, all uncertainty should be thoroughly addressed. OU 3 will potentially propose preparation of a NFA document after completion of the first Feasibility Study Technical Memorandum. Any radiological contaminated soils that need remediation will be proposed to be handled under OU 2.

Any radiological contaminated soils that need remediation will be proposed to be handled under OU 2.

OU 3 has assumed that one year's worth of air monitoring data will be required for the final RFI/RI Report to fulfill the work plan requirement. This has caused an approximately 8 month delay between submittal of the draft and final Phase I RFI/RI Report. Project acceleration can be achieved by negotiating reduced monitoring requirements.

Assumptions: Reduced monitoring will be acceptable.

OU 5

IHSS 115, Original Landfill and IHSS 196, Water Treatment Plant Backwash Pond, are candidates for early action, a screening level Human Health Risk Assessment has just begun, additional geotechnical samples are scheduled to be collected this summer to address the potential problem with slope stability:

IHSS 133.1 through 133.4, Ash Pits, the writing of a Technical Memorandum for additional field sampling to fill in data gaps is in progress. The information gathered during this activity should alleviate the need for a Phase II RI. This will either allow for the FS process to begin earlier or allow the IHSS to be a logical candidate for an early action through the soils IM/IRA.

IHSS 133.5 and .6, Incinerator Pad and Concrete Wash Pad are potential candidates for NFA. Preliminary results indicates no problems with rads, metals are still a bit of a question and seems to be the manganese problem that we are seeing in OU 1.

IHSS 142.10 and .11, Pond C1 and C2, Final disposition of the pond sediments should occur after D&D.

IHSS 209, Surface Disturbance, possible candidate for NFA, a high Pu value from a surficial soil sample may necessitate additional sampling which is scheduled to occur this summer. Also, candidate for the soils IM/IRA.

OU 6

IHSS 141, Sludge Dispersal Area, possible candidate for soils IM/IRA.

IHSS 142.1-142.2, A-1 and A-2 Ponds, Final disposition of the pond sediments should occur after D&D.

IHSS 142.3, 142.4, A-3 and A-4 Ponds, possible candidates for NFA.

IHSS 142.5, 142.6, 142.7, B-1, B-2, and B-3 Ponds, Final disposition of the pond sediments should occur after D&D.

IHSS 142.8, 142.9, B-4 and B-5 Ponds, possible candidates for NFA.

IHSS 142.12, Pond at Walnut and Indiana, probable candidate for NFA.

IHSS 143, Old Outfall, will be administratively transferred to OU 8, deferred and linked to D&D.

IHSS 156.2, Soil Dump Area, possible candidate for soils IM/IRA or NFA.

IHSS 165, Triangle Area, possible candidate for the soils IM/IRA.

IHSS 166.1 - 166-3, Trenches A, B, and C, possible candidates for NFA.

IHSS 167.1, North Spray Field Area, possible candidate for NFA.

IHSS 216.1, East Spray Field Area, possible candidate for NFA.

OU 7

An accelerated approach strategy and revised technical baseline has been submitted to regulatory agencies for approval. This includes:

- Closing the landfill under Colorado Hazardous Waste Act closure requirements and EPA presumptive remedies guidance eliminating the need for treatability studies and extensive options analysis. Closure will also streamline final action requirements and schedules.
- Integrating the Phase I and Phase II requirements with the IM/IRA Decision Document to support closure eliminating Phase I RFI/RI Report, Phase II Work Plan and RFI/RI Report Table VI milestones.
- The CAMU concept will be used for removal of soils or sediments in and around the East Landfill Pond that have concentrations of contaminants above risk based levels. Soils and sediments will be placed within the Present Landfill prior to landfill closure.

OU 8

Presently, several approaches are being utilized for revisiting the investigation of OU 8. These proactive efforts are documented within the latest meetings and documents being produced by the Environmental Restoration Management Accelerated Cleanup Working Group. The outcome of

this work group has been to establish approaches to aid in the realistic scoping and scheduling of not only OU 8, but many other OUs e.g. OUs 9, 10, 12, 13, and 14, which are soon to be in a similar situation of missing IAG Enforceable milestones. An example of documentation that the agencies have been involved in and is a major plan that will support renegotiation of the IAG is the Interim Measures/Interim Response Action/Decision Document for the RFP Industrial Area. This document is in draft form as of February 16, 1994 and will soon be transmitted to the agencies.

Additionally, the recent change in mission of RFP has considerably altered the approach to the work considered in the original IAG. The implementation of T/D&D schedules and the subsequent interaction with OU 8, has affected when parts of OU 8 should be investigated and cleaned up. Also, changes identified during development of the Phase I RFI/RI Work Plan identified improvements to the original IAG scope of work. For example, duplication of effort improvements were realized which include consideration of field sampling plans from other OUs that are adjacent to or overlap IHSSs within OU 8. Originally, the IAG and the CDH and EPA did not allow for consideration of other work efforts in these areas. EG&G RPM developed the Integrated Field Sampling Plan for the Industrial Area OUs (OUs 8,9,10,12,13,14) which addresses all the IHSS overlap and has integrated each IA OU FSP. DOE, RFO has reviewed and commented on the IA OU FSP, following submittal of EG&G's responses and a revised FSP, DOE will send the IA OU FSP to the regulators for review. This is expected by April 15, 1994.

Ongoing efforts to date have included an IHSS by IHSS evaluation that is necessary to fully evaluate and schedule for impacts resulting from T/D&D. This evaluation was initiated early in FY 93 and consists of evaluating each IA OU on an IHSS per IHSS basis. The information collected is being compared to a set of selection criteria used to provide the basis for estimating what work can be performed following the non-intrusive field work and what work should be deferred. The scope of work for each IHSS is limited to the anticipated initial stages of intrusive field work efforts used for producing the budget information for the Five Year Plan. The individual Phase I RFI/RI Work Plans also detail some intrusive work, but most of the intrusive efforts are to follow the results of the non-intrusive field work.

The IHSS evaluation is to serve as a decision tool for proposed intrusive work for the IA OUs. The main question that needs to be answered is which IHSSs should be linked to D D effort and which IHSSs could be worked on immediately following the non-intrusive effort. This effort is designed to meet three goals and to be based on as much factual information as possible. These goals are:

1. Demonstrate to EPA and CDH that investigation of the IA OUs is dependant on D D and transition efforts
2. Provide definitive guidance for out year planning efforts and thus reduce last minute planning decisions that don't make sense
3. Provide a basis for requesting extensions for IAG milestones for the IA OUs.

OU 9

Eliminate Phase II RFI/RI For OU 9: The scope of the Phase I RFI/RI investigation is sufficiently substantial in scope to eliminate the Phase II RFI/RI investigation. There are six rounds of sampling and field work in the Phase I RFI/RI work plan, three rounds on the tanks and three rounds on the pipelines. Each of rounds is initiated with a technical memorandum.

Eliminate The Phase I IM/IRA: The principal residual contaminants from the Original Process Waste Lines (OPWL) were metals, anions, and radionuclides. There are no technologies that would allow these to be destroyed in-situ; therefore, the only remediation that makes sense is ex-

situ treatment. Furthermore, due to the nature and extent of the pipelines and tanks, groundwater remediation should be tied into other operable units since the IHSSs in Ou 9 are hydraulically connected and relatively close together, ground water retrieval activities would have to include other operable units anyway. The most likely option for an IM/IRA would be source removal of contaminated soils that resulted from leaks in the OPWL. Rather than performing an IM/IRA, these actions should be performed as part of either the Industrial Area IM/IRA or the accelerated cleanup early action activities.

Eliminate Groundwater Cleanup And Limit Investigation in Areas that are in the Capture Area of Other Operable Units: In areas where groundwater contamination is contiguous, there should be only one effort to address the contamination since, in long run, that water will be captured and will have to be treated anyway (see below). If there isn't an integrated approach to water remediation then only the areas of OU 9 where groundwater plumes are independent of other IHSSs and other water remediation actions should be addressed. In areas where groundwater contaminants could be associated with other cleanup activities, then efforts to sample the groundwater should be done only, in conjunction with, soil sampling activities, i.e., take samples when boreholes are installed as opposed to monitoring wells. Monitoring wells should only be installed in areas where there are no wells nearby. Areas such as around Building 881 do not require any additional efforts for water sampling since they are already in the capture area of the OU 1 IM/IRA.

Use Observational Approach Methodology for Streamlining RFI Work on the Process Waste Lines: Currently we are proceeding with this approach since the cost, duration, and safety hazards of the existing work plan need to be rectified. This would consist of using a decision tree with contingencies that would direct the field work for pipeline investigations. This is aimed at reducing the number of test pits required, as outlined in RFI/RI work plan. The decision tree would be used to determine whether a test pit would be installed. As an alternative to test pit discrete soil sampling methods such as "Geoprobe" or "BAT" sampling systems would be utilized. This improves worker safety hazards to workers and will improve the quality of information because more samples can be taken along the length of any given pipe in less time.

This approach could also be tied in with accelerated clean up, if the systems are in place to take contaminated soil. In areas under investigation that meet a set of predetermined criteria, the soils could be removed as an early action during the investigation itself. This could integrate the investigation, remediation, and closure sampling. This approach can be tied in with geophysical techniques and cameras for inspecting pipelines. Details of this approach are still being worked out and will be incorporated in Technical Memorandum #1 Volume IA on the outside pipelines. It will not be clear how much the schedule can be reduced until a plan is more fully developed and approved by DOE and the regulatory agencies.

OU 10

Potential Early Actions (PEA): This approach would entail a thorough evaluation of existing analytical and Phase I assessment data, in conjunction with, process knowledge of the site. Decisions could then be made as to the method and scope of clean-up that might be implemented. After the PEA is completed, this IHSS could then be closed out or removed from further characterization efforts. Examples for this approach would include IHSS's 170, 174 A&B, and 176.

No Further Actions (NFA): Like PEA's, NFA would use the same initial evaluation of each site based on existing data and process knowledge of the site. Based on this evaluation, the IHSS would then become a candidate for no further assessment of remediation action at the site. This area could then be closed out, with no further characterization or remediation activities. Examples for this approach would include IHSS's 175, 181, and 210.

Transition and Decontamination/Decommissioning: Certain IHSS could be deferred from

assessment until the objectives for D&D and transition are more clearly defined. IHSS's that would be candidates for this approach would be those areas that are very close to or under buildings or areas of the plant that are currently being used for other plant or Environmental Restoration activities. While this would not necessarily streamline the ER process, it would free up resources in the near term for other approaches until such time as the areas that have been deferred can be addressed. Examples for this approach would include IHSSs 129, 177, 182, 205, 206, 207, 208, 213 and 214.

OU 11

An accelerated approach and revised technical baseline has been submitted to the regulatory agencies for approval. This includes :

- Integrating Phase I and Phase II field investigation requirements eliminating the need for a Phase II Work Plan and Phase II RFI/RI Report and their associated Table VI milestones. This includes a streamlined field sampling plan.
- Eliminating the need for an IM/IRA and proceeding into a Final Action. This includes an assumption of the no action alternative as supported by historical data evaluation and current field screening investigations.

OU 12

Potential Early Actions: IHSSs 116.1, 116.2, 120.2 - small areas, easily accessible and anticipate hot spot excavation and re-paving of affected area.

IHSSs 120.1 and 147.2 - small areas, easily accessible, unpaved and anticipate hot spot excavation and fill of affected area. IHSS 147.2 may also be a No Further Action depending on analytical results for samples currently being taken.

IHSSs 136.1 and 136.2 - small areas, easily accessible, main possible contaminant being investigated is chromate. Both of these IHSSs have the potential to be a No Further Action depending on analytical results for samples currently being taken.

IHSS 157.2 - Although it is a relatively large area, there is minimal intrusive sampling required by the Phase I RFI/RI Work Plan. This IHSS could also be a RI/FS due to the possible groundwater effects.

No Further Action: IHSSs 187 and 189 are potential No Further Action. The main possible contaminant being investigated is acid.

OU 13

Additional sampling crews could be added to conduct sampling scheduled this summer. Sample management could seek out additional laboratory resources to compress turn around time for analysis. Additional support from Stoller could speed data entry and/or review for entry into the RFEDs System. Establish a team (war room) approach to the actual writing of the Tech Memos. Additional support could be hired to assist the OU managers with administrative tasks so they can be directly involved on a daily basis. The DOE counterparts should likewise be involved. If the IAG is renegotiated several IHSSs should be dropped from any further consideration; IHSSs 169 and 191, which were the same incident a hydrogen peroxide spill, and IHSS 190 a sodium hydroxide spill which was neutralized and cleaned up more than a decade ago.

Candidates for PEA at OU 13 include: 117.1, 117.2, 117.3, 128, 134, 152, 157.1, 171 and 197. It is likely that several of these—117.3, 128, 134, 152, 171, are candidates for NFA or very limited remediation after the results of the first round of sampling are complete. The others could follow an expedited characterization path which could lead to limited remediation. IHSSs 148 and 186 will require more investigation because they involve a subsurface release. Both could be combined with the OU 9 OPWL investigation.

OU 14

Human Health Risk Assessment

Candidates for PEA at OU 14 include: IHSSs 156.1, 160, 161, 164.1, 164.2 and 164.3. It is likely that several of these— IHSSs 160, 164.1, 164.2 and 164.3, are candidates for NFA or very limited remediation after the results of the first round of sampling are complete. The others could follow an expedited characterization path which could lead to limited remediation. IHSSs 131, 134 and 162 will require more investigation. In addition, this scenario assumes that the waste storage issues in IHSSs 160 and 164 are resolved in such a manner as to allow unencumbered site characterization and remediation.

OU 15

EG&G will recommend upon completion of TM 1 that verification sampling be initiated, if necessary, prior to EPA's and CDH's official request. This will enable verification sampling results to be available for the Final Phase I RFI/RI Report and demonstrate that OU 15 has met clean closure performance standards in an expedited manner.

The January 31, 1994, Five-Year Plan ADS Baseline schedule for OU 15 has been accelerated as of March 25, 1994, based on the unofficial comments on OU 15 Technical Memorandum No. 1 (TM 1). Unofficial comments (i.e., unsigned) on the Draft TM 1 for OU 15 were received from CDH on March 21, 1994. The Cyanide Bench Scale Treatment Unit (RCRA Unit 32) has met RCRA Clean Closure performance standards per CDH's unofficial comments on Draft TM 1, eliminating the need for an Interim Measure/Interim Remedial Action (IM/IRA) to be conducted for Unit 32 (IHSSs 217) closure. It can now be assumed that OU 15 can be clean closed and a determination of "No Action" justified based on the Phase I RFI/RI Report for OU 15. The cost realized from the accelerated March 25, 1994, Re-baseline compared to the January 31, 1994, ADS Five-Year Plan Baseline for ADS 1018 is tabulated on the attached page. The closure of OU 15 as an operable unit at RFP via the Record of Decision (ROD) process will be accelerated from Record of Decision signature during June 1999 to September 1996 (i.e., approximately 33 months or 2.75 years).

COST SAVINGS BY FISCAL YEAR:

<u>Fiscal Year</u>	<u>1-31-94 Rebaseline (\$K)</u>	<u>3-25-94 Rcbaseline (\$K)</u>	<u>Savings(\$K)</u>
FY 95	884K	642K	203K
FY 96	714K	393K	321K
FY 97	1015K	281K	734K
FY 98	634K	-0-	634K
FY 99	573K	-0-	573K
			=====

Total Cost Savings = \$2,465K

OU 16

Will be closed out this year. No additional acceleration is possible.

ATTACHMENT 3.1

GENERAL INDUSTRIAL AREA (IA) OPERABLE UNIT (OU) ACCELERATIONS

Regroup Industrial Area OU IHSSs. One approach would be to combine IHSSs based on similar contaminant releases. Also, IHSSs that are linked to D&D and work deferred, could be combined into a new OU, while the IHSSs that are targeted for PEA/NFA, could be grouped into another OU. This would eliminate much of the confusion that has been encountered with managing multiple IHSSs, in multiple OUs, in the IA.

Blanket Categorical Exclusion from NEPA For All Environmental Restoration (ER) Activities:

Rather than determining which activities have a categorical exclusion, get DOE, RFO should grant a blanket categorical exclusion for all ER activities with the exceptions list from NEPA attached.

One Groundwater Cleanup Action for All of the Inner Operable Units or One Groundwater Cleanup Action For Rocky Flats Plant:

This would include not only the Industrial Area OUs, but also other areas that are part of the same plumes. Many of the wells outside of traditional IHSS boundaries are contaminated. There are three facilities already that could be better used toward groundwater remediation through an integrated approach. An integrated approach makes sense when looking at how IHSS boundaries disappear below the water table. There will be contaminant migration anyway, so a single approach to mitigating the groundwater will make much more sense than addressing it IHSS by IHSS, OU by OU. In some areas, for example, the Industrial areas.

This work should be started now. There is too much emphasis in the current IAG approach on contaminant identification and, then, tailoring the technology to those contaminants, then doing treatability studies, then an extended design process, etc. We already know that we can design and treatment facilities that can handle a wide variety of contaminants, in fact, we have treatment systems that can already handle a good variety of contaminants and with some modifications should be able to handle an even wider spectrum. Most ground water that is recovered will have a wide spectrum of contaminants due to subsurface mixing etc. Some limited testing could be required, in a few isolated cases, but for the most part we should be able to build an integrated system now prior to the Feasibility Studies that can handle ground water. The Feasibility Studies need to focus more on soil contaminants.

ATTACHMENT 4

PROGRAMMATIC AND OU SPECIFIC ISSUES

Hold DOE and the regulators to established review times for documents. One major problem to keeping projects on schedule has been the excessive review cycle that typically has been encountered with DOE and regulatory review of documents. If review times could be adhered to more closely, then milestones might be more easily met.

Establish an approach for environmental work that is oriented more to accomplishing work and responsibly spending money, rather than do whatever it takes to accomplish a particular milestone. This would result in more project and budget control, thereby, resulting in a more credible environmental program overall.

Streamline Procurement Activities - Exceptions should be made to allow more letter subcontracts, modifications to existing statements of work, and more flexibility in selecting subcontractors in an expedient manner. Much of the schedule time is consumed in getting subcontracts into place. Since only a small portion of the work is defined in a statement of work, there should not be any forced rotation under the Master Task System (MTS). Since all of the subcontractors have been determined to be qualified in the MTS system, we should be able to select the MTS subcontractor best capable of performing the work as was originally promised to us as opposed to rotation or EG&G Procurement forcing a selection on us. If there is an existing subcontract in place, there should be nothing wrong with modifying it to perform additional work through a change order instead of going through the entire procurement process over again. In addition, procurement staff should be dedicated to specific projects, matrixed and chargeable.

In addition, the following programmatic issues or recommendations need to be addressed and could result in significant project acceleration. These include:

- No DOE HQ review of document
- Decisions on Land Use in FY 94 would expedite milestones by restricting the number of land use scenarios and the cost and schedule request for evaluation
- DOE review times which are not as specified in DOE Orders
- Establish minimum QA compliance requirements for ER activities.
 - Only relevant reviews, and audits
 - No NQA-1 QA requirements
 - Split ER Audits QA requirements from RFP
 - Approval of SOPs from appropriate reviewers
- Accelerate Procurement.
 - Relaxation of DOE requirement
 - Dedicated procurement support to project; matrixed and directly chargeable staff assigned.
- RCRA storage of IDM/waste must be resolved in 1994.
- Staff level approvals instead of upper level approvals.
- Empower DOE and EG&G employees including DOE contractor.

- Combine presentation and reporting requirements:
 - DOE HQ
 - DOE RFO
 - EG&G
 - Regulatory
 - 4700.1
 - RCRA
 - CERCLA
 - Only one database is needed for records management not one for the administrative record and one for the ER records.
- Minimize multiple rounds of comments.
- Make preliminary resolution binding for all parties.
- One iteration of comments allowed per milestone (i.e., Draft and Final documents, not Draft, Draft Final, Final).
- Currently there is sufficient training available through present systems without developing new training requirements.
- Quality employees must be hired and retained.
- Specify only the necessary training requirements. If RFP employees are retrained for ER projects, ensure:
 - Clear guidelines for use
 - Trained before given to us
 - ER work not done under union contract
- RFP Priorities must reflect work prioritization.
- ER Projects must have proper priority by support groups.
- More customer service attitude.
- Mandatory review times..
 - Agencies
 - DOE
 - TMS - 22 days for Agencies or automatic approval
- Mandatory Dispute Resolution.
- Streamline Change Control.
- Flexibility in funding. a small amount of discretionary funds available for extra scope/budget with AGM/division manager approval and RFO counterpart approval.
- Discussions automatically elevated to dispute if not resolved in one month.

ATTACHMENT 5

RECOMMENDED STRATEGIES FOR REGULATORS

We have evaluated potential strategies for negotiations with the regulators regarding missed milestones. We support the concepts discussed March 23, 1994.

- Focus initial renegotiation on the Industrial Area IHSS regrouping and consequent revised implementation plan
- Delay discussion on milestones impacted by stop work until resolution of this issue is reached.
- Request extension of the near term milestones for OU 9 and OU 12 for which we have a solid basis for the request.

In addition, we recommend DOE consider the following, particularly if the regulators do not appear willing to forego fines and penalties for the remaining IA milestones based on the above:

- Offer accelerated actions as options for no more NOV's. Also, request development of an interagency team to scope schedule and develop milestones for recommended accelerated actions.
- Offer resolution of issue items, as good faith effort, to improve time and cost of remediation.
- Do not negotiate any current IAG milestone past the Proposed Plan on OUs 1 and 2.
- Add Technical Memorandum Milestones To Schedule: This will give intermediate steps between the Table VI milestones. These probably shouldn't carry as much weight as the Table VI milestones.

DOE/CDH/EPA/EG&G Workshops: This was a good suggestion for streamlining work since it would allow some buy-in prior to performing work. It might help to alleviate strained relationships between the principal parties. Maybe it should be used in other areas such as prior to developing work plans, etc.

ATTACHMENT 5.1

RECOMMENDED STRATEGIES FOR MISSED MILESTONES

OU 3

There has been much good faith effort on this project to show progress to the regulators. We have had several meetings to show preliminary results and to obtain approval on methodologies and technical approaches. We have informally discussed the impact of the Stop Work Order on this project with the regulators, and we have also discussed areas where work may proceed without the Stop Work Order. It is hoped that this approach of open communication and frequent interaction will result in more expedited and efficient document reviews and ultimately lead to timely approvals.

Industrial Area Operable Units

Regroup Industrial Area OU IHSS's. One approach would be to combine IHSS's based on similar contaminant releases. Also, IHSS's that are linked to D&D and work deferred, could be combined into a new OU, while the IHSS's that are targeted for PEA/NFA, could be grouped into another OU. This would eliminate much of the confusion that has been encountered with managing multiple IHSS's in multiple OU's in the IA.

Offer accelerated actions as options or concessions for no more NOV's.

Offer resolution of issue items as good faith effort to improve time and cost of assessment/remediation (i.e. utilizing residential scenario for Industrial Area risk assessment).

Offer Technical Memoranda milestones as concessions for eliminating Phase II assessment.

The Environmental Restoration program at RFP has had several recent developments that were not part of the development of the original IAG schedules. The most significant changes have occurred because of the recent change in mission at RFP. The new mission impacted original IAG schedules of the many of the Operable Units at RFP and has caused a priority ranking of environmental work given the available environmental budget. The single most significant impact has been the development of the Transition and Decontamination and Decommissioning (T/D&D) planning efforts within the last year. The impacts from T/D&D has mainly impacted IAG schedules for OUs within the Industrial Area (IA) at RFP which include OUs 8, 9, 10, 12, 13, and 14.

The T/D&D planning and process has impacted the originally IAG scheduled investigation tasks for OU 8 mainly by delaying field investigation work until buildings within the IA are decontaminated and decommissioned. The main reason for delaying work within OU 8 is the potential for re-contamination of IHSSs during the T/D&D process. Since, the majority of the IHSSs associated with the IA OUs are located near buildings or plant facilities that are scheduled for D&D, there is a strong possibility that the IHSSs within OU 8 could be affected by the future efforts of D&D. Thus, it does not make sense to investigate these IHSS and then clean them up only to have the areas become re-contaminated by the D&D process.

Current planning efforts are being completed to identify IHSSs that work can be coordinated with D&D efforts and IHSSs that can be disassociated from T/D&D so that investigative work can proceed. Additionally, DOE has taken proactive efforts to initiate field investigation efforts in FY 93 and continuing into FY 94 to provide baseline IHSS specific information in accordance with the Phase I RFI/RI Work Plan. The main effort to date in the integration of all the Industrial Area

OUs, which includes OU 8 into a single administrative management operation that allows considerations of changes in the RFP missions and also allow agency concurrence for refocused IAG implementation.

The integration of the Industrial Area (IA) Operable Units (OU) began with the initiation of non-intrusive field work efforts in FY 93 and continuing into FY94. The term "non-intrusive" has been defined as field work that does not require disturbances of environmental media that may impact critical buried utilities in the IA at Rocky Flats. The non-intrusive field tasks are limited to field activities with minimal disturbance of environmental media e.g. field screening techniques, radiation surveys, surface soil sampling, and soil gas surveys. The non-intrusive field work activities are described in the Field Sampling Plan (FSP) sections of each of the Phase I Resource Conservation and Recovery Act [RCRA] Facilities Investigation/Remediation Investigation (RFI/RI) Work Plans for the IA OUs.

The intrusive work e.g. drilling, ground-water monitoring well installation, soil boring sampling, etc. in the current Five Year Plan is deferred until Decontamination and Decommissioning (D&D) efforts are completed. The main reason for deferring the intrusive work is the possibility of re-contamination of IHSSs as the D&D process is completed. Since the majority of the IHSSs associated with the IA OUs are located near buildings or plant facilities that are scheduled for D&D, there is a strong possibility that the IHSSs could be affected by the future efforts of D&D. Thus, it does not make sense to investigate these IHSS and then clean them up only to have the areas become re-contaminated by the D&D process. Therefore, current planning is identify IHSSs that intrusive field work can be coordinated with D&D efforts. Implementation of the non-intrusive field work will provide baseline information that can be used by both environmental restoration and D&D planning efforts.

The field work completed to date and currently in progress includes performance of the IA Environmental Evaluation (EE) and completion of the radiation surveys, utilizing the High Purity Germanium detector (HPGe). The HPGe surveys have been ongoing since June 1993 and complete coverage of the IA OUs has been obtained, with the exception of IHSSs within the Protected Area (PA). This information is being utilized direct subsequent stages of field activities which include the following:

1. Inspections of each OU
2. Additional Data Compilation
3. Data collection for the IA EE
4. Radiation surveys using both the HPGe and Sodium Iodide (NaI) detectors
5. Vertical profile sampling supporting HPGe results and analysis
6. Geophysical Surveys
7. Surface soil sampling
8. Asphalt and Concrete Sampling
9. Soil Gas Surveys
10. Surface water and sediment sampling
11. Sample shipping and lab turnaround

OU 9

While certain IHSSs have been identified as preliminary candidates for early remediation, no initial assessment has been completed on OU 9. Additional assessment data will be necessary in order to adequately identify the nature and extent of contaminants in OU 9. Therefore, no recommendations on Potential Early Actions should be made at this time.

Other suggestions for streamlining the RFI/RI process for OU 9 include:

Blanket Categorical Exclusion from NEPA For All Environmental Restoration (ER) Activities: Rather than determining which activities have a categorical exclusion, DOE, RFO should grant a blanket categorical exclusion for all ER activities except for the exceptions listed in the National Environmental Policy Act. This should be attached to the exemption letter.

One Groundwater Cleanup Action for All of the Inner Operable Units Or One Groundwater Cleanup Action For Rocky Flats Plant: This would include not only the Industrial Area OUs but also other areas that are part of the same plumes. One ground water cleanup action for all of Rocky Flats should also be considered. Many of the wells outside of traditional IHSS boundaries are contaminated. There are three facilities already, that could be better utilized toward ground water remediation through an integrated approach. An integrated approach makes sense when looking at how IHSS boundaries disappear below the water table. Also, there will be contaminant migration any way, so a single approach to mitigating the ground water makes much more sense than addressing it IHSS by IHSS, OU by OU.

This work should be started now. There is too much emphasis in the current IAG approach on contaminant identification and then tailoring the technology to those contaminants. This followed by treatability studies, then an extended design process, etc. We already know that we can design and treatment facilities that can handle a wide variety of contaminants, in fact, we have treatment systems that can already handle a good variety of contaminants and with some modifications should be able to handle an even wider spectrum. Most ground water that is recovered will have a wide spectrum of contaminants due to subsurface mixing etc. Some limited testing could be required in a few isolated cases but for the most part we should be able to build an integrated system now prior to the Feasibility Studies that can handle ground water. The Feasibility Studies need to focus more on contaminated soils.

Integrated Approach on Industrial Area OUs: This should be discussed in a general suggestion section for the Industrial OUs.

Redirect the approach to Accelerated Cleanup: Direct the focus more towards getting systems in place that can handle a wide variety of contaminated soils. Emphasis should be taken off the IHSSs completely since it forces the accelerated cleanup to be dependent on the remedial investigations. Instead systems should be put in place that can handle soil when it is detected in the field so that it can be removed during, instead of after, field investigations. The system should be set up so that Remediation Project Management (RPM) identifies the soil and the accelerated cleanup group takes the soil and stores or treats it. This would mean writing the SOPs now, writing the Health and Safety Plan now, getting subcontracts in place, developing a transportation system now and develop a storage and/or treatment system now. The suggestion (by waste programs?) of using railroad cars seems plausible especially if utilized in conjunction with the soil treatment plant described below. The accelerated cleanup group would be responsible for all activities required to get the soil from the IHSS to storage and for storage of the material until treatment. The emphasis right now, seems to be aimed on identifying candidates for early action. RPM can do that. The hard part is going to be meeting the requirements for handling contaminated soils and those activities should start now.

Construct a Small to Medium Scale Soil Treatment Plant Now: Unless contaminated soils are going to remain in place, they should be treated. since there is fairly low contamination levels and the requirements of waste storage make reduction of the waste preferable.

Metals and radionuclides can not be destroyed but they can be concentrated. This especially true of alluvial materials since the contaminants tend reside in the finer fractions and the larger fractions can be cleaned. The technology exists for concentrating radionuclides and metals in soils. Regardless of whether these materials are stabilized or how they are stabilized, volume reduction needs to be performed and these technologies are fairly well known. A soil washing facility could be built now to meet the needs of remediation activities.

This facility would serve several functions: 1) to treat soils generated in Interim Remedial Actions; 2) to allow pilot scale testing to be performed on other technologies (as a side stream project); 3) to get a head start on soil treatment activities; and 4) to reduce the amount of materials that will be in storage. The system should be constructed as a treatment train with various process units. This would allow more flexibility for new remediation and process control technologies. It should also be designed to be flexible for expansion to a large size treatment unit. Soil washing units are used frequently in Europe, particularly in Germany and the Netherlands. The start up unit could be almost an off-the shelf item which greatly reduce schedule time and possibly eliminate design costs.

Once the facility gets going, a process unit should be added to address volatiles in the soils, such as a rotary kiln or a fluidized bed reactor with off-gas treatment of sufficient level to alleviate public concerns. This would be used to turn mixed waste type soils to radioactive soils and make it easier for stabilization. These ideas have been previously promulgated as possible remedial actions but why not go ahead and initiate them as early action, since the options for treatment are relatively limited. This would be a good faith effort towards an actual remediation of soils as opposed to just generating more material for storage. Since the sitewide treatability program might be dropped, this would free up the metallurgical engineers in Environmental Engineering And Technology to initiate this project now while funding is available. These engineers already have experience in these technologies on top of already doing the treatability studies that investigated some of these technologies.

Eliminate Conduct of Engineering Manual Requirements For Environmental Restoration: Regardless of if and when engineering requirements are developed for Environmental Restoration Projects, the plant engineering requirements should not be utilized. This would include the plant engineering standards. These requirements were developed for use in constructing and operating nuclear weapon facilities and should not be applied to environmental restoration. Also eliminating Conduct of Operations should be considered.

Activity Dependent Milestones: Schedules should be developed that have milestones and activities that can float relative to other activities and milestones. This would minimize the impact that prolonged reviews by regulatory agencies have, especially when a work plan or report is forced to go through additional iterations. This technique was used in developing milestones for the OU 2 Subsurface IM/IRA. Milestones for document submittals were tied into the reviews of those submittals so that when delays by the agencies occurred, the schedule was not impacted. The schedule basically had a fixed submittal date for the draft document, then the next iteration was due a set number of days after the regulatory review of the draft was completed. When the review took longer than what was scheduled, the milestone was not impacted by delays that were out of control, since the duration of the next activity was not impacted. This would also account for situations where in the past, one milestone would slip and therefore all of the milestones slipped even though the duration of each subsequent task was the same as what was originally scheduled.

Exemption from certain non-essential DOE Orders: Some of the orders involving records management, quality assurance, etc. should be examined.

Eliminate Operational Readiness Reviews: Although these reviews occasionally have some beneficial value that frequently have a detrimental impact on the schedule.

OU 10

Currently, there are few options for resolving the milestones that will be missed as part of OU 10. If the Phase II portion is eliminated, that will reduce the out year milestone liability by nearly half. And, in place of the Phase II portion, some additional milestones might be added, such as tech. memo's, etc.

ATTACHMENT 5.2

RECOMMENDED STRATEGIES FOR UNDERRUN DOLLARS

In general, funds should be used for the acceleration listed in Attachment 3. Funds will be required when the Stop Work Order is lifted to fund additional scope requirements and to fund expedited risk assessments where possible.

OU 1

Underrun will not allow current milestones to be expedited. However, funds could be applied to the acceleration options, specifically removal of the three hot spots. This may eventually allow project acceleration by potentially eliminating downstream milestones.

OU 2, 5, and 6

Underrun can be used by allowing present subcontractor to identify NFA IHSSs. These could be closed, removed from the OU, and cost and schedule could potentially be reduced for out year milestones. Additionally, certain early actions and extended actions at IM/IRAs would also potentially remove IHSSs from further consideration.

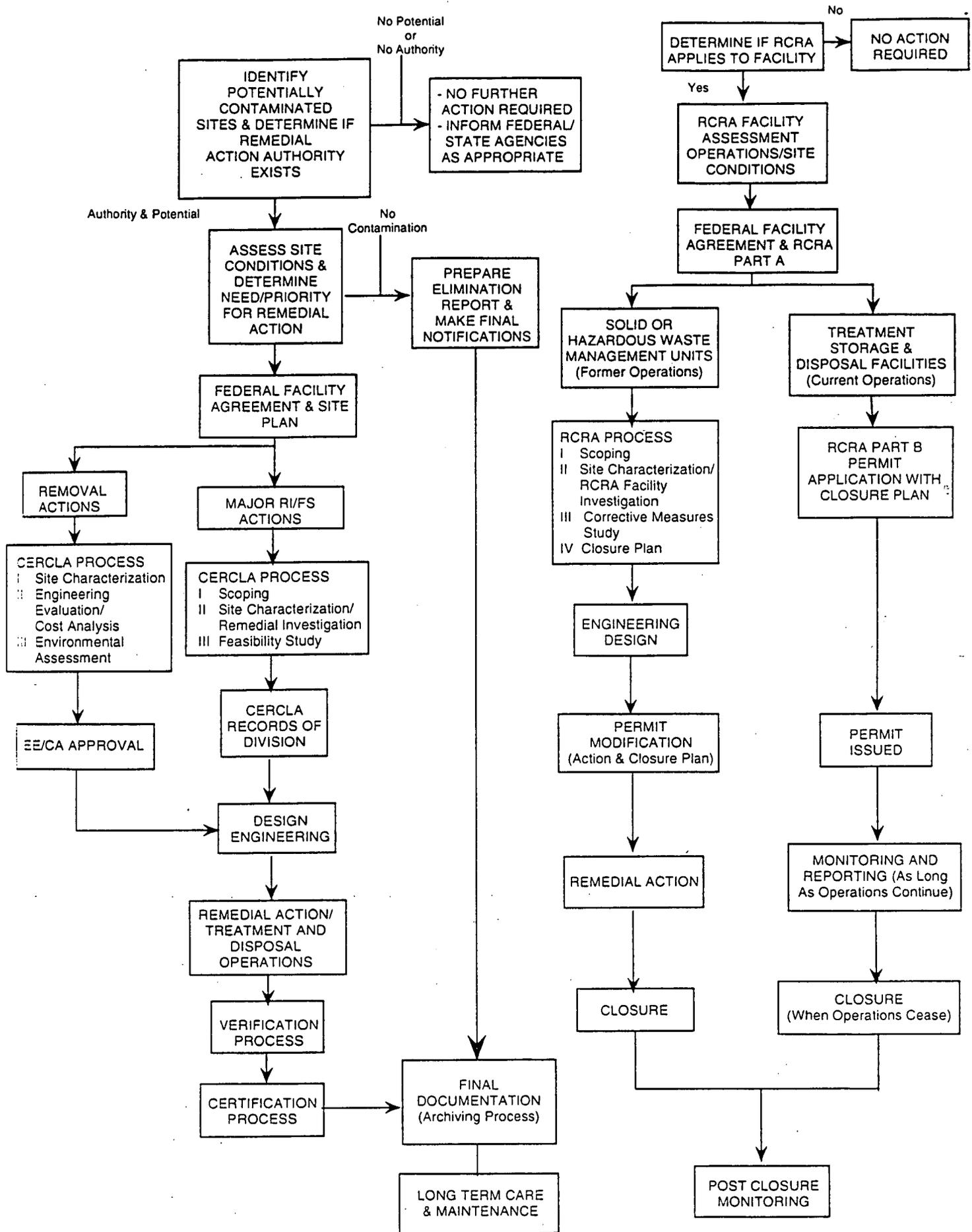
OU 10

No amount of money would allow us to achieve the existing milestones for OU 10. However, excess funds or redirected funds could be used for all the streamlining approaches, or for other OUs that might be able to achieve milestones, but require additional funding to do so. As far as whether this would have any validity with the regulators remains to be seen.

DOE/CDH/EPA/EG&G Workshops

These workshops can be used to gain support for initiatives. These workshops must communicate a clear vision of the program, identify specific programmatic goals, and establish interdepartmental agreements with the full support of DOE, EG&G, and the agencies. Agency support will be crucial to develop the basic understandings that allow projects to proceed.

The CERCLA/RCRA/NEPA Process



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