

Distribution
Unit Managers' Meeting: 100 Areas Remedial Action Unit/Source Operable Units
June 24, 2004

Kevin Bazzell.....	DOE-RL, RP (A3-04)
Dale Jackson	DOE-RL, RP (A4-52)
Mary Jarvis.....	DOE-RL, RP (A5-15)
Chris Smith	DOE-RL, RP (A3-04)
Mike Thompson.....	DOE-RL, RP (A6-38)
Arlene Tortoso	DOE-RL, RP (A6-38)
Kent Westover.....	DOE-RL, RP (A3-04)
Dib Goswanmi.....	Ecology (H0-57)
John Price	Ecology (H0-57)
Noel Smith-Jackson	Ecology (H0-57)
Jean Vanni	Ecology (H0-57)
Dennis Faulk	EPA (B5-01)
Richard Jaquish	EPA (B5-01)
Randy Acselrod.....	WDOH (B1-42)
Debora McBaugh	WDOW (B1-42)
Jane Borghese.....	FH (E6-35)
Mark Buckmaster	BHI (X3-16)
Rich Carlson	BHI (X0-17)
Frank Corpuz	BHI (X0-17)
John Darby.....	BHI (L6-06)
Linda Dietz	BHI (H0-23)
Rick Donahoe	BHI (X5-57)
Jack W. Donnelly	BHI (X0-17)
Jon Fancher	CHI (X0-17)
Ella Feist	CHI (X0-17)
Jim Golden.....	BHI X5-50)
Vern Johnson.....	FH (E6-35)
Kim Koegler	BHI (X9-08)
Eileen Murphy-Fitch	FH (A4-25)
Rex Miller.....	BHI (X3-40)
Alexander Nazarali.....	BHI (X0-17)
Annie Smet	BHI (X0-17)
Scott Parnell.....	CHI (X5-57)
Dean Strom.....	CHI (X3-40)
Jill Thomson.....	CHI (H0-23)
Joan Woolard.....	BHI (H9-03)
Administrative Record	BHI (H9-04) 2 copies

Please forward distribution list changes to Pat Ellsworth (BHI).
 Phone: 372-9355 E-mail: plllswo@bhi-erc.com

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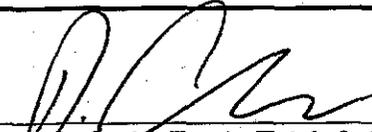
EDMC

Meeting Minutes Transmittal/Approval
Unit Managers' Meeting

119468

100 Area Remedial Action and Waste Disposal Unit/Source Operable Unit
3070 Washington Way, Richland, Washington
June 24, 2004

APPROVAL:

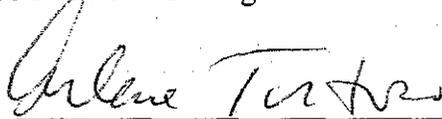


Chris Smith/Jamie Zeisloft, RL (A3-04)
100 Area Unit Managers

Date

12/9/04

APPROVAL:

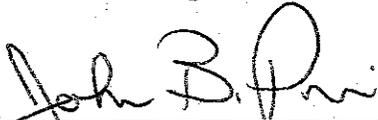


Michael Thompson/ Arlene Tortoso, RL (A6-38)
Waste Management Division

Date

12/9/04

APPROVAL:

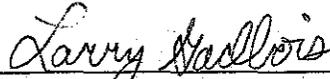


John Price, Ecology (H0-57)
100 Aggregate Area Unit Manager

Date

12/9/04

APPROVAL:



Larry Gadbois, ~~DOE~~ (B5-01) EPA
100 Aggregate Area Unit Manager

Date

27 Jan 2005

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

Attachment 1	--	Attendance Sheet
Attachment 2	--	Agenda and Outstanding Action Items
Attachment 3	--	Meeting Minutes and New Action Items
Attachment 4	--	WIDS Site CVP Closeout Summary Table
Attachment 5	--	Assessments, Regulatory, and Quality Programs Assessment Report
Attachment 6	--	Post-ROD Change Notice for the 100-NR-2 Operable Unit
Attachment 7	--	EPA Agreement on Lead/Cadmium Spacers
Attachment 8	--	116-KW-1 and 116-KE-1 Closeout Sample Tables
Attachment 9	--	118-C-1 and 118-B-3 Waste Staging Maps and Approval
Attachment 10	--	IOM, D. N. Strom, BHI, to L. R. Miller, BHI, "TPA Milestone M-16-26-F, Backfilling the 100-BC Effluent Pipelines," CCN 113606, dated May 5, 2004
Attachment 11	--	IOM, D. N. Strom, BHI, to L. R. Miller, BHI, "Re-Vegetation of 600-232," CCN 113618, dated May 6, 2004
Attachment 12	--	Addendum II, 105-D and 105-H Air Monitoring Plan, April 15, 2004
Attachment 13	--	Deferring 105-H Fuel Storage Basin Shallow Zone Side Slope Soils to the Remedial Actions Program, April 21, 2004
Attachment 14	--	Orphan Site's Task Presentation
Attachment 15	--	ISRM Schedule

Prepared by:

Pat Ellsworth

Pat Ellsworth (H9-03)

Date

11/22/04

Concurrence by:

Richard A. Carlson

Richard A. Carlson

BHI Remedial Action Project (X0-17)

Date

10/21/04

119468

ATTACHMENT 1

Attendance Sheet

ATTACHMENT 2

Agenda and Outstanding Action Items

100 AREA
UNIT MANAGERS MEETING AGENDA
Thursday, June 24, 2004

1:00 – 4:00 p.m. Hanford Square II (Room 20)

Administrative

- Meeting Minutes Status
- Review and Approve Last UMM Minutes
- Next 100 UMM is July 22, 2004, at 1:00 – 4:00

Remedial Action

100 Area Common

- Remaining Sites Sampling Efforts Status
 - B/C Area Remaining Sites
 - 600 Area Remaining Sites
 - F Area Remaining Sites
- 100 Area RDR and SAP Revisions Status
- D Area Chromium Source Investigation
- CVP Status
- Results of the 100 Area LDR Storage Assessment
- River Corridor Risk Assessment
- B/C Pilot
- N Eco Study
- Approval Requested of 118-C-1 Waste Staging Area
- Update on Pb/Cd Spacers
- Status of 100-B/C Radioactive Air Inspection

100 F, K, and Group 4

- 100 F General Status
- Condensate Crib Data
- 118-K-1 Burial Ground
- 100 F Design
- 100 K General Status

100 N

- Procurement Update
- Overburden Sampling Results

100 B/C

- Burial Ground Status
- Approval for 100-B/C Waste Staging Locations
- Air Monitoring Revision Update
- Pipeline Backfill Status
 - Areas that remain void of backfill (IOM, CCN 113606)
- 600-232
 - Verification samples taken
 - Backfill status (IOM, CCN 113618)
- RPAS Status

D&D

- Project Status

General Crossover Items

- Orphan Sites

Review Open Action Items Log

100-NR-2 Groundwater OU

- Remediation Treatment Status

100-KR-4 Groundwater OU

- Remediation Treatment Status
- 100 K Burial Ground Soil Gas Investigation

100-HR-3 Groundwater OU

- Remediation Treatment Status

100-FR-3 Groundwater OU

-

100-BC-5 Groundwater OU

- Status of Quarterly Sampling at Wells 199-B3-46 and -47

Groundwater

- 100 Area Open Action Items
- 100-Area Open Forum and Discussion
- Recent Change in Tritium Concentration near KE Fuel Storage Basin
- Status of Aquifer Tube Installation Project

Outstanding Action Items

There are no outstanding actions.

ATTACHMENT 3

Meeting Minutes and New Action Items

100 Area Unit Managers' Meeting Minutes

Thursday, June 24, 2004, 1:00 – 3:00 p.m.

Hanford Square II, Conference Room 20

3070 George Washington Way

ADMINISTRATIVE

- **Meeting Minute Status** – May 2004 meeting minutes are out for review and are expected to be ready for approval next week.
- **Next 100 Area Unit Managers' Meeting** - July 22, 2004, Hanford Square II, 3070 George Washington Way, Conference Room 20.
- **Action Item Update** - All outstanding action items are complete.

REMEDIAL ACTION

100 AREA COMMON

- **100 RDR and SAP Revision Status** - Revision 5 of the 100 Area RDR/RAWP and Revision 4 of the 100 Area SAP were previously provided to the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) for review. Regulator comments have been incorporated. Ella Feist, ERC, will send a redlined hard copy of the RDR and SAP revisions to the Regulators. Concurrently, Chris Smith, U.S. Department of Energy, Richland Operations Office (RL), will check with Ellen Dagan, RL, to ensure that Office of Environmental Support concurs with changes to Section 1.6.
- **D Area Chromium Source Investigation** – Three additional test pits are being planned to the west of the first round of test pits along the railroad tracks. Test pits and sampling locations correspond to areas of high hexavalent chromium in the groundwater. Twelve or thirteen test pits, 10 to 12 feet deep have been excavated and sampled every two feet to date. Also, 30-plus surface samples were taken along the railroad tracks. Results did not show presence of hexavalent chromium.
- **CVP Status** – Alex Nazarali, ERC, provided an updated status table of Cleanup Verification Packages (CVPs) and Remaining Sites Verification Packages (RSVPs) (Attachment 4).
- **Results of LDR Storage Assessment** – Donna Yasek, ERC, reported that the 100 Area General and 100 Area Ancillary Facility Land Disposal Restriction (LDR) Storage Assessment (Attachment 5) had been completed. The assessment found that several of the 100 Area facilities that are included in the LDR Potential Mixed Waste Table can be removed as the buildings are not posted as radioactive facilities. One observation was identified at the 115-KW facility where a leaking overhead pipe was found. The project is

investigating the source of the leak. Further information on the leak will be reported as it is discovered.

- **River Corridor Risk Assessment** – Steve Weiss, ERC, reported that the work plan for the 100 Area and 300 Area Component of the River Corridor Baseline Risk Assessment will come out June 25, 2004, for a 60-day review, as required by the Tri-Party Agreement for a primary document. This document will support the Data Quality Objectives (DQO) process. The DQO, which will work through the issues and technical aspects of the risk assessment with the Trustees, Tribes, and Hanford Advisory Board, is to begin soon. Neptune and Company, Inc. has been subcontracted to perform the DQO.
- **N Eco Study** - National Priorities List (NPL) change form was prepared to change the date from October 2004 to October 2005 (Attachment 6). John Price, Ecology, suggested that greater external communications are needed.
- **Update of Lead and Cadmium Spacers** – Dennis Faulk, EPA, and Jack Donnelly, ERC, provided the EPA Agreement for the record (Attachment 7).
- **Status of 100-B/C Radioactive Air Inspection** – Jack Donnelly asked if the air inspection was still open and if any additional reviews were planned. Dennis Faulk reported that EPA was pleased with the air monitoring inspection and that the inspection has been closed out.

100 F, K, and GROUP 4

- Mark Buckmaster, ERC, reported job progress for the F and K Areas. Excavation of waste site 116-K-2 (the Mile Long Trench) is 25% complete. Areas of side walls outside the trench boundary are contaminated and must be removed. Summary Reports are being prepared for the remedial actions at the 116-KE-1 and 116-KW-1 Condensate Cribs. High levels of tritium and carbon-14 remain at the sites. Final excavations were close to 30 feet below grade with contamination levels too high to pass cleanup criteria for groundwater protection. The excavations were backfilled immediately after final excavation and sampling. Final remediation of the sites will be deferred to the future because nearby structures and utilities must be removed. Past maintenance activity at 116-KW-1 to replace a pipeline to the crib spread contamination making the amount of material removed larger. WIDS will document information included in the summary reports (Attachment 8).

118-K-1 Burial Ground infrastructure, roads, and overburden removal will begin this summer so the site will be ready to begin excavation next fiscal year. Approximately four to five feet of overburden would be removed which would not affect protection of the environment from burial ground contamination. Doing site preparation now will allow remediation to be completed in 2005.

- Stacey Callison, ERC, reported that 100-F Area design has been put on hold pending input from the ongoing remaining sites confirmation sampling. The results from the sampling will provide for a more complete and accurate remedial design for the 100-F Area remaining sites.

- Larry Gadbois, EPA, asked RL about the \$1.5 million available for FY04. One alternative that he had heard about was to use the money to move dirt piles at ERDF in support of cell expansion. Larry encouraged RL to consider higher priority projects. Chris Smith reported that RL does not support soil movement until 2007.

100 N

- Procurement awarded in April 2004 to complete remediation of 116-N-1. Readiness Assessment is complete and excavation began this week. John Price, Jean Vanni, RL, Kent Westover, RL, and Jack Donnelly are to meet regarding Ecology's concern over the completion date and permit schedule.

100 B/C

- **Burial Ground Status** – Dean Strom, ERC, reported that the project encountered high rad objects at the 118-B-1 Burial Ground during excavation, making it necessary to move to the 118-C-1 Burial Ground. A similar object was also found at 118-C-1 making it necessary to move to 118-B-3. Additional high rad controls will be added to 118-B-1 to prevent possible exposures and the project expects to be back at 118-B-1 within a few next weeks.
- **600-232** - A two-inch diameter steel pipeline at waste site 600-232 must be removed because it contains elevated levels of arsenic, lead, and chromium. About 75-feet of pipe, about a foot below the surface will need to be removed.
- **RPAS Status** - Design has been signed and will be out for bid tomorrow. The scope includes the 100-C-9 pipeline, box culvert, miscellaneous pipelines, and an area containing high hexavalent chromium at 100-C-7.
- **Approval for 100 B/C Waste Staging Locations** – Jack Donnelly reported that waste staging pile locations at 118-C-1 and 118-C-3 have been approved by EPA (Attachment 9).
- **Air Monitoring Revision Update** - The air monitoring plan for B/C will be revised to include additional waste sites. The previous two air monitoring stations used during B/C effluent pipelines remediation will be put back up in the same locations. The present three air monitoring stations will remain in place. Dennis Faulk agreed to approve the revision and asked that the changes be sent to the Washington State Department of Health for information.
- **Backfill Status** – Dean Strom presented backfill status documents for the Pipelines and the 600-232 site as an attachment to the meeting minutes (Attachments 10 and 11).

D&D

- Jim Golden, ERC, reported on D&D activities. 100-N, 100-D, and 100-H. Addendum II to the 105-D and 105-H Air Monitoring Plan dated April 15, 2004 (Attachment 12), and Deferring 105-H Fuel Storage Basin Shallow Zone Side Slope Soils to the Remedial Actions

Program, dated April 21, 2004 (Attachment 13) were submitted for the record. 190-DR pre-demolition is 30% complete. 107-N engineering is in preliminary design. 105-N reactor EE/CA will be issued to DOE July 8, 2004, for review. Pre-demolition characterization is being done at other N ancillary facilities. 100-K EE/CA has gone to EPA for review. 100-D roof is about 50% complete. B Reactor museum document is going through internal review.

GENERAL CROSSOVER ITEMS

- **Orphan Sites** - Linda Dietz, ERC, discussed the Risk Assessment and Site Closure Orphan Sites Task (Attachment 14). Dennis Faulk mentioned that Mike Stankovich, ERC, was part of sampling transformers in the 100A in early 1990s and might be able to provide information on the subject. Undocumented USTs might have info to help. John Price noted that Ecology would like to comment on well abandonment.

GROUNDWATER

Vern Johnson, FH, provided the following summary of Groundwater operations and related highlights for March 21 through June 20, 2004.

100-NR-2

- The pump and treat system operated normally during the report period except for a one-week shutdown due to an injection well failure during the second week of June. Average flow rate was 63 gpm.
- A justification/approval statement was prepared for the revised DQO schedule to determine additional data needs for the aquatic and riparian impacts. The final report due date was changed from October 2004 to October 2005 to allow more than one seasonal sampling event and to better coordinate with the River Corridor risk assessment data needs.
- The NR-2 literature and data review report for evaluation of aquatic and riparian receptor impacts was posted on the river corridor risk assessment web page to help facilitate coordination (e.g., see: www.bhi.erc.com/projects/risk/docs/PNNL-SA-39495.pdf).
- Interviews for the aquatic and riparian impacts DQO were completed and an issues matrix prepared. The matrix will be used as part of the formal DQO process to begin in July.
- Planning began for a treatability test in the central portion of the strontium-90 plume. A SOW was prepared to secure a contractor to assist in preparation of the feasibility study, proposed plan (PP), and treatability test plan for the selected method. The proposed plan will be submitted to Ecology on or about October 2004.
- Laboratory studies of phytoremediation and in situ formation of apatite at PNNL are progressing. Initial findings (expected September 04) will be included in the feasibility study/selection of a treatment method for the treatability test.

100-KR-4

- The system operated normally during the report period except for minor shutdowns due to low water levels, power outages, and some injection well problems. Average flow rate for the first three weeks of June 2004 was 295 gpm.
- Hexavalent chromium concentrations have continued to increase in well K-130, reaching 102 ug/L on May 24, 2004. The current concentrations are equivalent to concentrations in the extraction wells for the original target zone (trench area). Accordingly, funding (FY05 dollars) was identified and a plan and schedule to convert K-130 to an extraction well was prepared. Other upgrades to the extraction network are also under consideration. However, the existing treatment capacity (300 gpm) limits network expansion without increasing treatment plant capacity.
- Options for an overall solution to KR-4 upgrades are being discussed with EPA. These considerations, together with recommendations of an expert panel that met at Hanford in May 2004, will be used to reach a technically sound solution.
- Prep work for a new monitoring well near the northwest corner of 100-N was completed and the well is on the drilling schedule for July 2004. The new well is part of a characterization effort to better define the downstream extent of the KR-4 chromium plume.

100-HR-3

- The HR-3 pump and treat system operated normally during the report period except for minor shutdowns due to low water levels and power outages. Average flow rate for the first three weeks of June 2004 was 168 gpm.

ISRM

- May operational/performance monitoring data for the barrier injection wells indicates chromium decreased in all the wells except for D4-35 and D4-40. The concentration in D4-35 increased sharply to 1380 ug/L in May as compared to 10 ug/L in February. This well was reinjected in August 2002.
- An ISRM focus group met at Hanford on March 2, 3, and 4, 2004 to review performance issues and to make recommendations for corrective actions. The report was received in May 2004.
- Based on the focus group recommendations, a plan and schedule to implement barrier characterization and laboratory and field testing of amendments was prepared (Attachment 15). Work will begin in FY04 and continue into FY06.
- An additional focus group/technical assistance workshop will be held in July 2004 to develop a short list of the most promising amendments to use in the field testing noted above.

New D Area Pump and Treat System

- In place of an ISRM extension as previously proposed, it was agreed to proceed with a small scale (50 gpm) pump and treat system to address the new chromium plume in the central region of the 100-D Area.
- The initial well network consists of conversion of four existing monitoring wells (three for extraction and one for injection). A stand alone treatment system (MR3) will be housed in a new building that was completed in May 2004. The complete system will be installed and operational by the end of July 2004.
- The objectives are to prevent further impact to the river in the central shoreline region, and mass reduction (a 50 gpm system should remove about 10 kg/month).
- Drilling began for three new wells for performance monitoring wells for the new treatment zone.

182-D Reservoir

- Continuous monitoring of water levels in the new wells near the 182-D reservoir continues to indicate the mound created by the reservoir leak has dissipated in response to lower water levels in the reservoir. Major leakage from the reservoir was found to occur when the water level exceeds about eight feet.
- Operational controls were instituted to maintain the reservoir depth below the eight-foot level until repairs to the concrete structure can be made.

100-H Area Extraction Well Network

- Funding was identified (FY05 dollars) and a plan was prepared to reconfigure part of the extraction and injection well network to address the highest concentration portion of the remaining chromium plume in the 100-H Area.

Reports

- The annual summary report for the HR-3, KR-4 and NR-2 pump and treat operations and the ISRM annual report were issued during the report period.
- The ISRM performance data quarterly report was prepared and finalized for release.
- The ISRM sampling and analysis plan was completed and submitted to Ecology for review with comments due by mid-July 2004.

ATTACHMENT 4

WIDS Site Closeout Summary Table

WIDS Site CVP Closeout Summary Table

06/24/04

WIDS Site Closeout	CVP Doc. No. Documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
100 B/C Area			
116-B-13	CVP-1999-00002	7/22/99	7/1999
116-B-14	CVP-1999-00003	7/22/99	7/1999
116-C-1	CVP-1998-00006	1/21/99	1/1999
116-B-1	CVP-1999-00012	12/8/1999	12/1999
116-B-11	CVP-1999-00001	12/8/1999	12/1999
116-C-5	CVP-1999-00004	12/8/1999	12/1999
116-B-4	CVP-1999-00014	2/24/2000	3/3/2000
116-B-5	CN 111 (DOE/RL-96-017)	1/14/1997	1/14/1997
116-B-6B	CVP-1999-00017	2/24/2000	3/3/2000
116-B-9	CVP-1999-00009	2/24/2000	3/3/2000
116-B-2	CVP-1999-00015	2/24/2000	3/3/2000
116-B-3	CVP-1999-00013	2/24/2000	3/3/2000
116-B-10	CVP-1999-00010	2/24/2000	3/3/2000
116-B-12	CVP-1999-00008	2/24/2000	3/3/2000
116-C-2A	CVP-1999-00019	3/15/2000	3/28/1999
116-C-2B			
116-C-2C			
116-B-6A	CVP-1999-00011	5/17/2000	5/26/2000
116-B-16			
116-B-7			
132-B-6	CVP-2002-00003	7/25/2002	8/6/2002
132-C-2			
BC Pipeline (North)	CVP-2002-00019	12/4/2003	2/17/2004
BC Pipeline (South)	CVP-2003-00022	2/23/2004	4/20/2004
100-B-5	CVP-2003-00014	6/18/2003	9/11/2003
1607-B7	CVP-2003-00004	5/27/2003	7/29/2003
1607-B8	CVP-2003-00005	5/27/2003	7/29/2003
1607-B9	CVP-2003-00006	6/19/2003	8/28/2003
1607-B10	CVP-2003-00007	5/27/2003	7/29/2003
1607-B11	CVP-2003-00008	5/27/2003	7/29/2003
100-C-3	CVP-2003-00009	5/27/2003	7/28/2003
118-C-4	CVP-2003-00015	6/25/2003	9/11/2003
100-B-9	0100-B-CA-V0177	2/10/2004	
100-B-11	0100-B-CA-V0167	2/10/2004	
100-B-16	0100-B-CA-V0169		
118-B-4	CVP-2004-00002	3/29/2004	5/24/2004
118-B-5	CVP-2004-00003	4/19/2004	5/24/2004
118-B-10	CVP-2004-00004	4/19/2004	5/24/2004
118-C-2	CVP-2004-00005	(submit for review 5/13/04)	
100 D Area			
100-D-4 (107D5)	CVP-1998-00004	3/25/1999	3/1999
100-D-20 (107D3)	CVP-1998-00003	3/25/1999	3/1999
100-D-21(107D2)	CVP-1998-00002	3/25/1999	3/1999
100-D-22 (107D1)	CVP-1998-00001	3/25/1999	3/1999
1607-D2		closed	
1607-D2:1 Tile Field	CVP-1998-00005	3/25/1999	3/1999
Septic Pipelines	CVP-2000-0004	9/26/2000	9/2000
Septic Tank	CVP-1999-00005	11/23/1999	12/1999
116-DR-9	CVP-1999-00006	1/6/2000	1/2000
100-D-25			
116-D-7	CVP-1999-00007	8/15/2000	8/2000
100-D-18 (107D4)	CVP-2000-00001	9/26/2000	10/2/2000
116-DR-1	CVP-2000-00002	9/26/2000	9/27/2000
116-DR-2			
100-D-48		closed	
100-D-48:1 (Grp 2 North Pipelines)	CVP-2000-00003	3/14/2001	3/2001
100-D-48:2 (Grp 2 West Pipelines)	CVP-2000-00005	9/26/2000	10/2/2000
100-D-48:3 (Grp 3 Large Pipelines)	CVP-2000-00034	4/20/2001	4/20/2001
100-D-48:4 (Grp 3 Small Pipelines)	CVP-2000-00033	4/17/2001	4/20/2001
100-D-19	CVP-2000-00003	3/14/2001	3/2001
UPR-100-D-4			
100-D-49		closed	
100-D-49:1 (Grp 2 North Pipelines)	CVP-2000-00003	3/14/2001	3/2001
100-D-49:2 (Grp 2 East Pipelines)	CVP-2000-00005	9/26/2000	10/2/2000

WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	issue Rev. 0 CVP
100 D Area (cont.)			
UPR-100-D-2	CVP-2000-00005	9/26/2000	10/2/2000
UPR-100-D-3			
100-D-5	CVP-2000-00034	4/20/2001	4/20/2001
100-D-6			
116-D-3	no CVP site rejected	5/17/2000	N/A
116-D-4	CVP-2000-00008	10/23/2000	10/31/2000
116-D-6	CVP-2000-00009	11/7/2000	11/9/2000
116-D-1A			
116-D-1B	CVP-2000-00010	3/12/2001	3/2001
100-D-46			
116-D-2	CVP-2000-00013	10/23/2000	10/25/2000
116-DR-6	CVP-2000-00014	10/23/2000	10/24/2000
116-DR-4	CVP-2000-00015	10/23/2000	10/25/2000
100-D-12	CVP-2000-00016	10/23/2000	10/26/2000
100-D-52	CVP-2000-00018	11/7/2000	11/9/2000
116-DR-7	CVP-2000-00019	9/26/2000	10/2/2000
116-D-9	CVP-2000-00012	3/23/2001	3/23/2001
105-DR Reactor			
118-DR-2:2	CVP-2003-00016	12/15/2003	1/15/2004
100-D-49:4			
117-DR			
100-D-23	CVP-2003-00018	1/29/2004	3/4/2004
100-D-54			
100 H Area			
1607-H2	CVP-2000-00024	2/5/2001	2/2001
1607-H4	CVP-2000-00025	2/26/2001	2/26/2001
116-H-1	CVP-2000-00026	4/4/2001	4/11/2001
116-H-7	CVP-2000-00027	7/24/2001	8/1/2001
100-H-5	CVP-2000-00028	12/21/2000	12/21/2000
100-H-17			
116-H-2	CVP-2000-00031	3/6/2001	3/8/2001
100-H-2			
100-H-30			
100-H-21			
100-H-22	CVP-2000-00029	3/29/2001	3/29/2001
100-H-1			
100-H-24	CVP-2000-00030	5/9/2001	5/2001
116-H-3	CVP-2000-00032	4/3/2001	4/11/2001
100 N Area			
120-N-1			
120-N-2	CVP-2001-00021	3/28/2002	4/18/2002
100-N-58			
116-N-3	CVP-2002-00002	9/26/2002	12/23/2002
100 Area Misc. & 300 Area			
JA Jones	CVP-2001-00019	11/8/2001	12/10/2001
600-23	CVP-2001-00020	11/30/2001	12/17/2001
300-49 (Landfill 1A)	CVP-2000-00020	1/12/2003	6/9/2003
300-50 (Landfill 1B)	CVP-2000-00021	1/27/2003	6/9/2003
628-4 (Landfill 1D)	CVP-2003-00001	4/10/2003	7/23/2003
316-1(South Process Pond) & 300-262			
UPR-300-FF-1, 300 RFBP	CVP-2003-00002	4/10/2003	7/23/2003
UPR-300-32, 33, 34, 35, 36, & 37			
300 Ashpit	BHI-01132	12/1/1997	12/1/1997
300-44 UPR	BHI-01135	12/1/1997	12/1/1997
316-2 (North Process Pond), 618-12, and UPR-300-7	BHI-01298	8/19/1999	8/19/1999
316-5 (Process Trench)			
UPR-300-15, and UPR-300-19	BHI-01164	3/30/1998	3/30/1998
UPR-300-20 Through UPR-300-30, UPR-300-47, UPR-300-8, and UPR-300-9			

WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
300-45	BHI-01136	12/1/1997	12/1/1997
618-4	CVP-2003-00020	1/16/2004	
618-5	CVP-2003-00021	1/29/2004	
100 F Area			
116-F-4	CVP-2001-00006	11/8/2001	11/15/2001
116-F-5	CVP-2001-00007	8/16/2001	8/23/2001
1607-F6	CVP-2001-00010	11/8/2001	11/15/2001
UPR-100-F2	CVP-2001-00011	4/22/2002	5/7/2002
100-F-19:1	CVP-2001-00002	5/21/2002	6/10/2002
100-F-19:3			
100-F-34			
116-F-12	site closed (No CVP)	2/15/2002	2/15/2002
100-F-40	CVP-2001-00009	7/11/2002	7/18/2002
116-F-14	CVP-2001-00001	7/25/2002	8/5/2002
100-F-2	CVP-2002-00001	7/25/2002	8/6/2002
100-F-15			
100-F-4			
100-F-11	CVP-2001-00008	10/16/2002	10/22/2002
100-F-16			
116-F-9			
116-F-2	CVP-2001-00005	1/13/2003	3/11/2003
126-F-1	CVP-2002-00002	1/13/2003	TBD
100-F-35	CVP-2002-00007	4/15/2003	6/16/2003
116-F-1	CVP-2002-00009	5/22/2003	11/3/2003
116-F-3	CVP-2002-00008	4/15/2003	6/16/2003
116-F-6	CVP-2002-00010	5/19/2003	11/3/2003
116-F-10	CVP-2002-00006	4/15/2003	6/16/2003
1607-F2	CVP-2002-00005	1/13/2003	3/11/2003
100-F-19:2	CVP-2001-00003	5/27/2003	9/15/2003
116-F-11			
UPR-100-F-1			
100-F-29	CVP-2003-00010	6/9/2003	8/14/2003
UPR-100-F-3			
100-F-25			
100-F-23	CVP-2003-00011	6/9/2003	8/14/2003
100-F-24	CVP-2003-00012	6/9/2003	8/14/2003
105-F Reactor	CVP-2003-00017	2/12/2004	5/6/2004
100 K Area			
116-K-1 Crib	CVP-2003-00024	2/17/2004	5/19/2004
116-KW-3 Retention Basin	CVP-2003-00023	2/23/2004	4/15/2004
116-KE-1	BHI-1737		
116-KW-1	BHI-1737		
100-K-29	RSVP-2004-040	5/25/2004	
100-K-30	RSVP-2004-036	(submit for review 5/25/04)	
100-K-31	RSVP-2004-038	(submit for review 6/2/04)	
100-K-32	RSVP-2004-039	(submit for review 5/13/04)	
100-K-33	RSVP-2004-041	(submit for review 6/9/04)	
128-K-1	RSVP-2004-042	(submit for review 6/22/04)	
600 Area sites			
600-110	RSVP-2004-062	(Submit for review 6/9/04)	
600-111, UPR 600-16			
600-120			
600-127			
600-232			

ATTACHMENT 5

Assessments, Regulatory, and Quality Programs Assessment Report

**ASSESSMENTS, REGULATORY, AND QUALITY PROGRAMS
ASSESSMENT REPORT**

ORGANIZATION ASSESSED: Facilities Decommissioning Project
ASSESSMENT NUMBER: ARQP-04-11
ASSESSMENT DATES: May 13, 2004 through June 3, 2004
ACTIVITIES ASSESSED: Land Disposal Restricted Mixed Waste Storage in
the 100 Areas

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Prepared/Approved by:

Ray Collins 6/15/04
Assessment Lead R. L. Collins Date

D. K. DuVon 6/15/04
Assessor – D. K. DuVon Date

Donna Yasek 6/15/04
Assessor – D. M. Yasek Date

Concurrence:

M. S. Cochrane 6/15/04
Quality Assurance and Services Manager – M. S. Cochrane Date

1.0 INTRODUCTION/PURPOSE

This report provides the results of an independent assessment conducted by the Environmental Restoration Contractor (ERC) Quality Assurance and Services (QA&S) group of Land Disposal Restricted (LDR) Mixed Waste (MW) storage in the 100 Areas. Bechtel Hanford, Inc. (BHI) has committed to the customer to conduct independent assessments to determine if LDR MW is being stored at any ERC managed facilities that has not previously been identified as a LDR MW or LDR potential MW. This LDR MW assessment requirement is set forth in DOE/RL-2003-20, Rev. 0 and identifies general areas and schedules for conducting the assessments.

2.0 SCOPE

The scope of the assessment initially covered all ERC managed facilities in the 100 Areas, except the reactors. The scope was narrowed to include only facilities that handled land disposal restricted mixed waste. Inactive facilities in the N Area are surveilled annually by the Facilities Decommissioning Project and are excluded from this assessment as the facilities are managed under a regulator approved long-term surveillance and maintenance plan. Remedial action dig sites are also excluded from the assessment. The results from the annual Hanford Site Resource Conservation and Recovery Act (RCRA) 100 Areas inspection that was conducted on May 20, 2004 were used in this assessment. This RCRA inspection covers the general 100 Areas (not including reactors and reactor auxiliaries). The remaining accessible inactive facilities inspected during this independent assessment were located in the 100-B and 100-KW Areas, as well as one active LDR MW storage facility in the 100-N Area.

The Facilities Decommissioning Project is responsible for conducting surveillances of the inactive facilities and identifying/managing any wastes visually noted during the surveillances.

3.0 ASSESSMENT TEAM MEMBERS

The ARQP assessment team consisted of Ray Collins as the lead assessor, and Doug DuVon and Donna Yasek as assessors.

4.0 ASSESSMENT SUMMARY AND CONCLUSIONS

An assessment checklist was used and is based on the Hanford Site Mixed Waste LDR Report, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) approval documents, 100-N Surveillance and Maintenance Plan, and RCRA requirements. Assessment performance was guided by the checklist and included personnel interviews, inspection of inactive facilities in the 100-B and 100-KW Areas, inspection of the 1330-N storage pad, reviews of requirements documents, and records.

The list of 100 Area facilities managed by ERC was reviewed to determine which facilities would be inspected. Only facilities that were known or suspected to be radiologically contaminated were candidates for inclusion in the assessment. Of these, only facilities that had or may have had LDR type wastes/materials associated with their functions were included. The 100-N Area inactive auxiliary facilities that have long-term surveillance and maintenance plans under the Tri-Party Agreement were excluded. Waste/materials in the 100-N facilities have already been inventoried and current storage location/methodology has been approved by the Washington State Department of Ecology (Ecology). Inspections are regularly performed to ensure facility safety/integrity. Facilities that were already demolished or are scheduled for demolition this calendar year were also excluded. Some facilities were not accessible due to radiological contamination or physical barriers preventing entry.

The assessment noted that overall compliance to applicable requirements was good. Although not visually inspected during this assessment, one facility (115-KW) does have potential LDR MW in it. Photographs of the interior of the facility were recently taken showing equipment still in place, as well as the floors, walls, and ceiling. One photograph shows what appears to be a single lead brick on the concrete floor. Any other potential LDR MW will not be verified until characterization/sampling of the facility prior to demolition (possible heavy metals in oils leaking from equipment and possible mercury switches). Also, two side by side overhead pipes appear to have leaked liquids onto the concrete floor (see observation one). There is another portion of the facility that was not accessible due to a key broken off in the door lock leading to another room(s) (contents unknown). Its sister facility (115-KE) was not accessible during this assessment since keys were not available to any portion of that facility. Similar contents may be expected until access and inspection can verify the facility contents regarding LDR MW. A Silver Letter Commitment (95-PCA-342) dated June 1997, in coordination with Section 8.0 of the Tri-Party Agreement Action Plan, allows buildings to achieve environmental compliance during final disposition of the facility. The 100-KE and 100-KW Area EE/CA provides a path for final disposition of these facilities. Results of the assessment were shared with the project via a draft assessment report on June 3, 2004 and accepted.

No Corrective Action Requests (CARs) or Unsatisfactory-Corrected Immediately (UCIs) deficiencies were noted. One observation was noted regarding rusty pipes and is discussed in section 6.3. The project personnel were supportive of this assessment and very knowledgeable regarding LDR MW requirements.

5.0 ASSESSMENT PREPARATION, CRITERIA, AND PERFORMANCE

An electronic e-mail was sent to the project notifying them that an independent assessment was to be conducted. Follow-up phone calls were made and discussions held to identify points of contact, assessment dates, scope, assessment team members, and applicable requirements. The checklist was used to guide the assessment and maintain scope and consistency. The assessment team reviewed the list of all ERC managed facilities in the 100 Areas. Criteria used to exclude facilities from the assessment were;

- Reactors
- Non-radiological facilities
- Demolished facilities
- Facilities in the 100-N Area already being surveilled annually under an approved surveillance and maintenance plan
- Facilities that never had MW in them

A walkdown and visual inspection was conducted where possible and in one instance photographs of the facility interior were reviewed. Results of the assessment were summarized and shared with representatives of the Facilities Decommissioning Project on June 3, 2004.

6.0 CORRECTIVE ACTION REQUEST, UNSATISFACTORY-CORRECTED IMMEDIATELY, AND OBSERVATIONS

- 6.1 Corrective Action Requests (CARs) – No CARs were identified.**
- 6.2 Unsatisfactory Corrected Immediately (UCI) – No UCIs were identified.**
- 6.3 Observations – One Observation was noted.**

There are two overhead rusty pipes in the 115KW Gas Recirculation Building that appear to have leaked liquid onto the concrete floor (stained). Project has initiated actions to evaluate the source of the leaks and constituents in the pipes (possibly caustic). At this stage of the evaluation, project believes the leaks originated from inside the building, are contained inside the building, and do not pose a safety or environmental hazard as currently managed. However, project stated they still need more information to make a final determination regarding source of possible leaks, constituents in the pipes, and potential actions to take.

Recommendation: Continue with the evaluation and develop a path forward, as appropriate, to address the rusty pipes, leak(s), and any hazardous constituents regarding their management and/or disposal.

Actionee: J. J. McGuire, Facilities Decommissioning Project

7.0 PERSONNEL CONTACTED

	Notification	Assessment	Closeout Discussions
J. M. Atwood	X		
D. R. Baker	X		
D. R. Byers	X		X
D. W. Eckert	X	X	
R. G. Egge	X	X	X

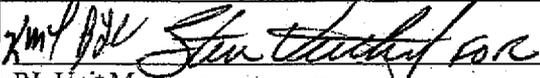
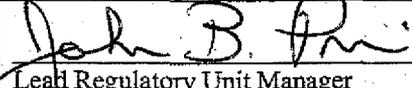
C. J. Galbreath	X	X	
J. W. Golden	X	X	X
R. J. Landon	X		
T. J. Lazarski		X	
J. J. McGuire	X		X
M. A. Mihalic	X		
R. P. Ollero	X		
M. A. Peloquin	X	X	

8.0 REFERENCES/DOCUMENTS REVIEWED

1. DOE/RL-2003-20, Rev. 0 *Calendar Year 2002 Hanford Site Mixed Waste Land Disposal Restrictions Report*, U.S. Department of Energy, Richland Operations Office, Richland, Washington
2. DOE/RL-98-64, Rev. 0 *Surveillance and Maintenance Plan for the 100-N Area Deactivation Facilities*, U.S. Department of Energy, Richland Operations Office, Richland, Washington
3. Ecology, EPA, and DOE, *Hanford Federal Facility Agreement and Consent Order*, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy
4. 40 CFR 268, *Land Disposal Restrictions*, Subpart E, Prohibition on Storage
5. WAC 173-303, *Dangerous Waste Regulations*, Section 140, Land Disposal Restrictions
6. Close Out Form, Environmental Compliance Issues Identified in DOE/RL Letter 95-PCA-342, July 1995, CCN 081857

ATTACHMENT 6

Post-ROD Change Notice for the 100-R-2 Operable Unit

Change Number CN 135	Approved Document Change Control Form Do not use blue ink. Type or print using black ink.		Date: June 22, 2004
Document Number and Title: Post-ROD Change Notice for the 100-NR-2 Operable Unit		Date Document Last Issued: October 1999	
Originator: Jane Borghese (FH)/Mike Thompson (RL)/ John Price (Ecology)		373-3804/373-0750/372-7921	
Description of Change:			
<p>The Interim Remedial Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units was issued in October 1999. One element of the 100-NR-2 Groundwater OU Selected Remedy was to . . .</p> <ul style="list-style-type: none"> Evaluate aquatic and riparian receptor impacts from contaminated groundwater and submit information to Ecology. <p>The activity is further described in the ROD (page 52) as follows:</p> <p>DOE will conduct an evaluation of aquatic and riparian receptor impacts from contaminant discharges at the groundwater/river interface and will coordinate with ongoing efforts. DOE shall submit information to Ecology within 5 years of this ROD [October 2004]. The evaluation will include a literature search and evaluation of existing data. Laboratory testing and studies of ecological receptors (e.g., through bioassays or injury assessments) and their habitat (e.g., pore water sampling) may be required.</p> <p><u>Activity Status</u></p> <p>The literature search and preliminary evaluation of existing ecologic and contaminant data for the shoreline and vicinity at 100 N was completed in September, 2003 (PNNL-SA-39495). Related laboratory studies to assess the uptake of strontium-90 by salmonids are underway at Pacific Northwest National Laboratory and aquatic and riparian reconnaissance sampling was conducted in late March 2004. The latter information will be used to refine the sampling and analysis plan for the DQO, described as follows.</p> <p>Description of Change continued on page 2.</p>			
Justification and Impact of Change:			
<p>A final report was originally scheduled for completion by October 2004. Deferral of this activity until October 2005 will allow coordination with the larger scope of the River Corridor Baseline Risk Assessment. The coordination is responsive to Natural (Continued on page 2)</p>			
<p>Approvals: A summary of changes will be published in the Tri-Party Agreement quarterly and included as an attachment to the June 2004 100 Area Unit Manager's Meeting to comply with the public notice requirements.</p>			
 RL Unit Manager	6-24-04 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 Lead Regulatory Unit Manager	6/24/04 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

Description (Continued)

A Data Quality Objectives process, currently underway, will be used to define additional data needs. As part of this effort, interviews of decision makers and tribal and other stakeholder interests are underway to solicit input for developing appropriate assessment endpoints and measurements. Existing and new data from the DQO effort will be used to support a final remedy decision.

The DQO and SAP will be completed during summer 2004 so that the fall 2004 sampling can be conducted and additional spring (2005) sampling, if needed. The aquatic eco-receptor study final report will now be delivered on or before October 1, 2005.

Justification and Impacts of Change (Continued)

Resource Trustees and other interested parties who have requested a "holistic" study of the River Corridor, including the 100N Area. RL has evaluated the impact of this proposed delay on the scope, performance, and cost of the Selected Remedy relative to the following criteria:

- Does the change alter the scope of the remedy (e.g., type of treatment or containment technology, the physical area of the response, remediation goals to be achieved, type and volume of wastes to be addressed)?
- Does the change alter the performance (e.g., treatment levels to be attained, long term reliability of the remedy)?
- Are there significant changes in costs from the estimates in the ROD, taking into account the recognized uncertainties associated with the hazardous waste engineering process selected (Feasibility Study cost estimates are expected to provide an accuracy of +50 percent to -30 percent)?

This evaluation determined this post-ROD change falls within the category of *Non-significant or Minor Changes*. Insignificant or minor changes should be documented in a memorandum or note to the post-ROD file (i.e., the Administrative Record or RD/RA case file). Completion and submittal of this form to the Administrative Record through Unit Managers Meeting Minutes meets this documentation requirement.

ATTACHMENT 7

EPA Agreement on Lead/Cadmium Spacers

EPA Agreement for Lead/Cadmium Spacers
Submitted by Dennis Faulk and Jack Donnelly for Inclusion in the
June 24, 2004, 100 Area UMM Minutes

DOE, EPA, and BHI met on March 25, 2004 to discuss the aluminum jackets containing lead/cadmium poison pieces (known as lead/cadmium spacers) discovered at the 118-B-1 burial ground. A waste profile was prepared that identified the aluminum jackets as sufficing as meeting macroencapsulation required by 40 CFR 268.42. BHI explained that segregation of damaged spacers would be performed on the initial cascading of waste. Those damaged spacers removed would be macroencapsulated prior to disposal. The damaged spacers were disposed in the 118-B-1 in that configuration and the damage was not the result of the environment in which they were disposed. The remaining soil matrix is being sampled in accordance with the regulatory approval Sampling Analysis Plan. EPA agreed with the segregation approach.

ATTACHMENT 8

116-KW-1 and 116-KE-1 Closeout Sample Tables

116-KW-1 (Closeout Samples)

116-KE-1 (Closeout Samples)

SHALLOW ZONE (pCi/g)

C-14	H-3
7.94	0
77	5.1
27	0.2
12.8	0.3
9.7	0.2
73.9	5.37

SHALLOW ZONE (pCi/g)

C-14	H-3
0	0
2.7	0
0	0
1.3	0
3	0
1.2	0

DEEP ZONE (pCi/g)

C-14	H-3
38,100	35.5
1980	162
45,000	47.1
42.7	13

DEEP ZONE (pCi/g)

C-14	H-3
7,600	851
1880	845
5	465
5580	737

~10 FT BELOW CRIB (pCi/g)

C-14	H-3
1610	155
1840	141
2460	616

~10 FT BELOW CRIB (pCi/g)

C-14	H-3
2130	658
2410	696
2800	774

Remedial Action Goals - Direct Exposure GW/River Protection

C-14 (pCi/g)	5.16	50
H-3 (pCi/g)	510	400

ATTACHMENT 9

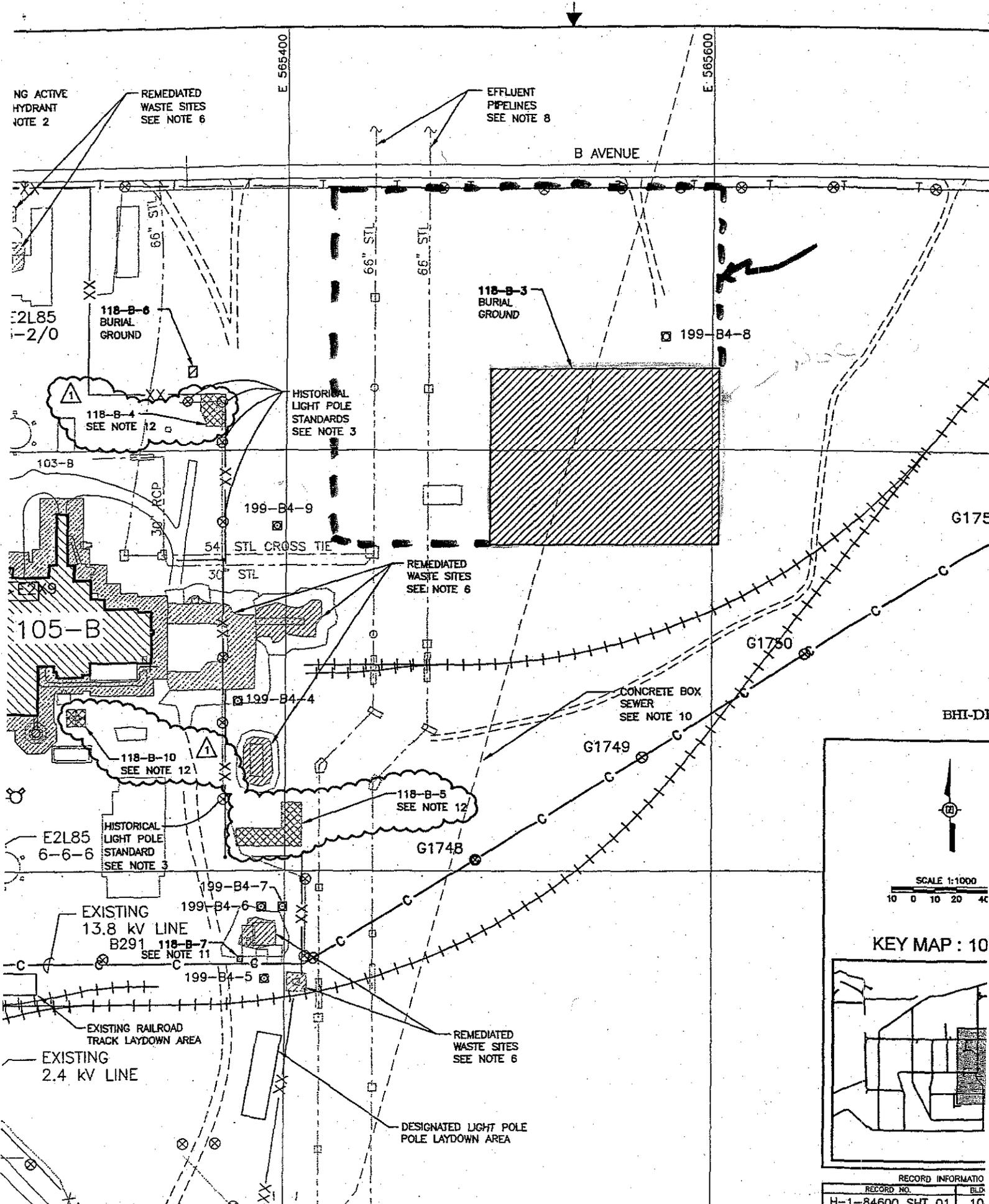
118-C-1 and 118-B-3 Waste Staging Maps and Approval

Donnelly, Jack W

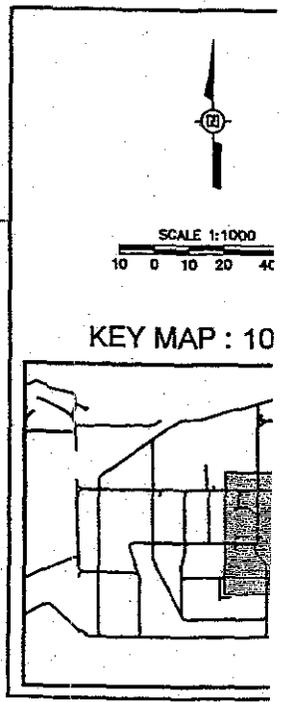
From: Faulk.Dennis@epamail.epa.gov
Sent: Thursday, April 22, 2004 3:32 PM
To: Donnelly, Jack W
Subject: Re: 118-C-1 and 118-B-3 waste staging area

The staging areas are acceptable to me.

Dennis



BHI-D1



RECORD INFORMATION	
RECORD NO.	BLD
H-1-84600 SHT 01	10

ATTACHMENT 10

**IOM, D. N. Strom, BHI, to L. R. Miller, BHI, "TPA Milestone M-16-26-F,
Backfilling the 100-BC Effluent Pipelines," CCN 113606, date May 5, 2004**

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum

RECEIVED

MAY 06 2004

BY DIS

Job No. 22192

Written Response Required: NO
Due Date: N/A
Actionee: N/A
Closes CCN: N/A
OU: 100-BC
TSD: N/A
ERA: N/A
Subject Code: 8240

TO: L. R. Miller X3-40

DATE: 05-05-04

COPIES: See Below
Document and Info Services H9-04

FROM: D. N. Strom, Resident Engineer *DNS*
100 BC Remedial Action Project
X3-40/373-5519/430-1770

SUBJECT: **TPA MILESTONE M-16-26F, BACKFILLING THE 100-BC EFFLUENT PIPELINES**

The conclusion of TPA Milestone M-16-26F, Backfilling of the 100-BC Effluent Pipelines is nearly complete. All excavated pipelines and proximity sites have been or will be backfilled to the original grade as directed, with the exception of Pipelines 5, 8 and 16/17. This is in accordance with the 100-BC Pipeline Remediation Project contract specifications (0100B-SC-G0010).

Based on future work scope associated with Remaining Pipelines and Sewers (RPAS), the backfill subcontractor was directed not to backfill Pipeline 5 and portions of Pipelines 8 and 16/17.

Pipeline 5:

Pipeline 5, WIDS 100-B-14 was a 43-meter long, vitrified clay pipe excavated to a depth of approximately 3 to 4 meters. This excavation will not be backfilled. The RPAS design has identified three additional pipes that fall within the excavation boundary that require remediation.

Pipeline 8:

Pipeline 8 was a 17-meter long pipeline that connected the B-Reactor 72" process sewer line to the 116-B-7 Outfall structure (removed under the 100-BC Pipeline contract). The RPAS design has established that the entire 72" process sewer pipeline will be remediated. The backfill subcontractor has been directed not to backfill that portion of Pipeline 8 that will directly impact the removal of the 72" process sewer line.

Pipelines 16/17:

Pipelines 16/17 were two 48" steel pipelines that ran parallel to the 72" Twin Box process sewer from C-Reactor. The 72" Twin Box process sewer, WIDS 100-C-9 has been identified by the RPAS design team as a structure that will require remediation. The backfill subcontractor has been directed not to backfill that portion of Pipelines 16/17 that will impact the removal of the 72" Twin Box process sewer line.

Pipelines 8 and 16/17 have been "closed-out" according to the *100 Area Remedial Action Sampling and Analysis Plan, DOE/RL-96-22, Rev.3*. Pipeline 5 will be "closed-out" along with the other three

Distribution
Page 2

pipelines under the RPAS contract in accordance with the 100 Area SAP.

By anticipating future work scope, the 100-BC Pipeline Remediation Project was able to save time and money by not double handling material and ultimately sending a portion of the material to ERDF. At the completion of the RPAS work scope, Pipelines 5, 8, and 16/17 will be backfilled to the original grade as outlined in the RPAS design documentation.

DNS:tmb

Copies:

R. D. Belden X3-40

R. A. Carlson X0-17

K. E. Cook X0-17

J. S. Decker X0-17

R. L. Donahoe X0-17

A. R. Michael X0-17

L. R. Miller X3-40

A. K. Smet X0-17

100 BC Pipelines Project Files X3-40

ATTACHMENT 11

**IOM, D. N. Strom, BHI, to L. R. Miller, BHI, "Re-Vegetation of 600-232,"
CCN 113618, dated May 6, 2004**

Environmental
Restoration
Contractor

ERC Team
Interoffice Memorandum

113618

Job No. 22192
Written Response Required: NO
Due Date: N/A
Action: N/A
Closes CCN: N/A
OU: 100-BC
TSD: N/A
ERA: N/A
Subject Code: 8240

TO: L. R. Miller X3-40
COPIES: See Below
Document and Info Services H9-04

DATE: May 6, 2004
FROM: D. N. Strom, Resident Engineer *DL*
100 BC Remedial Action Project
X3-40/373-5519/430-1770

SUBJECT: RE-VEGETATION OF 600-232

The original remedial design for the 600-232 Electrical Lay-down Yard estimated the removal of 19,608 BCM (\approx 49,000 US tons) from the site. Based on site walk-downs, recycling efforts, and additional characterization sampling, the 100-BC Burial Ground Project was able to substantially reduce this volume by nearly 41,000 tons. As a result the disturbed remediation footprint for the site was reduced and shallower than originally estimated. On average, the remediated area is approximately 15 to 20 cm (6-8 in.) in depth.

The backfill material for this site would come from Pit 24. Backfill material from Pit 24 consists of sand mixed with 4-6" cobbles. From a re-vegetation standpoint, the selected backfill material for the site is less desirable than the existing soil.

Based on a post remediation walk-down, Ken Gano and April Johnson (BHI Natural Resources) forecast a more successful re-vegetation of 600-232 if the existing soil is used, rather than using material from Pit 24. Because the remediated area is flat and rather shallow, the 100 BC Remedial Action Project proposes a re-vegetation of the existing soil at 600-232 instead of importing backfill material from Pit 24.

The attached photographs show the current conditions of the 600-232 site.

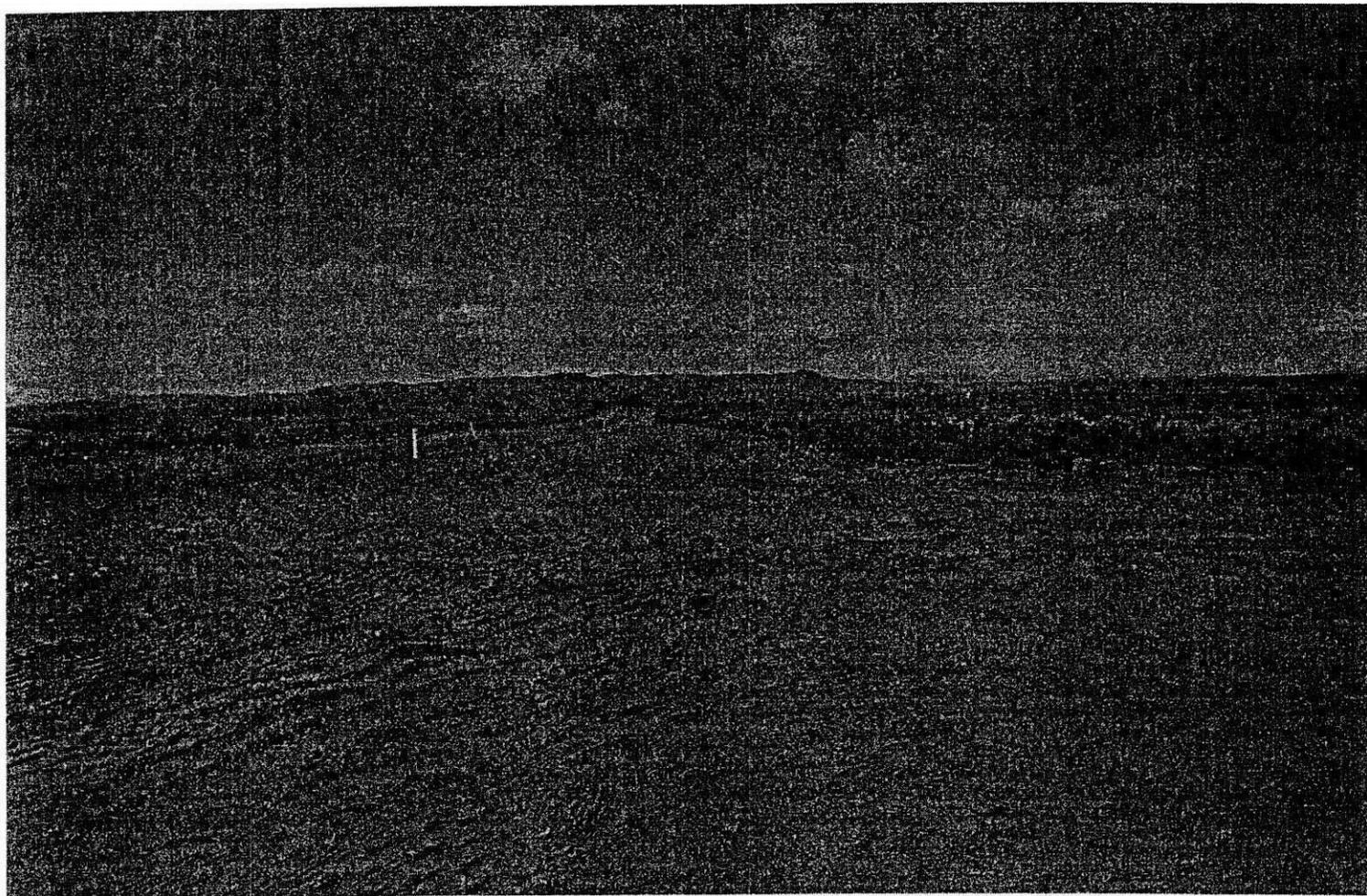
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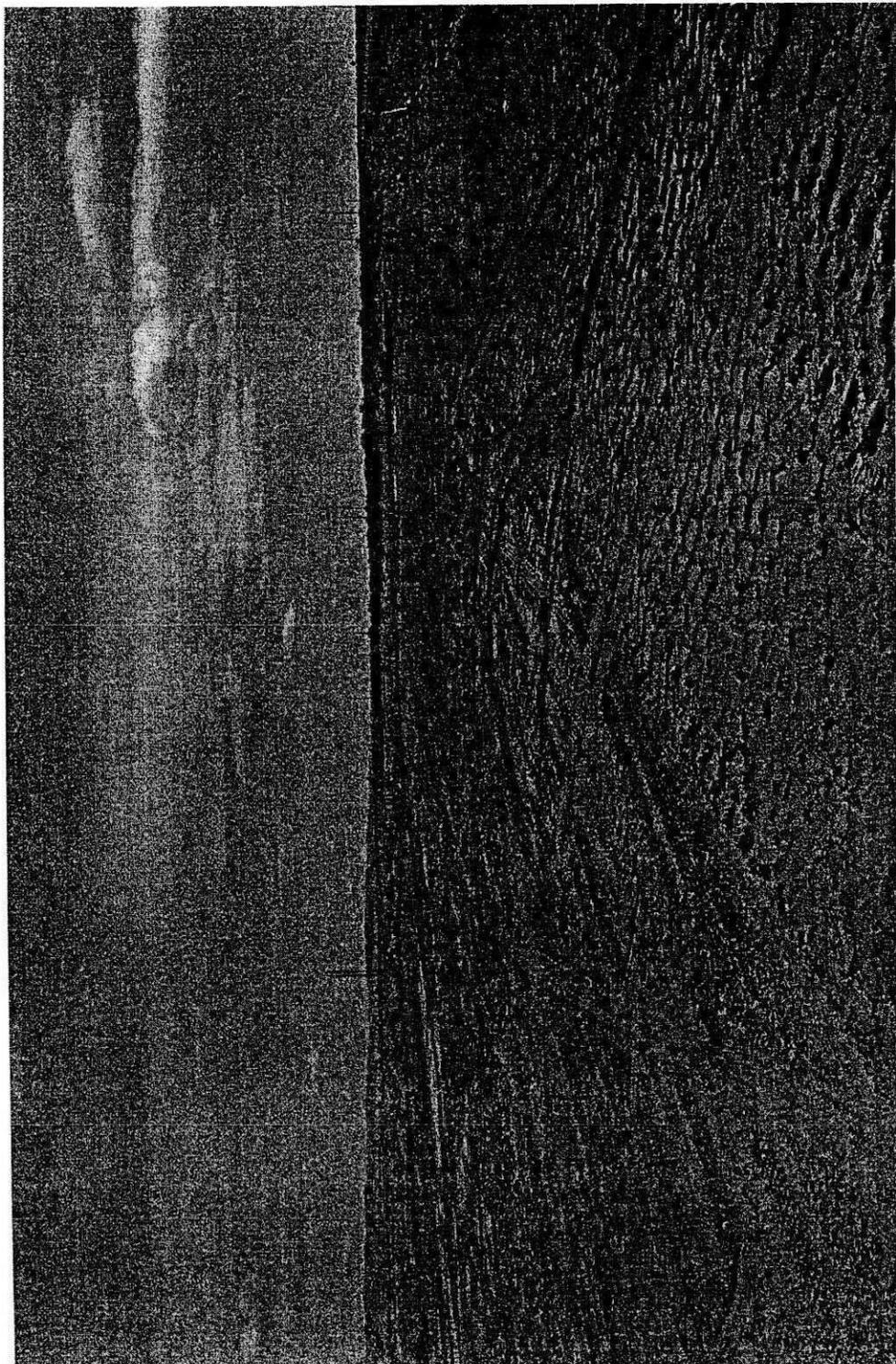
Attachments: Photos (5)

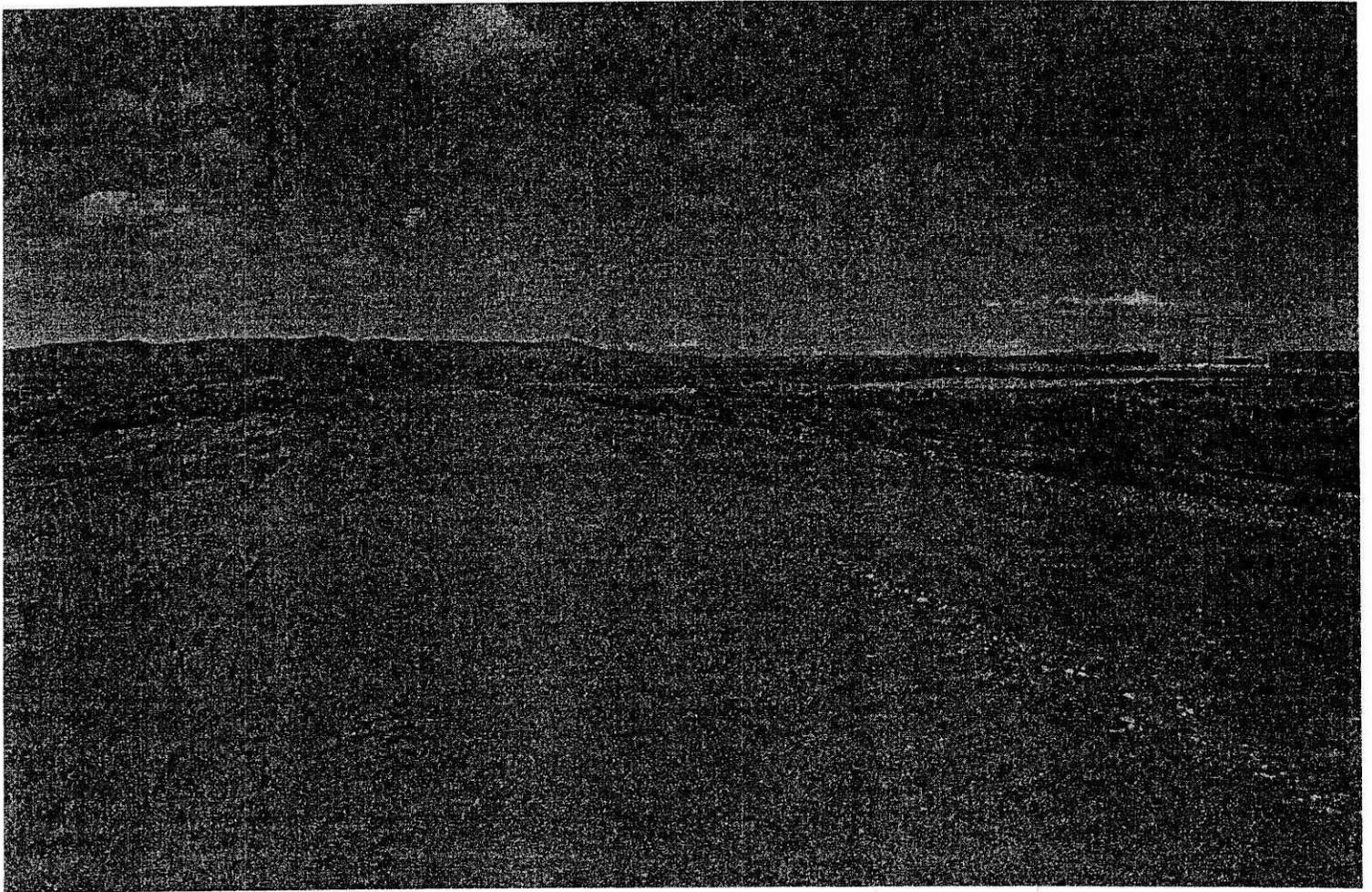
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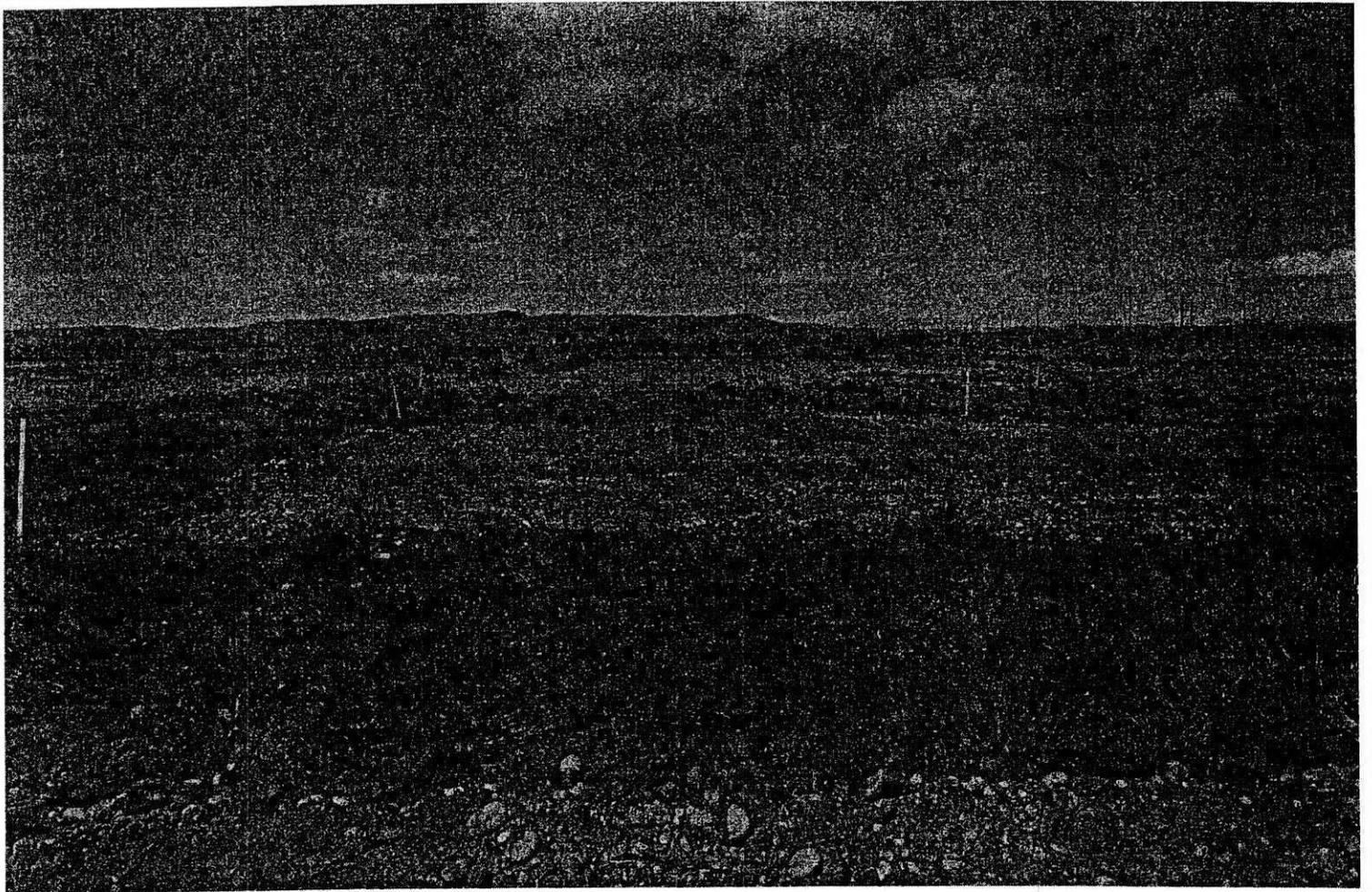
R. D. Belden X3-40
F. M. Corpuz X0-17
R. L. Donahoe X0-17
J. W. Donnelly X0-17
K. A. Gano H0-23
A. L. Johnson H0-23
A. M. Nazarali X0-17
A. K. Smet X0-17
100 BC Burial Ground Project Files X3-40











ATTACHMENT 12

Addendum II, 105-D and 105-H Air Monitoring Plan, April 15, 2004

Addendum II

105-D and 105-H Air Monitoring Plan

April 15, 2004

1.0 Purpose

This document is prepared as an addendum to the 105-D and 105-H Air Monitoring Plan (AMP) that is presented as Appendix B in the *Removal Action Work Plan for 105-D and 105-H Building Interim Safe Storage Projects and Ancillary Buildings* (DOE-RL 2002).

2.0 Scope

Four buildings were excluded from the original 105-D and 105-H AMP until additional information became available (see Section B.1, "Introduction," second paragraph of the AMP). One of the excluded buildings is the 190-DR Process Water Pumphouse. The AMP states the plan will be updated and approved by the regulatory agencies when additional information for the excluded facilities becomes available. This addendum addresses the demolition of the 190-DR Process Water Pumphouse and the removal of the associated radioactive materials storage area (RMSA).

Prior to demolishing the facility, many items (including the materials in the RMSA) must be removed. Some of items within the RMSA must first be opened and/or sampled to support their characterization for disposal. Some of the items may also be repackaged prior to disposal. Opening, sampling, and repackaging of materials from the RMSA will be conducted in a high-efficiency particulate air (HEPA)-filtered enclosure at the 100-N Area. An estimate of the radionuclide inventory, potential-to-emit and estimated offsite dose from these activities are provided in this addendum as Table B-3.

The 190-DR Process Water Pumphouse is not considered a radiological facility. The only known radiologically-contaminated materials are stored in the RMSA. However, the 190-DR Process Water Pumphouse is being added to the scope of the AMP in the event that radioactivity is encountered during demolition activities. The work practices described in the AMP will be followed to minimize the potential for fugitive radioactive air emissions. In the addendum to the AMP dated May 5, 2003 (BHI 2003a), a revised total unabated offsite dose to the maximum exposed individual from decontamination and decommissioning (D&D) activities at the 105-D Reactor facilities was estimated to be $3.90\text{E-}04$ mrem/yr. It is assumed that if radioactive materials are encountered during D&D of the 190-DR Process Water Pumphouse, the material would be within the envelope established for the 105-D Reactor facilities; therefore, a revised estimate is not provided.

3.0 Proposed Additions to the Air Monitoring Plan

Based on the discussion in the preceding sections, the following are the proposed changes to the AMP:

1. Page B-1, Section B.1, second paragraph, first sentence: Remove the section that excludes the 190-DR Process Water Pumphouse from the AMP.
2. Page B-1, Section B.1.1.1., second paragraph: Add the following bullet to the list of bullets:
 - “Demolition of the 190-DR Process Water Pumphouse and removal of the RMSA. Radioactive materials from the RMSA that need to be opened, repackaged, or sampled, may have these activities performed in a HEPA-filtered enclosure at the 100-N Area. Following the activity (opening, repackaging, or sampling) the materials will either be sent back to their point of origin or disposed of at the ERDF or other regulator-approved disposal facility.”
3. Page B-4, Section B.2: Add the following new paragraph after the second paragraph:
 - “The radionuclide inventory and potential emissions for opening, repackaging, or sampling of materials from the 190-DR Process Water Pumphouse RMSA at the 100-N Area are presented in Table B-3.”
4. Page B-6, Section B.4: Add the following sentence at the end of the first paragraph: “If radiological emissions become a potential at 190-DR, downwind air monitoring will be performed using the air monitor denoted in the 190-DR Air Monitoring Stations map (Figure B-3). Historical data from N492 will be used for upwind monitoring.”
5. Page B-6, Section B.4: Following the above sentence, add: “For work occurring at the 100-N Area, the existing air monitors will be used (see Figure B-4). In addition, these monitors will be supplemented by information obtained from a low volume air sampler located near the enclosure. ”

4.0 References

BHI, 2004, *Radioactive Air Emission Calculation for the 190DR Facility*, 190DR-CA-V001, Bechtel Hanford, Inc., Richland, Washington

BHI, 2003a, *Addendum 105-D/H Air Monitoring Plan*, CCN 108880, Bechtel Hanford, Inc., Richland, Washington.

BHI, 2003b, *Air Emission Calculations for the 105-D and 105-H Buildings*, Calculation No. 0100X-CA-V0035, Rev. 3, Bechtel Hanford, Inc., Richland, Washington.

DOE-RL, 2002, *Removal Action Work Plan for 105-D and 105-H Building Interim Safe Storage Projects and Ancillary Buildings*, DOE/RL-2000-57, Rev. 2, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

5.0 Bibliography

BHI, 2003, *Air Monitoring Plan for 100-N Area Ancillary Facility Decontamination and Decommissioning*, CCN 105293, Bechtel Hanford, Inc., Richland, Washington.

BHI, 2003, *Approval to Move Items From 190-DR to 100N for Package Verification and/or Sampling*, CCN 112772, Bechtel Hanford, Inc., Richland, Washington.

6.0 Attachments

1. Table B-3. 190-DR Radioactive Materials Storage Area Inventory Values.
2. Figure B-3. 190-DR Air Monitoring Stations.
3. Figure B-4. 100-N Area Air Monitoring Stations.

Table B-3. 190-DR Radioactive Materials Storage Area Inventory, Potential-to-Emit and Unabated Offsite Dose.^a

A	B	C	D	E	F	G	H	I	J	K	L ^b	M ^c	N ^d	O
Isotope	105-C (Very Light to Light) (Ci)	105-C (Vacuuming) (Ci)	105-C (Medium to Heavy) (Ci)	105-C (Liquids -- Lift Station) (Ci)	105-D (Ci)	105-H (Ci)	105-DR (Ci)	105-F (Ci)	313 (Ci)	183-H (Ci)	Sum (Ci)	Sum x (0.25) (Ci/yr)	PTE (Ci/yr)	Unabated Offsite Dose (mrem/yr)
Co-60	1.05E-05	2.10E-06	1.27E-03	--	2.98E-05	2.98E-05	1.73E-06	1.73E-06	--	--	1.35E-03	3.36E-04	1.71E-05	2.28E-06
Sr-90	1.27E-04	2.54E-05	1.54E-02	4.39E-02	4.28E-02	4.28E-02	1.84E-04	1.84E-04	--	--	1.45E-01	3.64E-02	1.85E-03	1.66E-04
Y-90	1.27E-04	2.54E-05	1.54E-02	4.39E-02	4.28E-02	4.28E-02	1.84E-04	1.84E-04	--	--	1.45E-01	3.64E-02	1.85E-03	3.62E-07
Tc-99	--	--	--	--	--	--	--	--	5.57E-04	3.25E-01	3.26E-01	8.14E-02	4.15E-03	7.84E-05
Cs-137	5.42E-04	1.08E-04	6.60E-02	--	1.83E-03	1.83E-03	2.79E-04	2.79E-04	--	--	7.09E-02	1.77E-02	9.03E-04	2.88E-05
Ba-137m	5.13E-04	1.02E-04	6.24E-02	--	1.73E-03	1.73E-03	2.64E-04	2.64E-04	--	--	6.70E-02	1.68E-02	8.54E-04	9.60E-05
Eu-152	6.12E-05	1.22E-05	7.41E-03	--	1.94E-04	1.94E-04	3.15E-06	3.15E-06	--	--	7.88E-03	1.97E-03	1.00E-04	1.28E-05
Eu-154	1.54E-05	3.09E-06	1.87E-03	--	4.71E-05	4.71E-05	7.87E-07	7.87E-07	--	--	1.98E-03	4.96E-04	2.53E-05	2.61E-06
U-234	--	--	--	--	--	--	--	--	1.90E-02	7.00E-03	2.60E-02	6.50E-03	3.31E-04	9.39E-04
U-235	--	--	--	--	--	--	--	--	8.84E-04	3.50E-04	1.23E-03	3.09E-04	1.57E-05	4.22E-05
U-236	--	--	--	--	--	--	--	--	1.54E-03	6.25E-04	2.17E-03	5.41E-04	2.76E-05	7.41E-05
U-238	--	--	--	--	--	--	--	--	1.13E-02	5.25E-03	1.66E-02	4.14E-03	2.11E-04	5.33E-04
Pu-239/240	--	--	--	--	--	--	4.98E-06	4.98E-06	--	--	9.96E-06	2.49E-06	1.27E-07	9.56E-07
Pu-241	--	--	--	--	--	--	1.24E-05	1.24E-05	--	--	2.48E-05	6.20E-06	3.16E-07	3.73E-08
Am-241	--	--	--	--	--	--	1.24E-06	1.24E-06	--	--	2.48E-06	6.20E-07	3.16E-08	3.66E-07
Total														1.98E-03

^aThe information for this table was obtained from Radioactive Air Emission Calculation for the 190DR Facility (BHI, 2004).

^bColumn L is the sum of the inventory for the buildings listed in B through K.

^cTo arrive at an inventory for the equipment/inventory in the 190DR RMSA, the totals from column L were multiplied by 0.25.

^dA release fraction of 1E-3 was applied to 95% of the inventory in column M. A release fraction of 1 was applied to 5% of the inventory associated with column M to address activities associated with HEPA vacuuming.

Figure B-3. 190-DR Air Monitoring Stations.

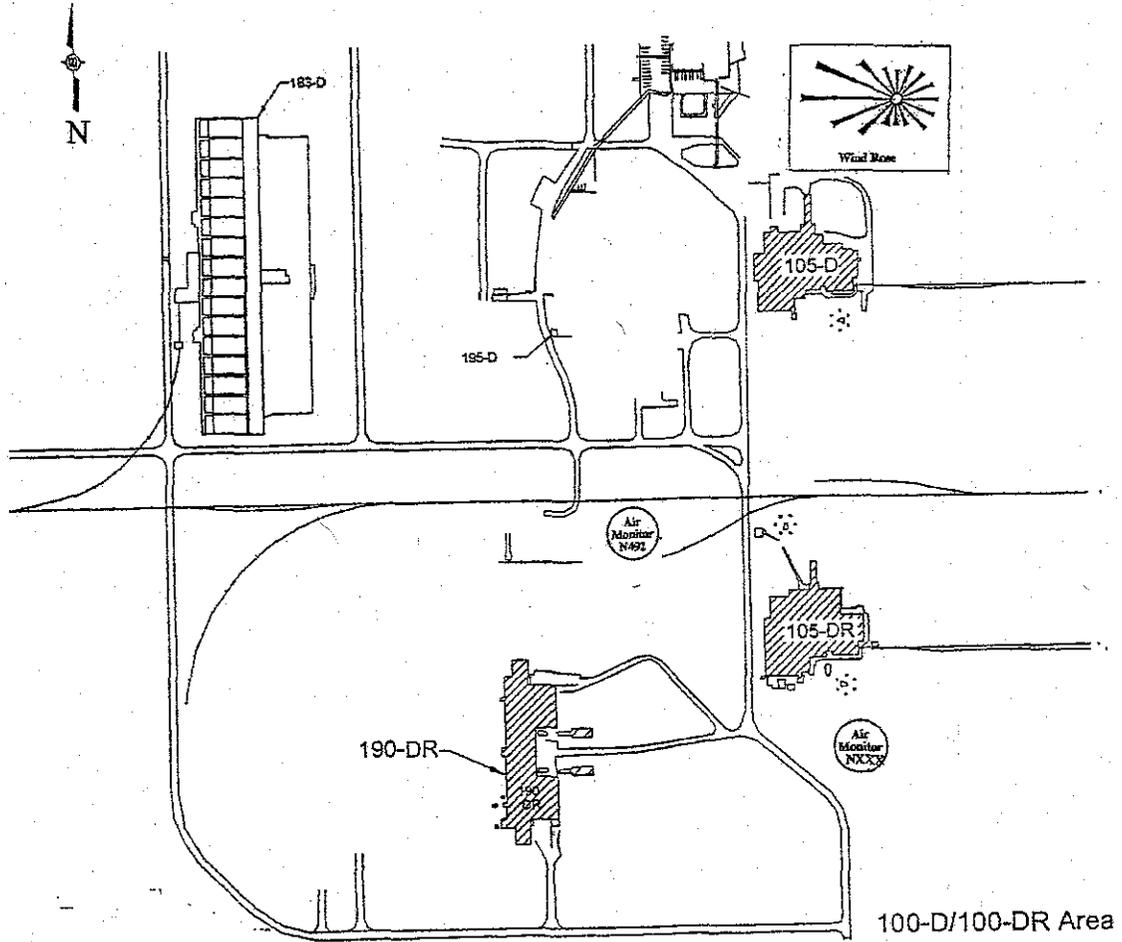
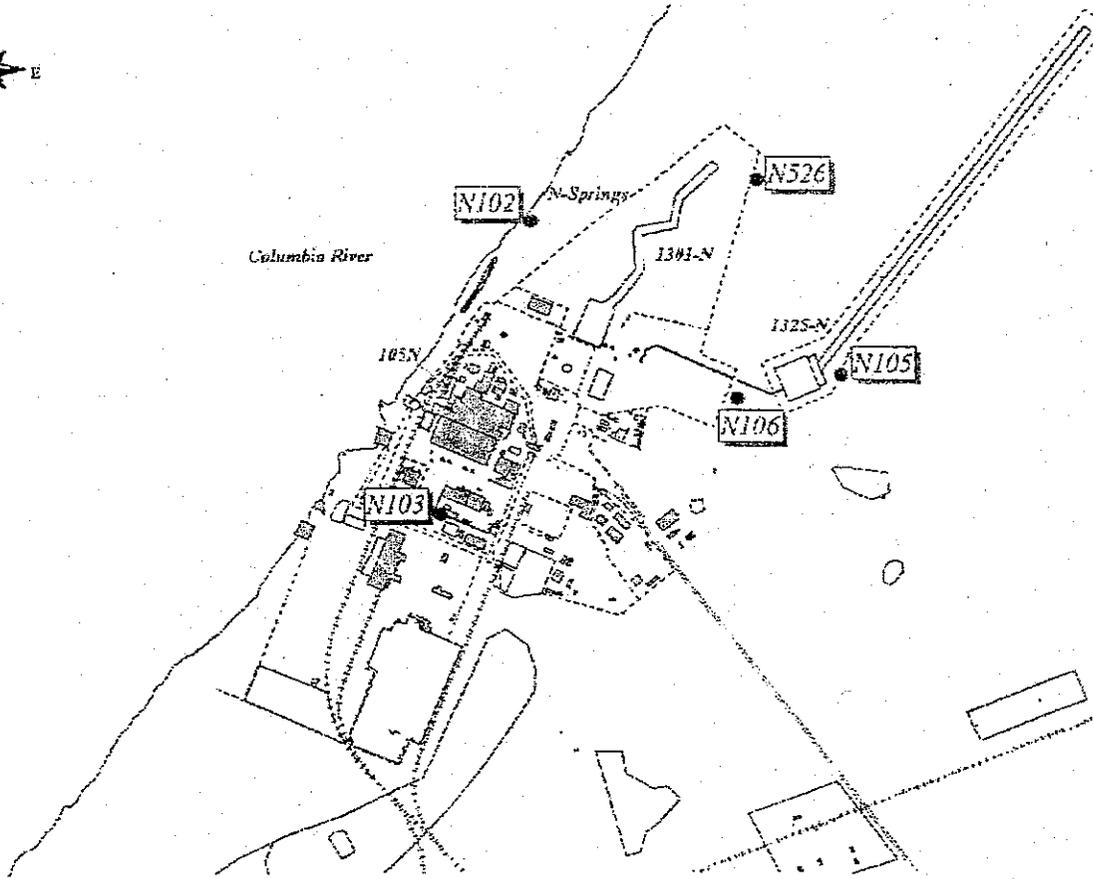


Figure B-4. 100-N Area Air Monitoring Stations.



ATTACHMENT 13

**Deferring 105-H fuel Storage Basin Shallow Zone side Slope Soils to the
Remedial Actions Program, April 21, 2004**

Deferring 105-H Fuel Storage Basin Shallow Zone Side Slope Soils to the Remedial Actions Program

April 21, 2004

I. Introduction

Decontamination and decommissioning (D&D) of the 105-H Fuel Storage Basin (FSB) by the Facilities Decommissioning Project (FDP) was completed in March of 2004. Demolition material was removed and the underlying and side slope soils were excavated and sampled to support interim closure. The underlying soils include deep zone soils located directly beneath the FSB footprint. The side slope soils include shallow zone soils (grade level to 4.6m (15ft) below grade level) and deep zone soils (below 4.6m (15ft)) located on the east, west, and south boundary of the FSB excavation.

The Safe Storage Enclosure (SSE) sub-contractor is scheduled to mobilize at 105-H in January 2005 to initiate demolition of the existing roof structure, in preparation for SSE construction activities. Backfill and stabilization of the FSB excavation is required to accommodate these activities. Failure to backfill and stabilize these soils will inhibit SSE construction access and may result in significant added costs and schedule delays

II. Background

The *Data Quality Objective Summary Report for the Interim Closure of D and H Reactor Below-Grade Structures and Soils (BHI 2001)* addresses the FSB underlying and side slope soils. The requirements for conducting the interim closure sampling is described in the *Sampling and Analysis Plan for Interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Underlying Soils (DOE/RL 2001)*. The soil sample designs presented in these documents were based on or adapted from the requirements in *100 Area Remedial Action Sampling and Analysis Plan (DOE/RL 1998)*.

Verification samples have been collected from the underlying soils and deep zone soils associated with the side-slopes. The 105-H underlying soils and deep zone side-slope soil data will be evaluated against the interim closure criteria defined in the *Sampling and Analysis Plan (DOE/RL 2001) (SAP)*.

A Laser-Assisted Ranging and Data System (LARADS) survey of the side slope (shallow zone) soils was conducted, and it has been determined that significant radiological contamination (i.e., >2x background) remains in these soils (ESR-FRM-H0-32604). In process characterization samples were collected and the analytical results show that several sample locations have contamination levels in excess of the 15mrem/yr (DOE/RL 1998) for Cs-137, Co-60, and Eu-152 (6.2, 1.4, and 3.3 pCi/g, respectively).

III. Discussion

The *Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities* (Ecology, et al. 2000) states the following:

“if it is not feasible to remediate below-grade structures and soil at the time of D&D, the site would be identified as a discovery site in the Hanford Site Waste Site Database. Disposition of these sites would then be deferred to the Remedial Action Program, where they would be remediated in accordance with the appropriate 100 Area CERCLA ROD. Ecology’s approval is necessary to defer the D&D action to the Remedial Action and Waste Disposal Project.”

IV. Activities

Stabilization and backfill work will occur prior to closure verification of the underlying and deep zone side slope soils. A discussion of the planned actions and the deferment of the shallow zone side slope soils has been discussed with the regulators.

The area will be posted with appropriate radiological postings, and the Waste Information Data System (WIDS) will be updated. A Characterization Summary documenting the verification sampling of the deep zone soils (underlying and side slope soils) and in-process characterization sampling of the shallow zone (side slope soils) will be prepared. The summary, will include the geographic boundaries of all decision units (including the area to be transferred) and subsequent information for chemical and radiological laboratory results. The summary will be referenced in the WIDS and in the D&D Closeout Report for the 105-H Reactor. The excavation boundary and sample location survey data (x, y, z) will be referenced for use in planning future work at this site

V. Conclusion

In accordance with *The Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities* (Ecology, et al. 2000), the remediation and cleanup verification of the 105-H FSB shallow zone side-slope soils will be deferred to the Remedial Action Program. Clean fill will be used to backfill and stabilize the excavation in support of the SSE roof installation. The in process radiological and chemical sample results will be documented in a final characterization summary for transition to the Remedial Action Program.

The 105-H FSB underlying soils and deep zone side-slope soils have been sampled; however, the sample results haven’t been returned. Once the data is returned, it will be evaluated against the interim closure criteria defined in the SAP. If these soils do not meet the interim closure criteria of the SAP, they too will be transitioned to the Remedial Action Program. If the deep zone soils do meet the closure criteria of the SAP, the project will pursue closure of the deep zone soils.

References

BHI, 2001, *Data Quality Objectives Summary Report for Interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Soils*, BHI-01469, Rev. 0, Bechtel Hanford, Inc., Richland Washington.

DOE/RL, 2001, *Sampling and Analysis Plan for Interim Closure of the 105-D and 105-H Reactor Below-Grade Structures and Underlying Soils* DOE/RL-2001-18, Rev. 0, U. S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 1998, *100 Area Remedial Action Sampling and Analysis Plan*, DOE/RL-96-22, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 2000, *Action Memorandum for the 105-D and 105-H Reactor Facilities and Ancillary Facilities, Hanford Site, Benton County, Washington*, CCN 054209, approved December 8, 2000, Washington State Department of Ecology, U.S. Environmental Protection Agency Region X, and U.S. Department of Energy, Richland, Washington.

V. Concurrence



D.C. Smith, Environmental Restoration Division
U. S. Department of Energy

4/21/04
Date



F. W. Bond, Project Manager, Restoration Projects
Washington State Dept. of Ecology

4-22-04
Date

ATTACHMENT 14

Orphan Site Task Presentation

ORPHAN SITE'S TASK

- BCP Approved For 100 B/C Area
- Needed for Closure of 100 B/C Operable Units
- Includes Potential New CERCLA Sites
- Does Not Impact RA Milestone for 2006- New Scope
- Follows Same Process as Other Sites – TPA-MP-14
- Includes Non-CERCLA Items, e.g., Physical Hazards, Abandoned Wells, WAC Septic Systems
- Potential CERCLA Sites: Railroad, Transformers (leaks), Undocumented USTs, Soils Associated With Early Building Removals

ATTACHMENT 15

ISRM Schedule

Activity ID	Activity Description	Early Start	Early Finish	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Groundwater Remediation Technologies														
Total		02OCT06	01JUL14											
FY07 Barrier Reinjectons - Planning & Construct														
Subtotal		28NOV08	29JUN07											
GS1720	Planning of Re-injection/Extraction/Sys Upgrade	28NOV08	30JAN07											
GS1720	Reinjection/Extraction Planning Design Documents	28NOV08	01FEB07											
GS1720	Re-injection/Extraction Work Plans & Permits	28NOV08	25JAN07											
GS1400	ISRM BARRIER RE-INJECTS (9 WELLS) - LABOR	02APR07	29JUN07											
GS1410	ISRM BARRIER RE-INJECTONS - CHEMICALS	02APR07	29JUN07											
FY08 Barrier Reinjectons - Planning & Construct														
Subtotal		01OCT07	27DEC07											
GS1601	ISRM BARRIER RE-INJECTS (4 WELLS) - LABOR	01OCT07	27DEC07											
GS1811	ISRM BARRIER RE-INJECTONS - CHEMICALS	01OCT07	27DEC07											
FY12 Barrier Reinjectons-Planning & Construct														
Subtotal		04OCT11	29JUN12											
GS15200	Planning of Re-injection/Extraction/Sys Upgrade	04OCT11	30MAR12											
GS15210	Re-injection/Extraction Planning Design Docs	04OCT11	07DEC11											
GS15220	Re-injection/Extraction Work Plans & Permits	04OCT11	30NOV11											
GS12100	ISRM BARRIER RE-INJECTS (8 WELLS) - LABOR	02APR12	28JUN12											
GS12110	ISRM BARRIER RE-INJECTONS - CHEMICALS	02APR12	28JUN12											
FY13 Barrier Reinjectons-Planning & Construct														
Subtotal		02APR13	28JUN13											
GS15100	ISRM BARRIER RE-INJECTS (14 WELLS) - LABOR	02APR13	28JUN13											
GS1310	ISRM BARRIER RE-INJECTONS - CHEMICALS	02APR13	28JUN13											
GENERAL OPERATIONS ACTIVITIES														
Subtotal		02OCT06	28SEP12											
GS17301	General Operations and Performance Monitoring	02OCT06	28SEP07											
GS1801	General Operations and Performance Monitoring	01OCT07	30SEP08											
GS16010	Upgrades (Injection Header)	29OCT07	17JUN08											

Start Date
01OCT02
Finish Date
01JUL14
Date Date
01OCT02
Run Date
29JUN04 07:36

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Early Bar
Progress Bar
Critical Activity

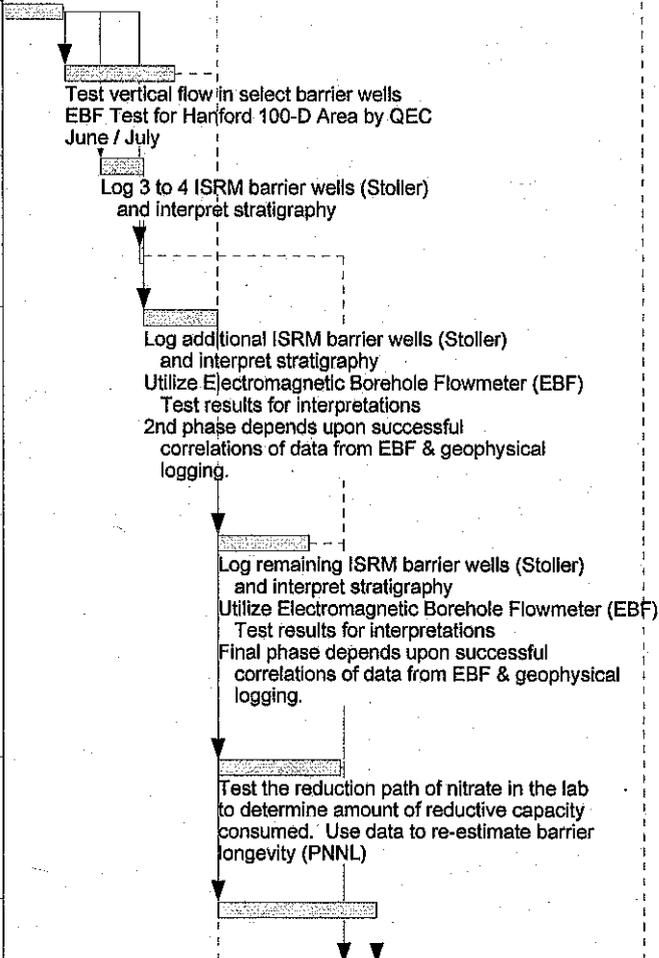
ISRM
Barrier Investigation
FY07 through FY18

Sheet 1 of 2

Activity ID	Activity Description	Early Start	Early Finish	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
GS6C100	Upgrades (Injection well)	18JUN08	05FEB09													
GS16501	General Operations and Performance Monitoring	01OCT08	30SEP09													
GS110501	General Operations and Performance Monitoring	01OCT09	30SEP10													
GS111601	General Operations and Performance Monitoring	01OCT10	30SEP11													
GS12901	General Operations and Performance Monitoring	03OCT11	28SEP12													
ISRM Pond Removal																
Subtotal		28SEP12	01JUL14													
GS15755	Evaluate Pond for Removal	28SEP12	17JUN13													
GS17P100	ISRM Pond Removal	30SEP13	01JUL14													
ISRM Closeout Report																
Subtotal		01JUL13	19NOV13													
GS8C010	ISRM Closeout Report	01JUL13	19NOV13													

Start Date: 01OCT02 Finish Date: 01JUL14 Date Date: 01OCT02 Run Date: 23JUN04 07:38		Early Bar Progress Bar Critical Activity	GWBL - GS01 ISRM Barrier Investigation FY07 through FY18	Sheet 2 of 2
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Activity ID	Activity Description	Early Start	Early Finish	Timeline		
				FY04	FY05	FY06
Groundwater Remediation Technologies						
Total		01APR04	29SEP06			
Existing ISRM Barrier Investigation						
Subtotal		01APR04	29SEP06			
G514649	Evaluate Technical Assistance Report	01APR04	21MAY04	[Bar chart showing activity in FY04]		
G514650	Electromagnetic Borehole Flowmeter Tests	24MAY04	24AUG04	[Bar chart showing activity in FY04]		
G514651	Geophysical Logging of Barrier Wells	24JUN04	29JUL04	[Bar chart showing activity in FY04]		
G514659	TAT Technical Assistance Team Workshop	27JUL04	29JUL04	[Bar chart showing activity in FY04]		
G514653	2nd phase of Geophysical Logging of BarrierWells	30JUL04	30SEP04	[Bar chart showing activity in FY04]		
G514653A	Final Ph of Geophysical Logging of BarrierWells	01OCT04	17DEC04	[Bar chart showing activity in FY04]		
G514655	Determine the reductive path of Nitrate	01OCT04	14JAN05	[Bar chart showing activity in FY04]		
G515670	Planning for Geophysics-investigate reduced zone	01OCT04	14FEB05	[Bar chart showing activity in FY04]		



Start Date 01OCT02
 Finish Date 01JUL14
 Data Date 01OCT02
 Run Date 15JUN04 20:54

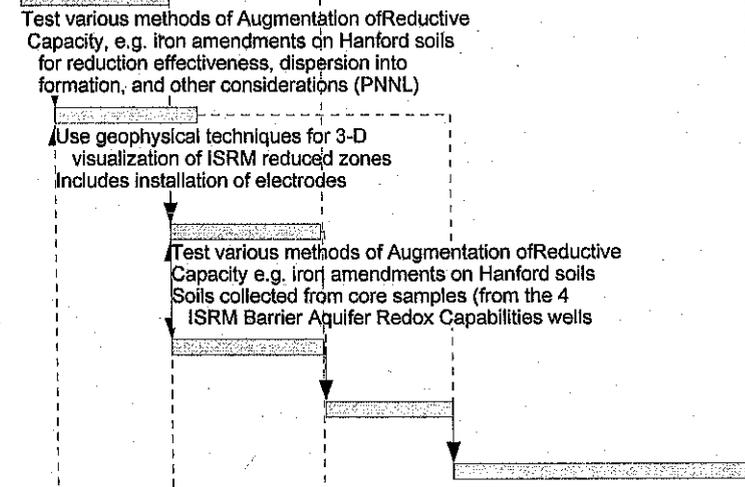
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 [Patterned Box] Progress Bar
 [Solid Black Box] Critical Activity

GWBL - G501

Sheet 1 of 3

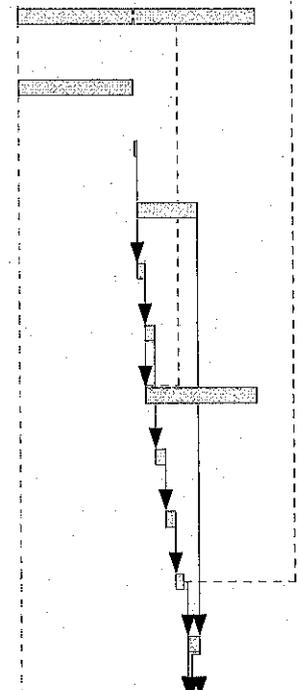
**ISRM
 Barrier Investigation
 FY04 through FY06**

Activity ID	Activity Description	Early Start	Early Finish	Timeline		
				FY04	FY05	FY06
G515675	1st set Lab Test of Iron Amendments	17JAN05	23MAY05			
G515672	Geophysics to investigate reduced zone	15FEB05	15JUN05			
G515674	2nd set Lab Test of Iron Amendments	24MAY05	29SEP05			
G515678	Field Test Iron Amendments/Sodium Dithionite Inj	24MAY05	30SEP05			
G515680	Design/RFP Field Test of Iron Amendments	03OCT05	18JAN06			
G515685	Perform Field Test of Iron Amendments	19JAN06	29SEP06			



100-HR-3 D AREA AQUIFER REDOX CAPABILITIES

Subtotal		01OCT04	22APR05
G516157	Well Planning for aquifer redox capabilities	01OCT04	06JAN05
G516666	Notice to Proceed	10JAN05	10JAN05
G51624A	Support during Well Drilling	11JAN05	03MAR05
G516670	Mobilize Drilling Subcontractor	11JAN05	17JAN05
G516020	S/C - Construct Well #1	18JAN05	25JAN05
G516045	Barrier Characterization	18JAN05	22APR05
G516030	S/C - Construct Well #2	26JAN05	02FEB05
G516040	S/C - Construct Well #3	03FEB05	10FEB05
G516050	S/C - Construct Well #4	11FEB05	18FEB05
G516196	Demob Well Drilling Subcontractor	22FEB05	03MAR05



Start Date 01OCT02
 Finish Date 01JUL14
 Data Date 01OCT02
 Run Date 15JUN04 20:54

Early Bar
 Progress Bar
 Critical Activity

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**ISRM
 Barrier Investigation
 FY04 through FY06**

Activity ID	Activity Description	Early Start	Early Finish			
				FY04	FY05	FY06
G516200	Perform Civil Well Surveys	22FEB05	10MAR05			
G516204	Field Closeout Report for Wells	22FEB05	18MAR05			
G516206	W/O: Install Label and Locks for Wells	25FEB05	01MAR05			
G516202	Borehole Summary Report for wells	04MAR05	22MAR05			
G516217	Demob Equipment	04MAR05	15MAR05			

Start Date 01OCT02
 Finish Date 01JUL14
 Data Date 01OCT02
 Run Date 15JUN04 20:54

 Early Bar
 Progress Bar
 Critical Activity

GWBL - G501

Sheet 3 of 3

**ISRM
 Barrier Investigation
 FY04 through FY06**