START

009149

May 9, 1990

Meeting Minutes Transmittal/Approval
Unit Managers Meeting: 1100-EM-1 Operable Unit
450 Hills Street, Room 47, Richland, WA
April 19, 1990

From/
Appvl. Robert K. Stewart Date: 5/17/90
Robert K. Stewart, 1100-EM-1 Unit Manager, DOE-RL (A6-95)

Appvl.: David R. Einan Date: 17 May 90
David R. Einan, 1100-EM-1 Unit Manager, EPA (A7-70)

Appvl.: Larry Goldstein Date 5/17/90
Larry Goldstein, 1100-EM-1 Unit Manager, WA Department of Ecology

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1 - Meeting Summary/Summary of Commitments and Agreements;
Attachment #2 - Statused Schedule;
Attachment #3 - Agenda for the Meeting;
Attachment #4 - Attendance List;
Attachment #5 - Operable Unit Commitments/Agreements Status List;
Attachment #6 - Handling of Data Discrepancies
Attachment #7 - Work Progress

Prepared by: Mark A. Myers Date: 5/17/90
SWEC Support Services

Concurrence by: R. W. Clark Date: 5/17/90
WHC RI Coordinator

Distribution:

Chuck Cline, WDOE
Ward Staubitz, USGS
Mike Thompson, DOE-RL (A6-95)
Jerry Chiaramonte, SWEC/IT (A4-35)
Jack Waite, WHC (B2-35)
Tom Wintczak, WHC (B2-15)
Mel Adams, WHC (H4-55)
Rick McCain, WHC (H4-55)
Roy Gephart, PNL (K6-97)
Brian Sprouse, WHC (H4-22)
Diane Clark, DOE-RL (A5-55)
Bill Price, WHC (SO-03)
Steven Clark, WHC (H4-55)
Don Kane, Battelle EMO (K1-74)
Donna Lacombe, PRC
Doug Sherwood, EPA
Jim Patterson, WHC

Ronald D. Izatt (A6-95)
Director, DOE-RL, ERD
Ronald E. Gerton
Director, DOE-RL, WMD

Roger D. Freeberg (A6-95)
Chief, Rstr. Br., DOE-RL/ERD
Steven H. Wisness
Tri-Party Agreement Proj. Mgr.
Richard D. Wojtasek (B2-15)
Prgm. Mgr. WHC

ADMINISTRATIVE RECORD (1100-EM-1) [Care of Susan Wray, WHC (H4-51C)]

Attachment #1

Meeting Summary and Summary of Commitments and Agreements
1100-EM-1 Operable Unit Managers Meeting
450 Hills Street, Room 47
April 19, 1990

1. A discussion on how data discrepancies would be handled was held. DOE provided a DSI with an attached procedure to those in attendance. The DSI and attachments are included as Attachment 6.

2. The final data packages for both soil and groundwater chemical analyses were delivered to both regulatory agencies.

3. Advanced Nuclear Fuels has provided DOE with data from their monitoring network through the last sampling period. The data packages are complete as to the needs of ANF, however, several important analytes for the 1100-EM-1 Operable are not available. ANF has informed DOE that a sharing of data can be instituted that will allow the ANF wells to be analyzed for needed DOE constituents. Such an agreement is in the process of being set up.

Action # 11EM1.39 **Groundwater samples collected at the Horn Rapids Landfill will be analyzed for gross alpha to provide a cross correlation with the ANF samples. Action Steve Clark prior to next sampling event.**

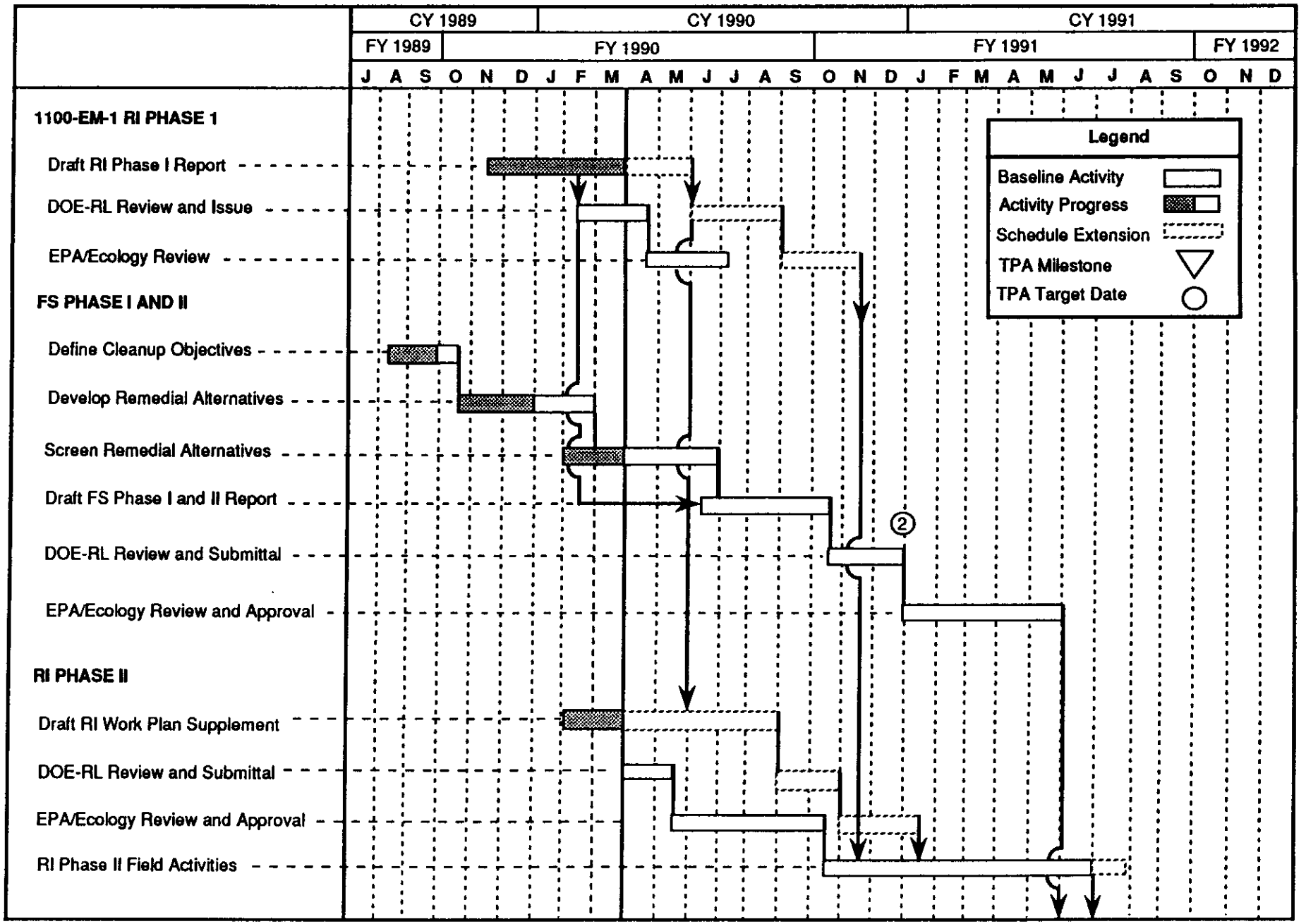
4. Work is proceeding on schedule in the development of the RI Phase 1 report. It is anticipated that the report will be available for initial review near the end of May.

Action # 11EM1.40 **A meeting will be scheduled to provide an overview of the Phase 1 RI Report. This meeting is to be on June 7, 1990, location is yet to be determined. Action R.K. Stewart by 6/7/90.**

5. An engineering study is underway to assess the needs for any potential interim responses for the 1100-EM-1 Operable Unit. This study will include alternatives that address the variety of potential clean up situations in the unit. The study is due to be delivered to DOE-RL in September 1990.

1100-EM-1 REMEDIAL INVESTIGATION/ FEASIBILITY STUDY WORK SCHEDULE

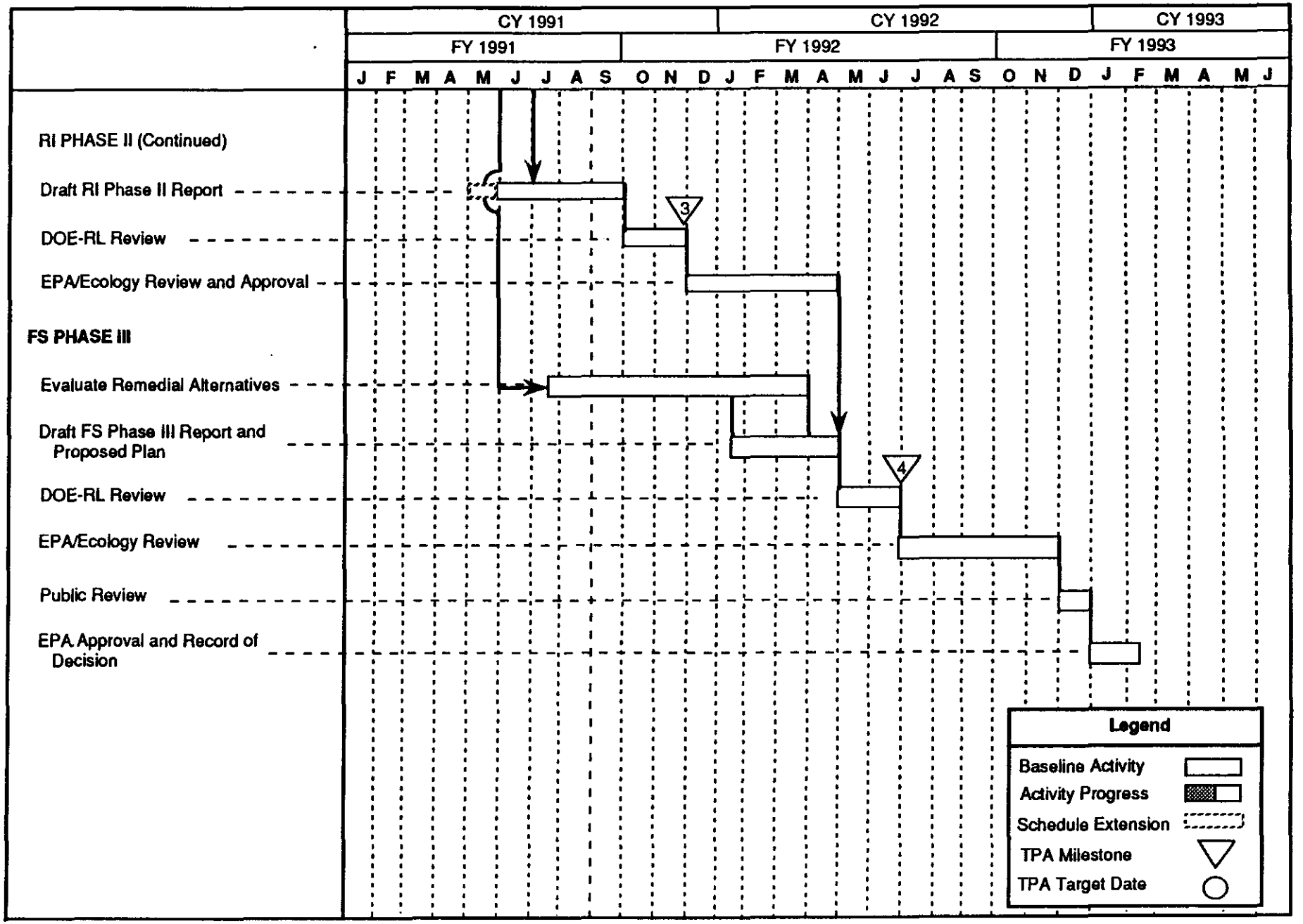
Status Date 04/01/90



Attachment #2

1100-EM-1 REMEDIAL INVESTIGATION/ FEASIBILITY STUDY WORK SCHEDULE

Status Date 04/01/90



Attachment #3

1100-EM-1 Unit Managers Meeting Agenda
April 19, 1990
450 Hills Street, Room 47

6. Introduction:

7. Action Item Status

8. Work Status:

   - o Vadose Zone Boreholes
   - o Groundwater Monitoring Wells
   - o Surface Sampling
   - o Development of RI Phase 1 and FS Phase 1 & 2 Reports

9. Schedule:

10. Issues:

    - o Coordination with ANF for Groundwater Monitoring

11. Other Topics: (as required)

12. Summary of Agreements and Commitments:

Attachment #4

Attendance List
1100-EM-1 Unit Managers Meeting
March 21, 1990

Name	Organization	1100-EM-1 Responsibility	Phone
D. Einan	EPA	Unit Manager	509-376-3883
C.S. Cline	WDOE	Hydrogeologist	206-438-7556
R.D. Hildebrand	DOE-RL	Env. Oversight	509-376-7287
R. Pressentin	DOE-RL	Admin. Ass't	509-376-5983
R.K. Stewart	DOE-RL	Unit Manager	509-376-6192
D.A. Myers	SWEC/IT	GSSC for DOE/RL	509-376-0969
M.M. Gasser	SWEC	GSSC for DOE/RL	509-376-9830
W. Staubitz	USGS	EPA Consultant	206-593-6510
D. Lacombe	PRC	EPA Consultant	206-624-2692
S.W. Clark	WHC	RI Coordinator	509-376-1513
M. Lauterbach	WHC	EE&T Group	509-376-5257
J. Lindberg	WHC	Envir. Engineering	509-376-5005
J. Patterson	WHC	Env. Programs	509-376-0568
B. Wright	GAI	WHC Consultant	206-883-0777
K.L. Pittman	GAI	WHC Consultant	206-883-0777
S. Ashworth	ES	WHC Consultant	509-943-0909

Attachment #5

Commitments/Agreements Status List
1100-EM-1 Operable Unit
April 19, 1990

Item No.	Action	Status
11EM1.23	WHC (S. Clark) is to review comments by EPA on strategy for documentation of data discrepancies and respond by proposing procedures for resolving discrepancies in the data.	Open *Revised* procedure given to EPA/Ecology on *4/11*. Pending comments by EPA Ecology.
11EM1.32	WHC is to investigate options for work plan change control. The issue will be on the agenda for the February General Topics UM Meeting.	Open Pending finalization of changes to the TPA Action Plan.
11EM1.34	Groundwater data will be provided based on the proposed TPA language -- within 15 days of receipt of validated data. Current groundwater data are to be provided according to this new TPA language. [Note: Following the meeting, EPA requested that this action also include transfer of vadose zone chemical analyses.]	Open Expedited procedures for clearance of data are being implemented by WHC.
11EM1.35	Actions required under TSCA relating to the 65 ppm of PCB in soil will be ascertained. Action: Dave Einan by 4/4/90.	Open WHC proposes to address PCB contamination as part of a possible Expedited Response Action.
11EM1.36	DOE/WHC are to assess the equivalency of the schedules shown in the approved work plan vs. the TPA Action Plan to assure that the correct schedule appears in both documents. Action: Merl Lauterbach by the April UMM.	Closed The schedules are equivalent.

11EM1.37	DOE is to furnish EPA and Ecology with the proposed letter to ANF for review and possible direct regulatory action. Action: Bob Stewart by March 30, 1990.	Closed ANF responded to a letter of April 6, 1990 providing available chemical data.
11EM1.38	Ecology (L. Goldstein) is to report on progress in obtaining data from ANF.	Closed Information acquired.

Attachment #6

1100-EM-1 Operable Unit

April 10, 1990

DOCUMENTATION AND RESOLUTION OF DATA DISCREPANCIES

Introduction:

Discrepancies are not uncommon between analyses of replicate samples. Not only is the likelihood of producing two identical samples questionable, but the precision of analysis decreases as the amount of the analyte (the substance being analyzed for) in the sample decreases.

When "significant" disagreement between two analytical laboratories occurs the discrepancy must be properly documented and resolved. What constitutes a significant disagreement depends upon the nature and concentration of the analytes, the matrix in which the analyte is contained, the detection limits of the EPA analytical method, the presence of interfering analytes, and the acceptance limits of replicate assays at the concentration of analytes detected.

Relevant Guidance:

Quality control programs based upon EPA guidance typically include:

1. Submission of blind standard, blank, and duplicate samples to the primary analytical laboratory;

2. Submission of split samples to alternate laboratories;

3. Participation of the analytical laboratories in interlaboratory and intralaboratory comparison programs.

Blind standard samples are samples of a clean matrix, such as finished drinking water, where a true concentration of the analyte(s) is known. For analysis of blind standard samples, analytical results based on known method precision within 2.0 standard deviations of the true concentration are accepted. Presence of analytes in blank samples indicates contamination of sampling or laboratory equipment used for sample handling and requires review or revision of procedures to eliminate reoccurrence. If analyses of duplicate samples which contain at least 100 times the concentration detection limit of the analyte fall outside a 99% confidence interval a request for data verification is warranted, but the differences are not regarded to be a significant discrepancy. Values from alternate laboratory comparisons of split field samples must fall within 2.8 standard deviations to be considered equivalent analyses. However, data which fails to meet this criteria are not automatically regarded to be a significant discrepancy.

EPA guidance discusses analysis of contaminants at low concentrations in terms of the "method detection limits" (MDL), defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the true value is greater than zero, and the "practical quantitation level" (PQL), defined as the lowest concentration that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions. The PQL is generally about five to ten times the MDL for relatively clean matrices such as finished drinking water. The PQL for contaminants is determined through interlaboratory studies by comparisons of analytical results on identical samples. Guidance has been promulgated citing PQLs and MDLs for analyses of regulated substances in water. However, promulgation of regulations for analysis of soils which would establish PQLs and MDLs is still forthcoming.

Proposed Criteria to Identify Significant Data Discrepancies:

Available guidance defines data discrepancies in terms of the contract required quantitation limits stated in the work plan for each operable unit. There are no CLP criteria for data discrepancies in analysis of organic materials because of the complexity of evaluating interferences of spectra from co-existing organic chemicals. Criteria for evaluation of inorganic analyses have been applied in the absence of specific criteria for organic analyses. A significant discrepancy triggering follow-up actions would be constituted by any of the following:

- Failure of a laboratory to detect an analyte at concentrations within twice the contract required quantitation limits of the work plan for water (five times the CRQL for soils because exact duplication of granular samples is very questionable) in interlaboratory split samples or in intralaboratory duplicate samples.

- Disagreement of more than 100 percent between analyses performed on duplicate samples with concentrations less than five times the contract required quantitation limits of the work plan for the analyte in water (200% of the CRQL in soils).

- Disagreement of more than 20 percent between analyses performed on duplicate samples with concentrations greater than five times the contract required quantitation limits of the work plan for the analyte in water (35% of the CRQL in soils).

- Disagreement of more than ten percent between analyses performed on duplicate samples with concentrations greater than 100 times the contract required quantitation limits of the work plan for the analyte.

Documentation of Data Discrepancies:

Determination of data discrepancies will be made by cognizant engineers reviewing validated analytical data for the remedial investigation. Determinations of data discrepancies made by the Office of Sample Management will be reported to the operable unit technical coordinator. CLP criteria call for reporting of the primary value, alone, with no qualifier if the duplicate or split sample are within control limits. If outside control limits the primary value is reported with a "J" qualifier, meaning that the associated value is an estimate. Occurrence and resolution of significant data discrepancies will be tabulated and reported at the unit managers meetings by the operable unit technical coordinator.

Resolution of Data Discrepancies:

The first step in resolution of significant data discrepancies will be a check with the laboratory(ies) to verify the reported numbers, to check for simple errors, and to recheck the calculation of the reported value, if necessary.

The second stage in the resolution process will be exchange of aliquot of the solutions extracted for analysis by the laboratory(ies) involved. Failure to resolve significant data discrepancies at this stage will require a step-by-step comparison of the analytical procedures and equipment used in different laboratories. If the discrepancy remains unresolved the unit managers must determine if the results are of sufficient significance to warrant repeating the sampling and analytical event which originally produced the discrepancy.

Attachment #7

Work Progress

1100-EM-1 Operable Unit

April 19, 1990

- o Vadose Zone Boreholes
  - Drilling of vadose zone boreholes was completed 2/12/90.
  - Data validation is complete for analyses of all samples.
- o Groundwater Monitoring Wells
  - 16 of the 17 groundwater monitoring wells listed in the Work Plan were drilled and sampled. One is proposed to be deleted.
  - The five groundwater monitoring wells drilled prior to completion of the work plan were also sampled.
  - The pipeline headers for the east and west sides of the North Richland Well Field were sampled with three pumps pumping to each header.
  - Data validation is complete for analyses of all samples.
- o Surface Sampling
  - Data validation is complete for analyses of all surface samples.
- o Development of RI Phase 1 and FS Phase 1 & 2 Reports
  - Data is being evaluated for risk assessment.
  - Sections of the RI Phase 1 report are being written and reviewed internally.
- o Schedule

1100-EM-1 Operable Unit

ANALYSES OF GROUNDWATER SAMPLES DRINKING WATER PARAMETERS

Status Date: 4/19/90

Well Number	Cond.	Analysis, parts per million (ppm) Nitrate	Sulfate	TOC	TDS
MW-1	714	9.8	29.8	2.1	391
MW-2	397	15.4	37.0	-	233
MW-3	1,230	15.8	32.2	2.0	648
MW-4	315	7.2	16.3	-	178
MW-5	313	8.3	20.5	-	187
MW-6	371	11.8	25.4	-	201
MW-7	400	10.1	30.0	-	239
MW-8	487	30.6	28.8	-	300
MW-9	216	0.5	18.0	-	121
MW-10	790	170	80.3	-	511
MW-11	783	180	88.7	-	512
MW-12	759	217	82.1	-	611
MW-13	875	208	76.3	-	553
MW-14	909	214	85.0	-	588
MW-15	730	143	60.2	-	477
MW-17	251	-	13.8	-	150
699-S41-E13A	235	6.4	10.5	-	144
699-S41-E13B	456	2.5	9.8	-	263
699-S40-E14	164	0.8	11.4	1.0	31
699-S37-E14	164	1.4	11.1	1.0	63
699-S43-E12	498	16.3	20.0	1.1	270
Well Field(W)	161	0.8	11.1	-	91
Well Field(E)	176	0.9	11.4	-	95

-: not detected
Cond.: Conductivity
TOC: Total Organic Carbon
TDS: Total Dissolved Solids

No fluoride was detected in any sample

1100-EM-1 Operable Unit

ANALYSES OF ORGANIC COMPOUNDS IN GROUNDWATER SAMPLES

Status Date: 4/19/90

Well Number	Analysis, parts per billion (ppb) 1,1,1-TCA	TCE	PCE
MW-1	-	-	-
MW-2	-	-	-
MW-3	-	-	-
MW-4	3	-	1
MW-5	4	-	0.8
MW-6	2	-	0.7
MW-7	-	-	-
MW-8	0.8	-	-
MW-9	-	-	-
MW-10	1	0.6	-
MW-11	0.8	0.9	-
MW-12	2	92	0.8
MW-13	2	90	0.6
MW-14	2	40	0.9
MW-15	-	84	-
MW-17	-	-	-
699-S41-E13A	-	-	-
699-S41-E13B	-	-	-
699-S40-E14	-	-	-
699-S37-E14	-	-	-
699-S43-E12	-	-	-
Well Field(W)	-	-	-
Well Field(E)	-	-	-

-: not detected
1,1,1-TCA: 1,1,1-Trichlorethane
TCE: Trichloroethene
PCE: Tetrachloroethene

1100-EM-1 Operable Unit

ANALYSES OF ORGANIC COMPOUNDS IN GROUNDWATER SAMPLES FROM MONITORING WELLS AND THE BOTTOM OF VADOSE ZONE BOREHOLES AT THE HORN RAPIDS LANDFILL

April 19, 1990

Well or Borehole Number	Analysis, parts per billion (ppb)		
	1,1,1-TCA	TCE	Acetone
Groundwater Monitoring Wells:			
MW-8	0.8	-	-
MW-9	-	-	-
MW-10	1	0.6	-
MW-11	0.8	0.9	-
MW-12	-	92	-
MW-13	2	90	-
MW-14	2	40	-
MW-15	-	84	-
Bottom of Vadose Zone Boreholes:			
HRL-2	6	61	12
HRL-3	-	42	-
HRL-5	-	-	19
HRL-7	-	28	26
HRL-8	-	19	-
HRL-9	-	76	161
HRL-10	-	82	12

-: not detected
1,1,1-TCA: 1,1,1-Trichlorethane
TCE: Trichloroethene

1100-EM-1 Operable Unit

DRILLING OF VADOSE ZONE BOREHOLES AND GROUNDWATER MONITORING WELLS

Status Date: 4/19/90

Site-by-Site Summary:

Site	Vadose Zone Zone Boreholes		Groundwater Monitoring Wells	
	Drilled	Assayed	Drilled	Assayed
Battery Acid Pit	2	2	2	2
Antifreeze Tank Site	2	2	1	1
1100-2 Disposal Pit	4	4	2	2
1100-3 Disposal Pit	5	5	3	3
Horn Rapids Landfill	10	10	8	8
TOTALS	23	23	16	16

1100-EM-1 Operable Unit

VADOSE ZONE BOREHOLE SAMPLES AT DISPOSAL PITS

Status Date: 4/19/90

Site	Borehole Number	Borehole Description	Contaminants
Battery Acid Pit	BAP-1	In Pit	Lead, Acetone
	BAP-2	Background	-
Antifreeze Tank Site	ATS-1	In 1171 Bldg.	Acetone, Various Organics
	MW-3	Borehole/Well	Acetone, Various Organics
1100-2 Disposal Pit	DP-4	20 ft depth	Lead
	DP-5	20 ft depth	Lead, VOC, Insecticides, PCB
	DP-6	20 ft depth	Various Organics
	DP-9	To Grndwater	Lead, TCE & VOC, Bis(2-ethylhexy
1100-3 Disposal Pit	DP-1	20 ft depth	Bis(2-ethylhexyl)phthalate
	DP-2	20 ft depth	Acetone
	DP-3	20 ft depth	Methylene Chloride, Acetone
	DP-7	Background	Acetone, Bis(2-ethylhexyl)phthal
	DP-8	To Grndwater	Methylene Chloride, Acetone

1100-EM-1 Operable Unit

VADOSE ZONE BOREHOLE SAMPLES AT HORN RAPIDS LANDFILL

Status Date: 4/19/90

Site	Borehole Number	Borehole Description	Contaminants
Horn Rapids Landfill	HRL-1	Background Hole	Acetone
	HRL-2	Soil Gas Area	Various Organics
	HRL-3	Soil Gas Area	Various Organics
	HRL-4	Near Waste Pits	PCB, DDE
	HRL-5		Various Organics
	HRL-6		Various Organics
	HRL-7	Near Waste Pits	Acetone, Various Organics
	HRL-8		Bis(2-ethylhexyl)phthalate
	HRL-9		Various Organics
	HRL-10	Soil Gas Area	Various Organics

1100-EM-1 Operable Unit

GROUNDWATER MONITORING SAMPLES AT DISPOSAL PITS

Status Date: 4/19/90

Site	Monitoring Wells		Data Comments
	Number	Description	
1171 Bldg.	MW-1	West of 1171	Low O_2, High Cond.
	MW-3	East of 1171	Low O_2, High Cond.
	MW-17	Confined Aquifer	-
1100-2 Pit	MW-4		1,1,1-TCA, PCE
	MW-5		1,1,1-TCA, PCE
1100-3 Pit	MW-2	North of Pits	-
	MW-6		1,1,1-TCA, PCE
	MW-7	Background Well	-

1100-EM-1 Operable Unit

GROUNDWATER MONITORING SAMPLES AT HORN RAPIDS LANDFILL

Status Date: 4/19/90

Monitoring Wells		
Number	Description	Data Comments
MW-8	Background Well	Elevated Nitrates
MW-9	Confined Aquifer	-
MW-10	East of HRL	High Nitrates, High Cond.
MW-11	"	High Nitrates, High Cond.
MW-12	"	TCE, High Nitrates, High Cond.
MW-13	"	TCE, High Nitrates, High Cond.
MW-14	"	TCE, High Nitrates, High Cond.
MW-15	"	TCE, High Nitrates, High Cond.

1100-EM-1 Operable Unit

GROUNDWATER MONITORING SAMPLES AT EXISTING WELLS

Status Date: 4/19/90

Monitoring Wells		
Number	Description	Data Comments
699-S41-E13A	Kaiser Yard	-
699-S41-E13B	Kaiser Yard	-
699-S40-E14	West of Well Field	Organic Carbon
699-S37-E14	North of Well Field	Organic Carbon
699-S43-E12	South 3000 Area	Organic Carbon
Richland Well Field:		
West	3 Wells Pumping	-
East	3 Wells Pumping	-