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100K PROJECT MANAGERS MEETING MINUTES
February 23, 2012

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Meeting Minutes Transmittal/Approval
100K Project Managers Meeting
February 23, 2012

APPROVAL: _____ Date: 2-23-2012
Tom Teynor, 100K Project Manager, DOE RL

APPROVAL: _____ Date: 2-23-2012
Rod Lobos, 100K Project Manager, EPA

HFFACO Action Plan Section 4.1 states that agreements and commitments resulting from the Project Managers meetings will be prepared and signed by all parties. Approval of these minutes documents approval of agreements and commitments documented in Attachments 2 and 3 to these minutes. Approvals do not apply to any other attachments. Any other attachments are provided for information purposes.

100K Project Managers Meeting
February 23, 2012

Please print clearly and use black ink

Printed Name	Organization	Telephone
DL Norman	DED	373-0040
Ellen B. Dogan	DOE-RBC	376-3811
[illegible] Rod Lobes	EPA	376-3749
T.K. Teynor	DOE-RL	376-6363
Roger Quintero	DOE-RL	373-0421
Steve Balone	DOE-RL	376-0236
Marie Bachand	CHPRC	373-0771
Lorna Dittmer	CHPRC TPA	376-7017
Kurt Kehler	CHPRC D&D	376-0566

Minutes of the 100K Project Managers meeting of February 23, 2012 are attached. Minutes are comprised of the following.

Attachment 1	Attendance Record
Attachment 2	Milestone Status Report with Agreements, Commitments and Actions Identified
Attachment 3	100K Area PMM Response Action Agreements
Attachment 4	100 K Removal Action Statuses
Attachment 5	100K Waste Sites Status
Attachment 6	Emerging Issues / Pending Actions List
Attachment 7	Email from Rod Lobos to Lorna Dittmer, dated February 22, 2012, "Milestone M-016-53 Completion Criteria"
Attachment 8	TPA/CN-498, DOE/RL-96-17 Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area
Attachment 9	TPA-CN-499, DOE/RL-96-17 Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area
Attachment 10	TPA-CN-502, DOE/RL-2005-26, Rev 1, Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities
Attachment 11	TPA-CN-503, DOE/RL-2005-26, Rev 1, Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities
Attachment 12	TPA-CN-504, Action Memorandum for the Non-Time Critical Removal Action for the 105-KE and 105-KW Reactor Facilities and Ancillary Facilities

ATTACHMENT 2
100K AREA PROJECT MANAGERS MEETING MILESTONE STATUS

February 23, 2012

M-016-171 Complete K Basin sludge treatment and packaging technology evaluation report and submit a schedule including proposed new interim milestones for bench scale or identified testing in order to meet M-016-173
Due 03/31/2012, DOE Lead Roger Quintero

- The Technology Evaluation and Alternatives Analysis Report was completed. The warm water oxidation process was identified as the technical baseline for further testing and development, along with process enhancement options of a Fenton's Reagent and size reduction to potentially shorten the time necessary for sludge treatment.
- A preliminary technology maturation plan is being developed to support completion of M-016-171.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

RL to schedule meeting with EPA for March 14, 2012 to review proposed milestones.

M-016-173 Select K Basin sludge treatment and packaging technology and propose new interim sludge treatment and packaging milestones.
Due 03/31/2015 DOE Lead Roger Quintero

- Pre-conceptual activities are being planned, including a facility siting study to evaluate existing new, and hybrid facility alternatives; and uranium metal size reduction technology testing.

Schedule Status: Pending completion of M-016-171.
Agreements, Commitments and Actions:

M-016-172 Complete KOP material removal from 105-KW Fuel Storage Basin.
Due 9/30/2012, DOE Lead Roger Quintero

- Procurement of the "production hardware" associated with the Knockout Pot Processing System (KPS) is in progress and on schedule.
- Offsite fabrication of additional MCOs for load out of the KOP product material is in progress as well as the copper inserts that will hold the KOP product material which will be placed in MCO baskets.
- The 90% Remedial Design Report for Knockout Pot Processing System and appended QAPjP/SAP for field measurements associated with the removal of the KOP product material from the basin was approved by RL and EPA.
- Hands-on operator training continues on KPS equipment and procedure validation was completed at MASF.
- Training in the KW Basin on the MCO Loading System (MLS) / Cask Loading System (CLS) which will be used for the removal of KOP product material from the basin.
- Installation of KPS equipment in the KW Basin has started and expected to be completed by the end of February.
- Nuclear safety basis documentation for KPS operations in KW Basin, Cold Vacuum Drying Facility, and Canister Storage Building have been submitted to RL for review and approval. These reviews are in progress.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

M-016-174 Complete final design of sludge retrieval and transfer system.
Due 9/30/2013, DOE Lead Roger Quintero

- A formal design review of the final design associated with the KW Basin Annex and building systems is in progress.
- Engineered Container Retrieval and Transfer System optimization testing continues at MASF as well as final design of the system.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

DOE commits to notifying EPA of Project delays due to funding short falls as soon as possible.

M-016-175 Begin sludge removal from 105-KW Fuel Storage Basin
Due 09/30/2014, DOE Lead Roger Quintero

- Procurement of a construction contractor for the KW Basin Annex is in progress. Vendor proposals are expected by the end of February.

Schedule Status: Pending completion of M-016-174.
Agreements, Commitments and Actions:

M-016-176 Complete sludge removal from 105-KW Fuel Storage Basin
Due 12/31/2015, DOE Lead Roger Quintero

Schedule Status: Pending completion of M-016-175.
Agreements, Commitments and Actions:

M-016-53 Complete the interim response actions for the 100 K Area within the perimeter boundary and to the river for Phase 1 actions.
Due 12/31/2012, DOE Lead Steve Balone

Remedial Actions:

- Completed the remediation at waste site 100-K-102. Started revisions to the verification sample instructions for the closure of the following phase 1 waste sites: 100-K-102, 100-K-18, 100-K-19, 100-K-34, 120-KW-5, 120-KW-7 and 1607-K3.
- The RSVP for the 100-K-63 is being drafted and interim re-vegetation is being pursued.
- The verification sample instruction for Area AG, Zone 2 was provided to EPA for review and comment.
- Initiated work planning activities for the identification of sampling requirements necessary to determine the extent of contamination at waste site 116-KE-3.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

DOE to schedule briefing with EPA for path forward for UPR-100-K-1, 116-KE-1, and 116-KE-3 waste sites. DOE and EPA will continue to meet to discuss facility demolition and waste site remediation scheduling per the integrated schedule revisions. To be scheduled on an ongoing basis.

M-016-143 Complete the interim response actions for the 100 K Area within the perimeter boundary and to the river for Phase 2 actions.
Due 12/31/2015, DOE Lead Steve Balone

- Completed the remediation at waste site 100-K-102. Initiated revisions to the verification sample instructions for closure of waste sites 100-K-97 and 100-K-102.
- An MOA for remediation work on the 100-K Eastern floodplain at 100-K-80, 100-K-81, 100-K-83, and 100-K-96 waste sites is under review by DOE and the Tribes.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

M-016-178 Initiate deactivation of 105-KW Fuel Storage Basin
Due 12/31/2015, DOE Lead Roger Quintero

- Preparing equipment and personnel for found fuel MCO loading and shipment.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

M-016-00C Complete All Response Actions in The 100 K Area
Due 12/31/2020, DOE Lead Tom Teynor

- Asbestos removal is approximately 45% complete at 165-KE and approximately 95% complete at the 105-KE water tunnel.
- Demolition of 183.2 KE was not worked, remains 35% complete. Sediment removal continues from the eastern bays of the sedimentation basin in preparation for sampling.

Schedule Status: On schedule.
Agreements, Commitments and Actions:

MILESTONE	DESCRIPTION	DUE DATE	DOE LEAD	SCHEDULE STATUS
M-093-22	Complete 105-KE Reactor Interim Safe Storage in Accordance with Remedial Design/Remedial Action Work Plan	7/31/2014	Ellen Dagan	On Schedule
M-093-26	Initiate 105-KW Reactor Interim Safe Storage	12/31/2015	Ellen Dagan	On Schedule
M-016-181	Complete Deactivation, Demolition, and Removal of 105-KW Fuel Storage Basin	9/30/2019	Roger Quintero	On Schedule
M-093-27	Complete 105-KW Reactor Interim Safe Storage	12/31/2019	Ellen Dagan	On Schedule
M-016-186	Initiate Soil Remediation Under 105KW Fuel Storage Basin	12/31/2019	Steve Balone	On Schedule

ATTACHMENT 3
100K AREA PROJECT MANAGERS MEETING RESPONSE ACTION AGREEMENTS

Milestone M-016-53 Completion Criteria (Attachment 7)

Co-located waste sites that are south of the former footprint of the 105-KW sedimentation basins will not require complete backfill and re-vegetation by December, 2012 to meet the M-016-53 (Phase 1) milestone completion criteria. Partial backfill of the deep excavations within the area, with soil stabilization, will be acceptable for purposes of milestone completion providing that a waste site included M-016-143 (Phase 2) list of waste sites, is still active in proximity to the Phase 1 waste sites. The elements of this agreement are as follows:

- Phase 1 waste sites will meet interim close-out criteria per the RDR/RAWP for the 100 Areas, and have approved Waste Site Reclassification Forms
- Phase 1 waste sites will be partially backfilled (deepest areas backfilled for safety of nearby work) but not necessarily brought to grade
- Phase 1 waste sites' surface soil will be maintained with soil fixative until re-vegetation occurs
- A minimum of one Phase 2 waste site within the remediation area surrounding the former head house footprint / excavation area remains that requires additional remedial action/evaluation
- A plan view schematic of the area, indicating the waste site footprints, the waste site number and milestone (or Phase) it's included in, and the depth of excavation /backfill at the time of milestone completion will be provided to EPA in advance of the M-016-53 completion date of December 31, 2012, to document EPA concurrence.
- Completion of M-016-143 (Phase 2) due December 31, 2015 will require re-vegetation of all Phase 1 and Phase 2 waste sites included in the footprint of the excavation of co-located waste sites south of the former 105-KW sedimentation basin footprint. The area to be re-vegetated for completion of Phase 2 will be delineated on the plan view schematic provided to EPA as part of the completion of M-016-53 milestone.

ATTACHMENT 3 (continued)
100K AREA PROJECT MANAGERS MEETING
RESPONSE ACTION AGREEMENTS

TPA-CN Approvals

TPA-CN-498, DOE/RL-96-17 Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area was approved by DOE & EPA. This change notice moves waste sites in the vicinity of the 105-KW Reactor that may be impacted by the Sludge Treatment Project from Phase 2 to Phase 3. This change notice (Attachment 8) supersedes TPA-CN-412.

TPA-CN-499, DOE/RL-96-17 Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area was approved by DOE & EPA. This change notice moves waste sites from Phase 1 and Phase 3 to Phase 2 where remediation is delayed pending resolution of cultural resource / Tribal concerns. This change notice (Attachment 9) supersedes TPA-CN-498.

TPA-CN-502, DOE/RL-2005-26, Rev 1, Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities was approved by DOE & EPA. This change notice moves facilities and structures in the vicinity of the 105-KW Reactor that may be impacted by the Sludge Treatment Project from Phase 2 to Phase 3. This change notice (Attachment 10) supersedes TPA-CN-245, TPA-CN-385, and TPA-CN-411 in their entirety.

TPA-CN-503, DOE/RL-2005-26, Rev 1, Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities was approved by DOE & EPA. This change notice provides an alternate approach to the design and construction of a Safe Storage Enclosure for the 105-KE/KW Reactor(s) during Interim Safe Storage. (Attachment 11)

TPA-CN-504, Action Memorandum for the Non-Time Critical Removal Action for the 105-KE and 105-KW Reactor Facilities and Ancillary Facilities was approved by DOE & EPA. This change notice provides an alternate approach to the design and construction of a Safe Storage Enclosure for the 105-KE/KW Reactor(s) during Interim Safe Storage. (Attachment 12)

Backfill Justification

Justification to backfill the 183.4 KE / KW Clearwells was provided to EPA for review and approval.

100K Area Removal Action Status (February 23, 2012)

Phase 1 M-016-053: December 31, 2012	Phase 2 M-016-143: December 31, 2015	Phase 3 (M-016-00C: December 31, 2020)
110KW Gas Storage Facility	115KW Gas Recirculation Building	105KW Water Tunnel
110KE Gas Storage Facility	116KW Reactor Exhaust Stack	142K CVDF
115KE Gas Recirculation Building	117KW Exhaust Air Filter Building	1506K1 Fiber Optics Hut
116KE Reactor Exhaust Stack	118KW Horizontal Control Rod Storage Cave	165KE Power Control Bldg
117KE Exhaust Air Filter Building	119KW Exhaust Air Sampling Building	142KA CVDF Generator Bldg
118KE Horizontal Control Rod Storage Cave	166AKE Oil Storage Facility	165KW Power Control Bldg
119KE Exhaust Air Sampling	166KE Oil Storage Vault	167K Cross-tie Tunnel Bldg
1706KE Radiation Control Counting Lab	166KW Oil Storage Vault	1717K Maintenance Shop
1706KEL Developmental Lab	1705KE Effluent Water Treatment Pilot Plant	1724K Maintenance Shop
1706KER Water Studies Recirculation Bldg	1713KER Shop Building	1724KA Storage Shed
1713KE Warehouse	1713KW Warehouse	181KW River Pump House
1714KE Oil and Paint Storage Shed	1714KW Oil and Paint Storage Shed	183KE Chlorine Vault
183.4KW Clearwell	1720K Administration Office Building	183.2KE Sedimentation Basin
183.1KW Head House	1724KB Gas Bottle Storage Facility	183.3KE Filter Basin
181KE River Pump House	182K Emergency Water Reservoir Pump House	183.4KE Clearwell
183.2KW Sedimentation Basin	183.5KW Lime Feeder Building	183.1KE Headhouse
183.3KW Filter Basin	183.6KW Lime Feeder Building	183.5KE Lime Feeder
MO048 Construction Lunch Trailer	MO101 Administration	183.6KE Lime Feeder
MO060 Conference Trailer	MO102 Administration	185K Potable Water Treatment Plant
MO872 Leased trailer	MO214 Administration	1908K Outfall Structure
MO873 Leased trailer	MO382 Office	1908KE Outfall Structure
MO969 HPT Change Trailer	MO401 Administration	190KE Main Pump House
1605KE Guard Tower East	MO402 Administration	190KW Main Pump House
	MO442 Classroom/Office	MO054 Construction Lunch Room
	MO506 CVDF Lunch Room	MO500 Administration
	MO507 CVDF Conference Room	MO236 KW Ops/HPT Change
	MO907 Administration	MO237 KW Construction Forces
	MO917 CVDF Administration	MO323 CVD Change Trailer
	MO928 Administration	MO955 Conference Room
		1605KW Guard Tower West

Field Work In Progress

Demolition Complete

Closure Actions and Documentation Complete

100K Area Waste Site Remediation Status

February 22, 2012

Phase 1 M-016-053: 12/31/2012		Phase 2 M-016-143: 12/31/2015		Phase 3 M-016-00C: 12/31/2020	M-016-57 (Initiate soil remediation at K East Basin)	Legend
100-K-3	100-K-71	100-K-1	120-KW-6	100-K-35	UPR-100-K-1	Excavation ongoing/ Additional remediation needed
100-K-6	100-K-77	100-K-4	126-KE-2	100-K-43		Failed CSNA
100-K-18	116-KE-1	100-K-5	130-K-2	100-K-47		Mixed Failed CSNA and RTD
100-K-19	116-KE-3	100-K-13	130-KE-2	100-K-55		Drafting VSI/Collecting Samples
100-K-34	116-KE-6A	100-K-14	130-KW-1	100-K-56		Drafting RSVP
100-K-36	116-KE-6B	100-K-25	130-KW-2	100-K-72		RSVP approved
100-K-37	116-KE-6C	100-K-27	132-KW-1	100-K-73		Backfill complete
100-K-38	116-KE-6D	100-K-48	1607-K1	100-K-74		Revegetation complete
100-K-46	118-KE-2	100-K-49	1607-K2	100-K-75		
100-K-53	120-KW-1	100-K-54	1607-K4	100-K-79		
100-K-56	120-KW-2	100-K-56	1607-K5	100-K-80		
100-K-57	120-KW-3	100-K-60	1607-K6	100-K-81		
100-K-62	120-KW-4	100-K-61	100-K-94	100-K-82		
100-K-63	120-KW-5	100-K-66	100-K-96	116-K-3		
100-K-64	120-KW-7	100-K-67	100-K-97	116-KE-2		
100-K-68	130-KE-1	100-K-83	100-K-100	116-KW-2		
100-K-69	132-KE-1	116-KW-1	100-K-101	118-KW-1		
100-K-70	1607-K3	118-KW-2	100-K-102			
		120-KE-1	100-K-103			
		120-KE-2	100-K-104			
		120-KE-3	100-K-105			
		120-KE-4	100-K-106			
		120-KE-5	100-K-107			
		120-KE-6	100-K-108			
		120-KE-8	100-K-109			
		120-KE-9	100-K-110			

Waste site listing is based on DOE/RL-97-16 TPA-CN-412

Site Code	Site Names	TPA-CN-412	PMB Remedy	Document Authorizing RTD of a CSNA site	Waste Site Status	Action	Actionee	VSI Status	RSVP	Area	Zone	Backfill Completed
100-K-18	183-KW Caustic Neutralization Pit	Phase 1	RTD	N/A	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	Zone 2	
100-K-19	183-KW Caustic Soda Storage Tank Site	Phase 1	CSNA	RA-00134	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	Zone 2	
100-K-3	1706-KE Fish Pond Heat Exchanger Pit and Pump Pit, Water Studies Semi-Works	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman	Pipeline partial closure in: RA-00408 (Area AG Z1A) on hold, RA-00407 (Area AG Z2) being reviewed by DOE-RL and EPA		AG	Zone 1A & Zone 2	
100-K-34	183-KW Acid Neutralization Pit	Phase 1	RTD	N/A	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	Zone 2	
100-K-36	1706-KE Chemical Storage Facility Dry Well	Phase 1	CSNA	RA-00122	Prove that remediation is complete by conducting verification sampling	Issue VSI and Sample	Klages/Hammons	RA-00407 (Area AG Z2), being reviewed by DOE-RL and EPA		AG/AH	AG Zone 2	
100-K-37	1706-KE Sulfuric Acid Tank	Phase 1	CSNA	RA-00122	Closed			N/A	DOE/RL-2010-44	AH	N/A	N/A
100-K-38	100-K-38, 1706-KE Caustic Soda Tank	Phase 1	CSNA	RA-00122	Closed			N/A	DOE/RL-2010-44	AH	N/A	N/A
100-K-46	100-K-46, 119-KE French Drain, Drywell	Phase 1	CSNA	RA-00145	Prove that remediation is complete by sampling	Develop path forward	Norman	On hold pending further sampling		AH	N/A	
100-K-53	100-K-53, 100-KE Glycol Heat Recovery Underground Pipelines	Phase 1	RTD	N/A	Prove that remediation is complete by sampling	Develop path forward	Norman	On hold pending further sampling		AH	N/A	
100-K-56	100-K-56, 100-KE Reactor Cooling Water Effluent Underground Pipelines	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman	Pipeline partial closure in: RA-00408 (Area AG Z1A) on hold, RA-00407 (Area AG Z2), being reviewed by DOE-RL and EPA		AG	Zone 1A & Zone 2	
100-K-57	100-K-57, 107-KE Drainage Ditch	Phase 1	RTD	N/A	Not Started		Norman			AM	N/A	
100-K-6	Vacuum Pit, Cyclone Separator, 105-KE Vacuum Pit	Phase 1	CSNA	RA-00142	Prove that remediation is complete by sampling	Develop path forward	Norman	On hold pending further sampling		AH	N/A	
100-K-62	100-K-62, 117-KE Filter Building	Phase 1	CSNA	RA-00136	Prove that remediation is complete by sampling	Develop path forward	Norman	On hold pending further sampling		AH	N/A	
100-K-63	100-K-63, 100-KW Floodplain, 100-K Flood Plain Contamination Area	Phase 1	CSNA	RA-00086	Backfill complete, RSVP to be drafted, downpost and reseed	Draft RSVP	Klages	RA-00401, Approved 9/28/2011		AJ	N/A	10/20/2011
100-K-64	100-KE Floodplain, 100-KE Flood Plain Contamination Area	Phase 1	CSNA	RA-00086	Not Started		Norman			AM	N/A	
100-K-68	100-K-68, 105-KE Pump Gallery and Catch Tank, D Sump	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman			AG	N/A	
100-K-69	100-K-69, 105-KE Sump C	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman			AG	N/A	
100-K-70	100-K-70, 105-KE Waste Storage Tank, Holding Tank	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman			AG	N/A	
100-K-71	100-K-71, 105-KE Collection Box	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman			AG	N/A	
100-K-77	100-K-77, Underground Railroad Ties Southeast of 1706KE	Phase 1	RTD	N/A	Closed			RA-00379. Approved 9/8/2011	DOE/RL-2011-105	AH	N/A	9/30/2011
116-KE-1	116-KE-1, 115-KE Condensate Crib	Phase 1	RTD	N/A	C-14 issue	Need path forward	Norman			AH	N/A	
116-KE-3	116-KE-3, 105-KE Storage Basin French Drain, 105-KE Fuel Storage Basin Sub-Basin Drainage Disposal System Crib	Phase 1	RTD	N/A	Additional excavation needed	Need funding	Norman			AG	N/A	
116-KE-6A	116-KE-6A, 1706-KE Condensate Collection Tank, 1706-KE Waste Treatment System	Phase 1	CSNA	RA-00121	Closed			N/A	DOE/RL-2010-42	AH	N/A	N/A
116-KE-6B	116-KE-6B, 1706-KE Evaporation Tank, 1706-KE Waste Treatment System	Phase 1	CSNA	RA-00121	Closed			N/A	DOE/RL-2010-42	AH	N/A	N/A
116-KE-6C	116-KE-6C, 1706-KE Waste Accumulation Tank, 1706-KE Waste Treatment System	Phase 1	CSNA	RA-00121	Closed			N/A	DOE/RL-2010-42	AH	N/A	N/A
116-KE-6D	116-KE-6D, 1706-KE Ion Exchange Column, 1706-KE Waste Treatment System	Phase 1	CSNA	RA-00121	Closed			N/A	DOE/RL-2010-42	AH	N/A	N/A
118-KE-2	118-KE-2, 105-KE Horizontal Control Rod Storage Cave	Phase 1	CSNA	RA-00119	Closed			N/A	DOE/RL-2010-50	AH	N/A	N/A
120-KW-1	120-KW-1, 183-KW Filter Water Facility Dry Well, 100-KW-1, 183-KW Acid Neutralization Pit, 100-K-17	Phase 1	RTD	N/A	Closed			RA-00358, Approved	DOE/RL-2011-113	AA	Zone 3	11/8/2011
120-KW-2	120-KW-2, 183-KW Filter Water Facility French Drain, 100-KW-2	Phase 1	RTD	N/A	Closed			RA-00358, Approved	DOE/RL-2011-113	AA	Zone 3	11/8/2011
120-KW-3	120-KW-3, 183-KW1 Sulfuric Acid Storage Tank	Phase 1	CSNA	RA-00134	Closed			RA-00358, Approved	DOE/RL-2011-113	AA	Zone 3	11/8/2011
120-KW-4	120-KW-4, 183-KW2 Sulfuric Acid Storage Tank	Phase 1	CSNA	RA-00134	Closed			RA-00358, Approved	DOE/RL-2011-113	AA	Zone 3	11/8/2011
120-KW-5	120-KW-5, 183-KW Sodium Dichromate Storage Tank	Phase 1	CSNA	RA-00134	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	Zone 2	
120-KW-7	120-KW-7, 183-KW Brine Pit, 183-KW Salt Dissolving Pits and Brine Pump Pit	Phase 1	CSNA	RA-00134	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	Zone 2	
130-KE-1	130-KE-1, 105-KE Emergency Diesel Oil Storage Tank, 105-KE Emergency Diesel Fuel Tank	Phase 1	CSNA	RA-00133	Closed			N/A	DOE/RL-2010-45	AH	N/A	N/A
132-KE-1	132-KE-1, 116-KE Reactor Exhaust Stack	Phase 1	CSNA	RA-00136	Prove that remediation is complete by sampling	Develop path forward	Norman	On hold pending further sampling		AH	N/A	
1607-K3	1607-K3 Septic Tank and Associated Drain Field	Phase 1	RTD	N/A	Drafting VSI	Draft VSI	Klages	RA-00371 (Area AA Z1) Drafting		AA	Zone 1	

100-K Waste Site Status as of 3/9/2012

Site Code	Site Names	TPA-CN-412	PMB Remedy	Document Authorizing RTD of a CSNA site	Waste Site Status	Action	Actionee	VSI Status	RSVP	Area	Zone	Backfill Completed
100-K-96	100-K-96, 100KE River Effluent Pipeline, 100KE River Line, River Line (East) from 116-K-3 Outfall	Phase 2	RTD	N/A	Drafting MOA for RTD	Need MOA	Norman/RL			AM	N/A	
100-K-1	100-K-1, 119-KW French Drain, 119-KW Exhaust Air Sample Building French Drain, 100-K-45	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-100	100-K-100, Radioactive Material Area Remaining After 107-KW Basin Removal, 116-KW-3 Remaining Contaminated Soil and Items	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-101	100-K-101, French Drains and Mercury Stained Soils near the 183KE Sedimentation Basin	Phase 2	RTD	N/A	Not Started					AB	N/A	
100-K-102	100-K-102, French Drains and Mercury Stained Soils near the 183KW Sedimentation Basin	Phase 2	RTD	N/A	Drafting VSI	Draft VSI	Klages	RA-00371 (Area AA Z1) Drafting		AA	Zone 1	
100-K-103	100-K-103, 1704-K and 1717-K Septic Systems, 1607-K4	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-104	100-K-104, 166-KE French Drain	Phase 2	RTD	N/A	Not Started					AD	N/A	
100-K-105	100-K-105, Pit at Southeast Corner of 100K	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-106	100-K-106, 182-K Fuel Oil Crib	Phase 2	RTD	N/A	Not Started					AD	N/A	
100-K-107	100-K-107, 1706-KER Abandoned Drain Field	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-108	100-K-108, 1706-KER Septic System	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-109	100-K-109, Unplanned Chemical Release near 183 1KW Head House, Yellow Stained Soil adjacent to 183 1KW Head House	Phase 2	RTD	N/A	Closed			RA-00361, Approved	DOE/RL-2011-114	AA	Zone 4	11/22/2011
100-K-110	Soil beneath 183.2-KW Flocculation and Sedimentation Basins; the 183.3-KW Sand Filter Basins	Phase 2	N/A	N/A	Drafting VSI	Draft VSI	Klages	RA-00371 (Area AA Z1) Drafting		AA	N/A	
100-K-13	100-K-13, French Drain West of the 166-KW Oil Storage Tank Facility	Phase 2	CSNA	RA-00144	Not Started					AC	N/A	
100-K-14	100-K-14, 183-KE Acid Neutralization Pit and Overflow French Drain	Phase 2	RTD	N/A	Not Started					AB	N/A	
100-K-25	100-K-25, 183-KE Caustic Neutralization Pit	Phase 2	CSNA	RA-00139	Not Started					AB	N/A	
100-K-27	100-K-27, 183-KE Caustic Soda Storage Tank Site	Phase 2	RTD	N/A	Not Started					AB	N/A	
100-K-4	100-K-4, 1706-KE Wet Fish Studies Ponds and Valve Pit	Phase 2	RTD	N/A	Closed			GC-SI-2010-0015, Approved	DOE/RL-2010-43	AG	N/A	Dec-11
100-K-48	100-K-48, 100-KE Oil Contamination Areas	Phase 2	CSNA	RA-00147	Not Started					AF	N/A	
100-K-49	100-K-49, 100-KW Oil Contamination Area	Phase 2	CSNA	RA-00147	Not Started					AC	N/A	
100-K-5	100-K-5, 1705-KE French Drain	Phase 2	CSNA	RA-00146	Not Started					AD	N/A	
100-K-54	100-K-54, 100-KW Glycol Heat Recovery Underground Pipelines	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-56	100-K-56, 100-KE Reactor Cooling Water Effluent Underground Pipelines (See Subsites)	Phase 2	RTD	N/A	Not Started					AF	N/A	
100-K-60	100-K-60, 1904-K Process Sewer (165-KW)	Phase 2	CSNA	RA-00148	Not Started					AC	N/A	
100-K-61	100-K-61, 117-KW Filter Building	Phase 2	CSNA	RA-00136	Not Started					AF	N/A	
100-K-66	100-K-66, 165-KW Power Control Building	Phase 2	CSNA	RA-00136	Not Started					AC	N/A	
100-K-67	100-K-67, 165-KE Power Control Building	Phase 2	CSNA	RA-00136	Not Started					AD	N/A	
100-K-83	100-K-83, 1904- K Spillway, 116-K-3, 1904-K Outfall Structure	Phase 2	CSNA	RA000149	Drafting MOA for RTD	Need MOA	Norman/RL			AM	N/A	
100-K-94	100-K-94, 1702-KE and 1702-KW Guard House Dry Wells	Phase 2	RTD	N/A	Not Started					AB	N/A	
100-K-97	100-K-97, 183-KW French Drain and Rail Spur Unplanned Release	Phase 2	RTD	N/A	Drafting VSI	Draft VSI	Klages	RA-00368 (Area AA Z2)		AA	N/A	
100-K-98	100-K-98, 183-KE French Drain and Rail Spur Unplanned Release	Phase 2	RTD	N/A	Not Started					AB	N/A	
100-K-99	100-K-99, Radioactive Material Area Remaining After 107-KE Basin Removal, 116-KE-4 Contaminated Soil and Items	Phase 2	RTD	N/A	Not Started					AF	N/A	
116-KW-1	116-KW-1, 115-KW Condensate Crib	Phase 2	RTD	N/A	Not Started					AF	N/A	
118-KW-2	118-KW-2, 105-KW Horizontal Control Rod Storage Cave	Phase 2	RTD	N/A	Closed			N/A	DOE/RL-2011-35	AF	N/A	
120-KE-1	120-KE-1, 183-KE Filter Waste Facility Dry Well, 100-KE-1, 183-KE Filter Water Facility, 183-KE Acid Neutralization Pit, 100-K-26	Phase 2	RTD	N/A	Not Started					AB	N/A	
120-KE-2	120-KE-2, 183-KE Filter Waste Facility French Drain, 100-KE-2, 183 KE Filter Water Facility	Phase 2	RTD	N/A	Not Started					AB	N/A	
120-KE-3	120-KE-3, 100-KE-3, 183-KE Filter Water Facility Trench	Phase 2	CSNA	RA-00134	Not Started					AB	N/A	
120-KE-4	120-KE-4, 183-KE1 Sulfuric Acid Storage Tank	Phase 2	RTD	RA-00134	Not Started					AB	N/A	
120-KE-5	120-KE-5, 183-KE2 Sulfuric Acid Storage Tank	Phase 2	RTD	RA-00134	Not Started					AB	N/A	
120-KE-6	120-KE-6, 183-KE Sodium Dichromate Tank	Phase 2	CSNA	RA-00134	Not Started					AB	N/A	
120-KE-8	120-KE-8, 165-KE Brine Pit, 165-KE Brine Mixing Tank	Phase 2	CSNA	RA-00141	Not Started					AB	N/A	
120-KE-9	120-KE-9, 183-KE Brine Pit, 183-KE Salt Dissolving Pits and Brine Pump Pit	Phase 2	RTD	N/A	Not Started					AB	N/A	
120-KW-6	120-KW-6, 165-KW Brine Pit, 165-KW Brine Mixing Tank	Phase 2	CSNA	RA-00141	Not Started					AC	N/A	
126-KE-2	126-KE-2, 183-KE Liquid Alum Storage Tank #2	Phase 2	RTD	N/A	Not Started					AB	N/A	
130-K-2	130-K-2, 1717-K Waste Oil Storage Tank	Phase 2	CSNA	RA-00150	Not Started					AD	N/A	
130-KE-2	130-KE-2, 166-KE Oil Storage Tank	Phase 2	CSNA	RA-00136	Not Started					AD	N/A	
130-KW-1	130-KW-1, 105-KW Emergency Diesel Oil Storage Tank, 130-KW-1A/130-KW-1B Tanks, 105-KW Emergency Diesel Fuel Tank	Phase 2	CSNA	RA-00137	Not Started					AC	N/A	
130-KW-2	130-KW-2, 166-KW Oil Storage Tank	Phase 2	CSNA	RA-00136	Not Started					AC	N/A	
132-KW-1	132-KW-1, 116-KW Reactor Exhaust Stack	Phase 2	CSNA	RA-00136	Not Started					AF	N/A	
1607-K1	1607-K1, 1607-K1 Septic Tank and Associated Drain Field, 124-K-1, 1607-K1 Sanitary Sewer System, 1607-K1 Septic Tank	Phase 2	RTD	RA-00135	Not Started					AA	N/A	
1607-K2	1607-K2, 1607-K2 Septic Tank and Associated Drain Field, 124-KE-1, 1607-K2 Sanitary Sewer System, 1607-K2 Septic Tank	Phase 2	RTD	RA-00135	Not Started					AB	N/A	
1607-K4	1607-K4, 1607-K4 Septic Tank and Associated Drain Field, 124-K-2, 1607-K4 Sanitary Sewer System, 1607-K4 Septic Tank	Phase 2	RTD	N/A	Closed					AF	N/A	
1607-K5	1607-K5, 1607-K5 Septic Tank and Associated Drain Field, 124-KE-2, 1607-K5 Sanitary Sewer System, 1607-K5 Septic Tank	Phase 2	RTD	RA-00135	Not Started					AH	N/A	
1607-K6	1607-K6, 1607-K6 Septic Tank and Associated Drain Field, 124-KW-1, 1607-K6 Sanitary Sewer System, 1607-K6 Septic Tank	Phase 2	RTD	RA-00135	Not Started					AF	N/A	
100-K-35	100-K-35, 183-KE Acid Neutralization Pit	Phase 3	CSNA	RA-00139	Not Started					AB	N/A	

100-K Waste Site Status as of 3/9/2012

Site Code	Site Names	TPA-CN-412	PMB Remedy	Document Authorizing RTD of a CSNA site	Waste Site Status	Action	Actionee	VSI Status	RSVP	Area	Zone	Backfill Completed
100-K-43	100-K-43, KW Basin, 105-KW Fuel Storage Basin, K West Basin, Irradiated Fissile Material Storage	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-47	100-K-47, 1904-K Process Sewer	Phase 3	RTD	N/A	Additional remediation required					AG/AF/AE	N/A	AG Zone 1A
100-K-56	100-K-56, 100-KE Reactor Cooling Water Effluent Underground Pipelines (See Subsites)	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-55	100-K-55, 100-KW Reactor Cooling Water Effluent Underground Pipelines (See Subsites)	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-72	100-K-72, 105-KW Pump Gallery and Catch Tank, D Sump	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-73	100-K-73, 105-KW Collection Box	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-74	100-K-74, 105-KW Waste Storage Tank, Holding Tank	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-75	100-K-75, 105-KW Sump C	Phase 3	RTD	N/A	Not Started					AE	N/A	
100-K-79	Sodium Dichromate and Sulfuric Acid Product Pipelines at 100-K	Phase 3	CSNA	RA-00134	Additional remediation required			Pipeline partial closure in: RA-00407 (Area AG Z2), being reviewed by DOE-RL and EPA and RA-00368 (Area AA Z2) drafting		AA/AB/AF/AG	AA Zone 2 AG Zone 2	
100-K-80	100-K-80, 100K River Effluent Pipeline, 100K River Line, 116-K-3 Outfall Structure, 1908 K Outfall	Phase 3	RTD	N/A	Drafting MOA for RTD	Need MOA	Norman/RL			AM	N/A	
100-K-81	100-K-81, Contamination Area West of 116-K-3	Phase 3	RTD	N/A	Drafting MOA for RTD	Need MOA	Norman/RL			AM	N/A	
100-K-82	100-K-82, 105 -KW Fuel Storage Basin Leak	Phase 3	CSNA	RA-00143	Not Started					AE	N/A	
116-K-3	116-K-3, 1904-K Outfall Structure, 1908-K Outfall Structure	Phase 3	RTD	N/A	Drafting MOA for RTD	Need MOA	Norman/RL			AM	N/A	
116-KE-2	116-KE-2, 1706-KER Waste Crib	Phase 3	RTD	N/A	Not Started					AF	N/A	
116-KW-2	116-KW-2, 105-KW Storage Basin French Drain, 105-KW Basin Reverse Well, 105-KW Fuel Storage Basin Sub-Basin Drainage Disposal System Crib	Phase 3	RTD	N/A	Not Started					AE	N/A	
118-KW-1	118-KW-1, 105-KW Reactor Building	Phase 3	CSNA	RA-00136	Not Started					AN	N/A	

Emerging Concerns / Pending Actions – 100K PMM

1. Need to formalize/definitize closure of 100-K-42 and UPR-100-K-1. Propose 100-K-42 be closed with the completion of the basin demolition/excavation activities and assign remaining costs to UPR-100-K-1 or assign new waste site. Discuss with EPA the path forward for closing and backfilling 100-K-42.
    - **Action:** Rod Lobos to look at the flexibility in the ROD to move forward. 100-K-42 is specific to the 105-KE basin and substructure only; the substructure and debris have been removed.

2. RL and EPA to reach agreement on "backfill complete" for the interim actions.
    - **Action:** RL will work with Contractor to prepare a contour plan.

3. Need EPA approval to complete the backfill at the KW Head House area with the understanding one waste site will remain in Phase 2. Specify on waste site agreements the agreed upon backfill depths and grades.
    - **Action:** Lorna Dittmer to verify in the TPA what allowance we have to push re-vegetation.
        - **Complete:** Agreement for re-vegetation and interim stabilization has been reached as documented in February 23, 2012 PMM.

4. 100K waste management areas (e.g., staging areas, debris storage, solid waste storage, etc). Review map of locations and requirements from RAWPs for EPA approval. Propose revision to 100K waste management plans for consistency and clarification of dangerous waste staging piles requirements, solid waste storage piles requirements and EPA approvals. Discuss EPA's November email regarding issuance of a letter (pending or in agreement there are no compliance issues).
    - **Action:** Dottie Norman to schedule meeting on Thursday, March 1, 2012 with RL and EPA to review proposed revisions to 100K Area Waste Management Plans.

5. Notice of Violation of the Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities, Revision 1 (DOE/RL-2005-26).
    - **Action:** Dottie Norman to schedule meeting on Thursday, March 1, 2012 with RL and EPA to review proposed revisions to 100K Area Waste Management Plans.

6. Rod Lobos asked for EPA approval on location for sampling (pothole) 116-KE-3. Rod noted the sampling plan did not have to be as rigorous as a VSI.
    - **Status**. Pothole sampling will not be performed at this time. RI/FS will need to include evaluation for determination of protectiveness. Dottie Norman will work with the RI/FS group to complete an evaluation for determination of protectiveness.

Emerging Concerns / Pending Actions – 100K PMM

7. RL to schedule a meeting with EPA on March 14, 2012 to review the M-016-171 proposed Milestones.
    - **Action:** Roger Quintero to schedule review meeting with EPA.

8. RL to schedule a meeting with EPA prior to the March PMM and reach agreement the 116-KE-1 waste site will be removed when the 105-KE reactor is removed. A TPA-CN will be prepared for approval once agreement is reached.
    - **Action:** Dottie Norman will work with the RI/FS group to complete an evaluation for determination of protectiveness and work with RL to schedule meeting with EPA.

9. Emerging concerns expressed by Rod Lobos
    - Disposition of IDW waste from 105-KE Reactor core sampling.
    - 181-KE/KW river sediment samples are not being picked up for evaluation in the RI/FS. Sediment evaluated in the RI/FS punted the decision to the Final ROD. If these sediment samples are not addressed in the Final ROD, completion of the Interim ROD Milestone could be in jeopardy.

10. The description for the M-093-22 Milestone incorrectly identifies the 105-KE Reactor ISS will be complete in accordance with the Remedial Design/Remedial Action Work Plan.
    - **Action:** Lorna Dittmer to prepare a TPA Change Package to identify the Removal Action Work Plan.

CHPRC-0900289 R28
Attachment 7

Norman, Dottie L

From: Rod Lobos [Lobos.Rod@epamail.epa.gov]
Sent: Wednesday, February 22, 2012 2:51 PM
To: Dittmer, Lorna M
Cc: Norman, Dottie L; Kehler, Kurtis L; Jaraysi, Moses; Engelmann, Richard H; Balone, Steven N; Teynor, Thomas K
Subject: RE: Milestone completion criteria regarding revegetation for M-016-53

Yes,

It looks fine. We can enter it in at the PMM.

Rod Lobos
Remedial Project Manager
Environmental Protection Agency, Region 10 Hanford Project Office
(509) 376-3749

From: "Dittmer, Lorna M" <Lorna_M_Dittmer@rl.gov>
To: Rod Lobos/R10/USEPA/US@EPA
Cc: "Teynor, Thomas K" <thomas.teynor@rl.gov>, "Balone, Steven N" <steven.balone@rl.gov>, "Norman, Dottie L" <Dottie_L_Norman@rl.gov>, "Engelmann, Richard H" <Richard_H_Engelmann@rl.gov>, "Jaraysi, Moses" <Moses_Jaraysi@rl.gov>, "Kehler, Kurtis L" <Kurtis_L_Kehler@rl.gov>
Date: 02/22/2012 01:49 PM
Subject: RE: Milestone completion criteria regarding revegetation for M-016-53

Rod,

I added another bullet to the agreement below per your request. Are you comfortable with this agreement being added to the PMM tomorrow?

Thanks -

Lorna

-----Original Message-----
From: Rod Lobos [mailto:Lobos.Rod@epamail.epa.gov]
Sent: Friday, February 17, 2012 1:46 PM
To: Dittmer, Lorna M
Cc: Norman, Dottie L; Kehler, Kurtis L; Jaraysi, Moses; Engelmann, Richard H; Balone, Steven N; Teynor, Thomas K
Subject: Re: FW: Milestone completion criteria regarding revegetation for M-016-53

Please add that phase 2 waste site completion will require re-vegetation of both phase 1 and 2 waste sites affected by the footprint of the

excavation. You can word it however you want.

Rod Lobos
Remedial Project Manager
Environmental Protection Agency, Region 10 Hanford Project Office
(509) 376-3749

From: Dittmer, Lorna M
Sent: Thursday, February 09, 2012 9:23 AM
To: 'Lobos.Rod@epamail.epa.gov'
Cc: Teynor, Thomas K; Balone, Steven N; Norman, Dottie L; Engelmann, Richard H; Jaraysi, Moses; Kehler, Kurtis L
Subject: FW: Milestone completion criteria regarding revegetation for M-016-53
Importance: High

Rod,

Per our discussion regarding milestone completion criteria for revegetation relating to M-016-53, I wanted to capture the main points for your concurrence prior to the PMM. We agreed that for the co-located waste sites that are south of the footprint of the KW sedimentation basins, the M-016-53 (Phase 1) waste sites will NOT require complete backfill and revegetation by December, 2012 to meet the milestone completion criteria. You indicated that partial backfill of the deep excavations within the area, with soil stabilization, will be acceptable for the purposes of milestone completion, providing that a waste site included in M-016-143 (Phase 2) list of waste sites, is still active in proximity to the Phase 1 waste sites.

The elements of this agreement are as follows:

- Phase 1 waste sites will meet interim close-out criteria per the RDR/RAWP for the 100 areas, and have approved Waste Site Reclassification Forms
- Phase 1 waste sites will be partially backfilled (deepest areas backfilled for safety of nearby work) but not necessarily brought to grade
- Phase 1 waste sites' surface soil will be maintained with soil fixative until revegetation occurs
- A minimum of one Phase 2 waste site within the remediation area surrounding the former head house footprint/excavation area remains that requires additional remedial action/evaluation
- A plan view schematic of the area, indicating the waste site footprints, the waste site number and milestone (or Phase) it's included in, and the depth of excavation/backfill at the time of milestone completion will be provided to EPA in advance of the M-016-53 completion date of December 31, 2012, to document EPA concurrence
- Completion of M-016-143 (Phase 2, due December 31, 2015) will require revegetation of all Phase 1 and Phase 2 waste sites included in the footprint of the excavation of co-located waste sites south of the KW sedimentation basin footprint. The area to be revegetated for completion of Phase 2 will be delineated on the plan view schematic provided to EPA as part of the completion of M-016-53.

If you would like to add clarification, please let me know, and I will modify this agreement. We look forward to gaining your concurrence and documenting the agreed-to approach in this month's PMM minutes.

Please let me know if you have any questions –

Lorna

CHPRC-00089 Rev 8
Attachment 8

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 498	TPA CHANGE NOTICE FORM	Date: February 22, 2012
Document Number, Title, and Revision: DOE/RL-96-17, Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area		Date Document Last Issued: September 2009
Originator: Dottie Norman		Phone: 373-0040

Description of Change:
Adds text to the RDR/RAWP regarding phased work for the 100-K Area and reflects agreed-upon shift of selected wastes sites between Phases 2 and 3. Specifically, waste sites in the vicinity of 105KW Reactor that will be impacted by the Sludge Treatment Project will move from Phase 2 to Phase 3. This TPA Change Notice replaces TPA-CN-412 in its entirety.

Tom Teynor (**DOE**) and Rod Lobos (**Environmental Protection Agency**) agree that the proposed change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records,* and not Chapter 12.0, *Changes to the Agreement*.

The following text is added to the end of Section 3.2.2 (Page 3-11) in DOE/RL-96-17, Rev. 6.:

A 100-K Area perimeter boundary has been identified to segregate waste sites and structures that require coordination and detailed integration with the Sludge Treatment Project to safely and effectively complete remediation. In many cases, these waste sites and structures are in proximity to the active KW Fuel Storage Basin or to facilities needed to keep the KW Basin operational. The perimeter boundary (with some exceptions on the east-side) generally coincides with the outer-most perimeter fences around the 100-K Area (encompassing the reactors and facilities) and the area between the northern perimeter fence and the Columbia River. The perimeter boundary was chosen to exclude the waste sites (118-K-2, 100-K-2, 100-K-78, 126-K-1, 128-K-2, and 600-29) that do not require integration with the Sludge Treatment Project for completion. The remediation will proceed in a phased approach, as identified in TPA Milestones M-016-53, M-016-143, and M-016-00C.

Remaining work at the 100-K Area is being performed in three phases and will be completed on the dates provided below:

Phase 1 (M-016-53, DUE 12/31/2012)		**Phase 2** (M-016-143, DUE 12/31/2015)			**Phase 3** (M-016-00C, DUE 12/31/2020)		
100-K-3	100-K-70	~~100-K-1~~	100-K-49	120-KE-3	100-K-1	100-K-73	116-KW-2
100-K-6	100-K-71	100-K-100	100-K-5	120-KE-4	100-K-35	100-K-74	118-KW-1
100-K-18	116-KE-1	100-K-101	~~100-K-54~~	120-KE-5	100-K-43	100-K-75	130-KW-1
100-K-19	116-KE-3	100-K-102	100-K-56*	120-KE-6	100-K-47	100-K-79	132-KW-1
100-K-34	116-KE-6A	100-K-103	~~100-K-60~~	120-KE-8	100-K-54	100-K-80	
100-K-36	116-KE-6B	100-K-104	~~100-K-61~~	120-KE-9	100-K-55	100-K-81	
100-K-37	116-KE-6C	100-K-105	100-K-66	120-KW-6	100-K-56*	100-K-82	
100-K-38	116-KE-6D	100-K-106	100-K-67	126-KE-2	100-K-60	116-K-3	
100-K-46	118-KE-2	100-K-107	100-K-83	130-K-2	100-K-61	116-KE-2	
100-K-53	120-KW-1	100-K-108	100-K-94	130-KE-2	100-K-72	116-KW-1	
100-K-56*	120-KW-2	100-K-109	100-K-96	~~130-KW-1~~			
100-K-57	120-KW-3	100-K-110	100-K-97	130-KW-2			
100-K-62	120-KW-4	100-K-13	100-K-98	~~132-KW-1~~			
100-K-63	120-KW-5	100-K-14	100-K-99	1607-K1			
100-K-64	120-KW-7	100-K-25	~~116-KW-1~~	1607-K2			
100-K-77	130-KE-1	100-K-27	118-KW-2	1607-K4			
100-K-68	132-KE-1	100-K-4	120-KE-1	1607-K5			
100-K-69	1607-K3	100-K-48	120-KE-2	1607-K6			
		And any other orphan and discovery sites					

* Partial unit. Waste sites that span multiple-phase areas (e.g., pipelines) may be executed in each phase.

Interim closed-out waste sites, therefore no further action required.

100-K-29	100-K-32	116-KE-5	128-K-1
100-K-30	100-K-34	116-KW-3	
100-K-31	116-KE-4	116-KW-4	

Waste sites rejected/not accepted in WIDS, therefore no further action required.

100-K-7	100-K-15	100-K-24	100-K-58
100-K-8	100-K-16	100-K-28	100-K-59
100-K-9	100-K-20	100-K-39	100-K-76
100-K-10	100-K-21	100-K-44	126-KE-3
100-K-11	100-K-22	100-K-51	130-K-1
100-K-12	100-K-23	100-K-52	130-K-3

Note: Include affected page number(s)

Justification and Impacts of Change:

This change moves waste sites in the vicinity of the 105KW Reactor that will be impacted by the Sludge Treatment Project from Phase 2 to Phase 3.

This change notice supersedes TPA-CN-412 in its entirety.

Approvals:

DOE Project Manager	FEB 23, 2012 Date	[X] Approved [ ] Disapproved
EPA Project Manager	2-23-2012 Date	[X] Approved [ ] Disapproved
Not Applicable Ecology Project Manager	Date	[ ] Approved [ ] Disapproved

CHPRC-0900289 R28
Attachment 9

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 499	TPA CHANGE NOTICE FORM	Date: February 22, 2012
Document Number, Title, and Revision: DOE/RL-96-17, Rev. 6, Remedial Design Report/Remedial Action Work Plan for the 100 Area		Date Document Last Issued: September 2009
Originator: Dottie Norman		Phone: 373-0040

Description of Change:
Adds text to the RDR/RAWP regarding phased work for the 100-K Area and reflects agreed-upon shift of selected wastes sites where remediation is delayed pending resolution of cultural resource / Tribal concerns. This TPA Change Notice replaces TPA-CN-498 in its entirety.

Tom Teynor (**DOE**) and Rod Lobos (**Environmental Protection Agency**) agree that the proposed change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records,* and not Chapter 12.0, *Changes to the Agreement.*

The following text is added to the end of Section 3.2.2 (Page 3-11) in DOE/RL-96-17, Rev. 6.:

A 100-K Area perimeter boundary has been identified to segregate waste sites and structures that require coordination and detailed integration with the Sludge Treatment Project to safely and effectively complete remediation. In many cases, these waste sites and structures are in proximity to the active KW Fuel Storage Basin or to facilities needed to keep the KW Basin operational. The perimeter boundary (with some exceptions on the east-side) generally coincides with the outer-most perimeter fences around the 100-K Area (encompassing the reactors and facilities) and the area between the northern perimeter fence and the Columbia River. The perimeter boundary was chosen to exclude the waste sites (118-K-2, 100-K-2, 100-K-78, 126-K-1, 128-K-2, and 600-29) that do not require integration with the Sludge Treatment Project for completion. The remediation will proceed in a phased approach, as identified in TPA Milestones M-016-53, M-016-143, and M-016-00C.

Remaining work at the 100-K Area is being performed in three phases and will be completed on the dates provided below:

Phase 1 (M-016-53, DUE 12/31/2012)		Phase 2 (M-016-143, DUE 12/31/2015)			Phase 3 (M-016-00C, DUE 12/31/2020)		
100-K-3	100-K-70	100-K-100	100-K-64	120-KE-3	100-K-1	100-K-73	116-KW-2
100-K-6	100-K-71	100-K-101	100-K-66	120-KE-4	100-K-35	100-K-74	118-KW-1
100-K-18	116-KE-1	100-K-102	100-K-67	120-KE-5	100-K-43	100-K-75	130-KW-1
100-K-19	116-KE-3	100-K-103	100-K-80	120-KE-6	100-K-47	100-K-79	132-KW-1
100-K-34	116-KE-6A	100-K-104	100-K-81	120-KE-8	100-K-54	~~100-K-80~~	
100-K-36	116-KE-6B	100-K-105	100-K-83	120-KE-9	100-K-55	~~100-K-81~~	
100-K-37	116-KE-6C	100-K-106	100-K-94	120-KW-6	100-K-56*	100-K-82	
100-K-38	116-KE-6D	100-K-107	100-K-96	126-KE-2	100-K-60	~~116-K-3~~	
100-K-46	118-KE-2	100-K-108	100-K-97	130-K-2	100-K-61	116-KE-2	
100-K-53	120-KW-1	100-K-109	100-K-98	130-KE-2	100-K-72	116-KW-1	
100-K-56*	120-KW-2	100-K-110	100-K-99	130-KW-2			
~~100-K-57~~	120-KW-3	100-K-13	116-K-3	1607-K1			
100-K-62	120-KW-4	100-K-14	118-KW-2	1607-K2			
100-K-63	120-KW-5	100-K-25	120-KE-1	1607-K4			
~~100-K-64~~	120-KW-7	100-K-27	120-KE-2	1607-K5			
100-K-77	130-KE-1	100-K-4		1607-K6			
100-K-68	132-KE-1	100-K-48					
100-K-69	1607-K3	100-K-56*					
		100-K-57					
		and any other orphan and discovery sites					

* Partial unit. Waste sites that span multiple-phase areas (e.g., pipelines) may be executed in each phase.

Interim closed-out waste sites, therefore no further action required.

100-K-29	100-K-32	116-KE-5	128-K-1
100-K-30	100-K-34	116-KW-3	
100-K-31	116-KE-4	116-KW-4	

Waste sites rejected/not accepted in WIDS, therefore no further action required.

100-K-7	100-K-15	100-K-24	100-K-58
100-K-8	100-K-16	100-K-28	100-K-59
100-K-9	100-K-20	100-K-39	100-K-76
100-K-10	100-K-21	100-K-44	126-KE-3
100-K-11	100-K-22	100-K-51	130-K-1
100-K-12	100-K-23	100-K-52	130-K-3

Note: Include affected page number(s)

Justification and Impacts of Change:

This change moves waste sites into Phase 2 where remediation is delayed pending resolution of cultural resource / Tribal concerns.

This change notice supersedes TPA-CN-498 in its entirety.

Approvals:

DOE Project Manager	2-23-2012 Date	[X] Approved [ ] Disapproved
EPA Project Manager	2-23-2012 Date	[X] Approved [ ] Disapproved
Ecology Project Manager (Not Applicable)	Date	[ ] Approved [ ] Disapproved

CHPRC-09000287 R28
Attachment 10

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 502	TPA CHANGE NOTICE FORM	Date: February 22, 2012
Document Number, Title, and Revision: DOE/RL-2005-26, Rev 1, Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities		Date Document Last Issued: September 2009
Originator: Dottie Norman		Phone: 373-0040

Description of Change:
Facilities and structures in the vicinity of 105KW Reactor that will be impacted by the Sludge Treatment Project will be moved from Phase 2 to Phase 3. This TPA change notice supersedes TPA-CN-245, TPA-CN-385, and TPA-CN-411 in their entirety.

Tom Teynor (**DOE**) and Rod Lobos (**Environmental Protection Agency**) agree that the proposed change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records,* and not Chapter 12.0, *Changes to the Agreement.*

The following text will be added to Section 1.1, Purpose and Objective of the Removal Action Work Plan, in conjunction with Table 1-3, Tri-Party Agreement Milestones for the 100-K Area ISS and D4 Removal Action.

A 100-K Area perimeter boundary has been identified to segregate waste sites and structures that require coordination and detailed integration with the Sludge Treatment Project to safely and effectively complete remediation. In many cases, these waste sites and structures are in proximity to the active KW Fuel Storage Basin or to facilities needed to keep the KW Basin operational. The perimeter boundary (with some exceptions on the east-side) generally coincides with the outer-most perimeter fences around the 100-K Area (encompassing the reactors and facilities) and the area between the northern perimeter fence and the Columbia River. The perimeter boundary was chosen to exclude the waste sites (118-K-2, 100-K-2, 100-K-78, 126-K-1, 128-K-2, and 600-29) that do not require integration with the Sludge Treatment Project for completion.

Remaining work at the 100-K Area is being performed in three phases and will be completed on the dates provided below:

Phase 1 M-16-053: December 31, 2012			
110KE	1605KE	181KE	MO048
110KW	1706KE	183.1KW	MO060
115KE	1706KEL	183.2KW	MO872
116KE	1706KER	183.3KW	MO873
117KE	1713KE	183.4KW	MO969
118KE	1714KE	183.5KW	
119KE	1717AKE	183.7KW	

Phase 2 M-16-143: December 31, 2015			
~~115KW~~	~~166KW~~	182K	MO401
~~116KW~~	1705KE	183.5KW	MO402
~~117KW~~	1713KER	183.6KW	MO442
118KW	~~1713KW~~	MO101	MO506
~~119KW~~	~~1714KW~~	MO102	MO507
166AKE	1720K	MO214	MO907
166KE	1724KB	MO382	MO917
			MO928

Phase 3 M-016-00C: December 31, 2020			
105KE Water Tunnel	165KE	183.1KE	1908KE
105KW Water Tunnel	165KW	183.2KE	190KE
115KW	166KW	183.3KE	190KW
116KW	167K	183.4KE	MO054
117KW	1713KW	183.5KE	MO236
119KW	1714KW	183.6KE	MO237
142K	1717K	183.7KE	MO323
142KA	1724K	183KE	MO500
1506K1	1724KA	185K	MO955
1605KW	181KW	1908K	

Note: Include affected page number(s)

Justification and Impacts of Change:

Facilities and structures in the vicinity of 105KW Reactor will be impacted by the Sludge Treatment Project and will be moved from Phase 2 to Phase 3.This change notice supports the 100-K Area current work schedule and implementation of the scope identified in change package M-16-08-09.

This change notice supersedes TPA-CN-245, TPA-CN-385, and TPA-CN-411 in their entirety.

Approvals:

DOE Project Manager	2-23-2012 Date	[X] Approved [ ] Disapproved
EPA Project Manager	2-23-2012 Date	[X] Approved [ ] Disapproved
Not Applicable Ecology Project Manager	Date	[ ] Approved [ ] Disapproved

CHPRC-0900289 R28
Attachment 11

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 503	TPA CHANGE NOTICE FORM	Date: February 10, 2012
Document Number, Title, and Revision: DOE/RL-2005-26 Rev 1, "Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities"		Date Document Last Issued: 2/21/2007
Originator: Dottie Norman		Phone: 373-0040

Description of Change:
Update to identify alternate approach for design / construction of the Safe Storage Enclosure supporting 105-KE/KW Reactor(s) Interim Safe Storage.

T.K. Teynor (**DOE**) and R.A. Lobos (EPA) (**Lead Regulatory Agency**) agree that the proposed change modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records,* and not Chapter 12.0, *Changes to the Agreement.*

Updates to the following sections (see attached redline / ~~strikeout~~; changes are indicated by ~~strikeout~~ of removed text. And double underline for added text.):

Section 1.0 Introduction, page 1-11
Section 2.1.5 Safe Storage Enclosure Construction, pages 2-7 through 2-10

Total number or pages, including this cover: 6

Note: Include affected page number(s)

Justification and Impacts of Change:

This change notice provides an alternate approach to the design and construction of a Safe Storage Enclosure for the 105-KE/KW Reactor(s) during Interim Safe Storage.

Approvals:

DOE Project Manager	2-28-2012 Date	[X] Approved [ ] Disapproved
EPA Project Manager	2-28-2012 Date	[X] Approved [ ] Disapproved
Ecology Project Manager (**Not Applicable**)	Date	[ ] Approved [ ] Disapproved

A-6005-413 (REV 1)

release to the environment and provided they are sufficiently similar to the sites addressed by the EE/CA such that additional analysis of removal alternatives would not be necessary or appropriate. Approvals for implementing this plug-in approach for such facilities and foundations will be obtained from the EPA.

One of the facilities, the 1706-KE Building, has a small area that is called the "1706-KE Waste Treatment System," which is regulated as a treatment, storage, and disposal (TSD) unit under the *Resource Conservation and Recovery Act of 1976* (RCRA). This TSD unit is composed of several major components including an accumulation tank, an ion-exchange column, an evaporator unit, a condensate collection tank, and a high-efficiency particulate air (HEPA) filtration unit. The Tri-Parties (DOE, EPA, and Washington State Department of Ecology [Ecology]) have agreed to integrate the cleanup and closure of this TSD unit with the CERCLA process. The TSD portion of the 1706-KE Building will be remediated under the authority of the Remaining Sites ROD (EPA 1999a) as provided by the *Explanation of Significant Differences for the 100 Area Remaining Sites Interim Remedial Action Record of Decision* (EPA 2004). However, the removal, treatment (as necessary) and disposal of all equipment and potentially contaminated structural components directly related to the 1706-KE Waste Treatment System will be carried out within the scope of this RAWP. Under the Tri-Party Agreement, DOE must satisfy closure requirements for the TSD unit, and therefore will submit a RCRA closure plan to Ecology for approval to ensure that RCRA closure requirements are met.

This removal action minimizes the potential for a release of hazardous substances from the facilities (listed in Tables 1-1 and 1-2) that could adversely impact human health and the environment; is protective of human health, including the site personnel and the environment; and contributes to the efficient performance of any remedial actions, including any future subsurface soil remediation and reactor block removal. The action includes ~~D4 of the reactor building up to the shield walls that surround the reactor block,~~ the construction of a safe storage enclosure (SSE), and S&M. This alternative also provides D4 of the ancillary facilities and portions of the 105-KE and 105-KW Reactor Facilities, which consist of immediate deactivation and any required decontamination of the facilities followed by demolition and associated waste disposal of the contaminated debris.

1.1 PURPOSE AND OBJECTIVE OF THE REMOVAL ACTION WORK PLAN

The purpose of this RAWP is to establish the methods and activities required to perform the following functions:

- Complete deactivation and demolition (D&D) of the 27 ancillary facilities addressed within the ancillary facilities EE/CA (DOE-RL 2004) and the related action memorandum (EPA 2005)

- Modify structures as necessary and construct an ISS enclosure for the 105-KE and 105-KW Reactor Buildings

materials to remove loose contamination. Water may be used to clean equipment in the decontamination area; however, the use of large volumes of water will be minimized. Soaps, detergents, or other cleaning agents will not be added to the washwater. Pressure washing (if required) will normally be performed using cold water (however, hot water may be used to avoid icing). Wet grit blasting, grinding, or steam cleaning will be used only after other decontamination methods prove to be ineffective.

Spent decontamination water and associated contamination from the decontamination of equipment (e.g., trackhoe excavators, front-end loaders) will be discharged to the ground within the decontamination area. The EPA and DOE Richland Operations Office will agree on a case-by-case basis whether (or not) a decontamination area shall be clean closed at the end of D&D/D4 and ISS activities or whether the final cleanup can be deferred to a later remedial action. Closeout of decontamination areas will be performed in accordance with the Remaining Sites ROD (EPA 1999a) prior to closeout of the project. Decontamination practices will be documented in the field superintendent's/craft supervisor's (as appropriate) daily logbook. Personnel responsible for equipment decontamination will be knowledgeable of the applicable requirements of this RAWP.

2.1.5 Safe Storage Enclosure Construction

The 100K Area ISS reactor facilities will be enclosed to provide the SSEs, either by construction of an independent metal structure (option A) or by using the existing walls as the primary enclosure with construction of a new roof (option B). Either option may be used for each reactor.

Option A is to remove applicable components from inside the SSE and construct an independent metal structure around the reactors that will enclose the reactors to grade. Under this approach, a reinforced concrete foundation will be built that is supported entirely by the adjacent soil. The foundation will be a continuous grade beam with no connections to the existing reactor building. Upon this foundation, a steel-framed metal-sheathed building will be constructed to entirely enclose the reactor(s).

Under option B, ~~T~~the existing reactor shield walls will be used as the primary enclosure for safe storage. Option B includes~~Upon~~ removal of the applicable components from inside the SSE and D4 of the reactor support areas surrounding the shield wall, and the construction of a roof ~~will be constructed~~ (as required) to enclose the top of the reactor block and adjacent rooms. The roof will consist of structural steel and metal roof decking. The shield walls have supported the roof in earlier SSE structures, and the 105-KE and 105-KW designs are expected to be similar if option B is used. Openings between the new roof and top of the shield walls will be closed with wall panel siding similar to that of the new roof. Openings and penetrations within the shield walls will be closed (i.e., large and small openings or penetrations will be sealed by concrete pourbacks or steel plates, as appropriate). Figures 2-1 and 2-2 provide the conceptual layout of the 100-K Area D4 Ancillary Facilities and the SSE for the 105-KE and 105-KW Reactor Facilities.

A single-door entry into each SSE will be provided to limit and control access and will have the~~be~~ capability of being welded shut. Necessary ventilation ducting will be installed inside the SSE that can be ~~will be~~ connected to an external portable exhaust unit for use prior to entry for maintenance activities, as needed. A remote monitoring system will be installed inside the reactor enclosure so that key parameters can be monitored between S&M entries. ~~The final configuration of the building will feature the existing shield walls as the exterior of the building, a single-entry door that will be used for inspections, and a metal roof with similar siding.~~ The equipment associated with the monitoring and electrical power and lighting will be installed in a utility room located outside of the SSE so that entry into the SSE will not be necessary to service this equipment.

Figures 2-1, ~~and~~ 2-2a, and 2-2b show graphical "before" and "after" representations of what the SSE will look like when completed.

Figure 2-1. 105-KE/105-KW Safe Storage Enclosure (Before).

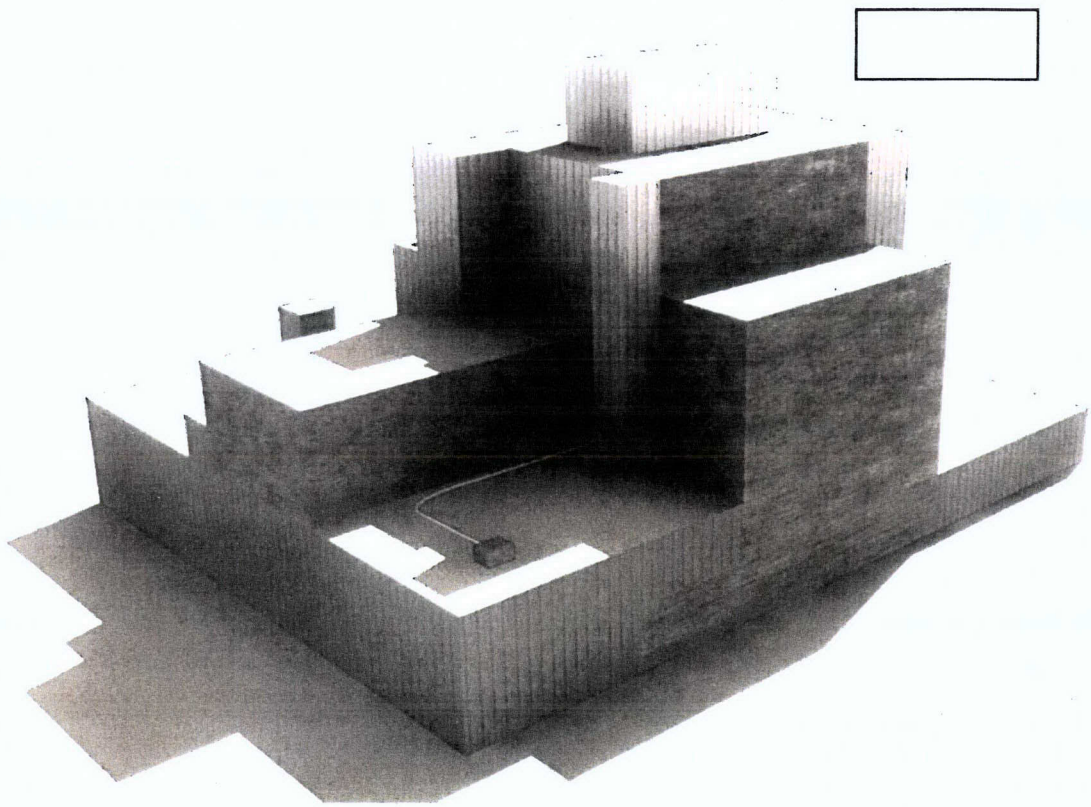


Figure 2-2a. 105-KE/105-KW Safe Storage Enclosure (Option A).

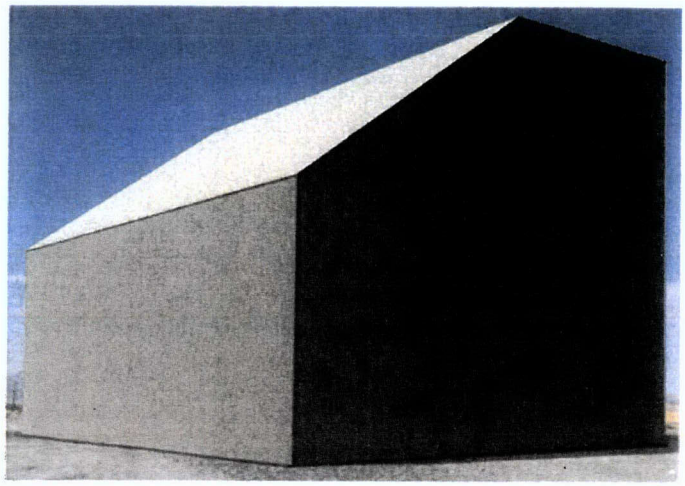
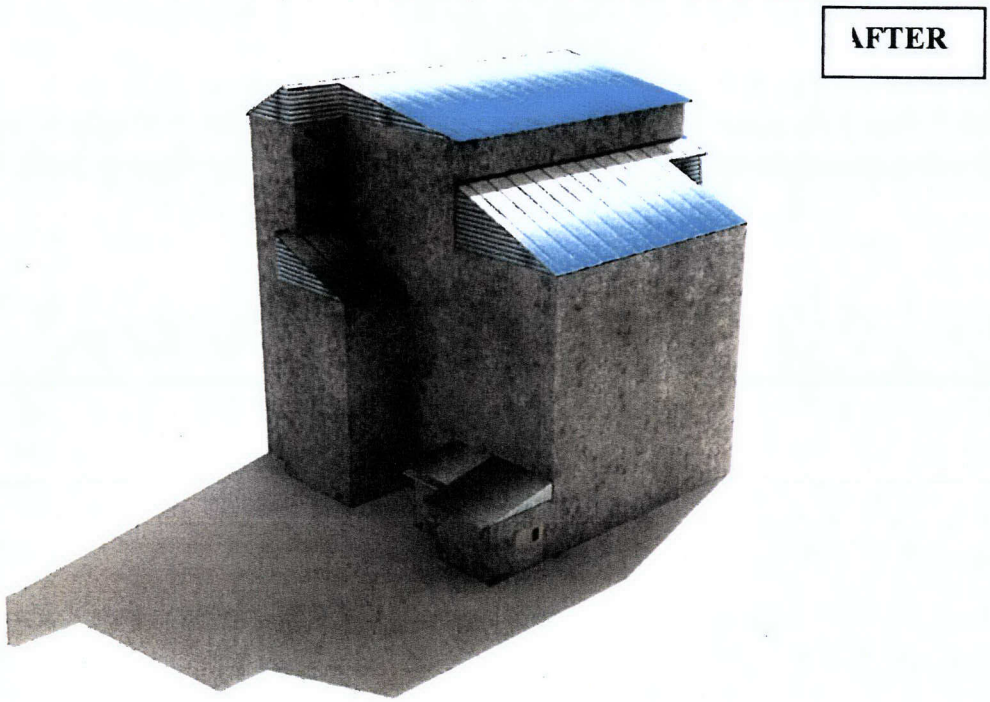


Figure 2-3~~32~~ab. 105-KE/105-KW Safe Storage Enclosure (Option B)~~After)~~.



Key elements of the SSE design are as follows:

- Provide effective enclosure for 100K Area ISS reactor facilities through:
  - Construction of a free-standing enclosure structure over the reactor building, or
  - Use existing 105-KE and 105-KW shield walls as the basis for establishing the SSE footprint and as prime components of the structure
- Remove exterior floors and decking to within the minimal acceptable distance of the walls for integrity of the remaining structure
- Place covers over openings in the reactor building and repair openings in damaged exterior siding panels to minimize intrusion by birds and pests (applies for option A)
- Plug large and small openings and penetrations (e.g., concrete pourbacks or sheet steel), as appropriate to the hazard (applies for option B)~~Seal all wall penetrations securely so penetration closures will not be dislodged in a seismic event or from wind loads~~
- Provide limited, nonroutine access into the SSE for S&M activities
- Identify and enclose/seal~~Address closure of~~ all subsurface tunnels and pipes (and other penetrations) that will be left in place to prevent water or pest intrusion and as isolation of the SSE from the environment
- Allow for decontamination of equipment and structural components to the extent reasonable for radioactive and hazardous material volume reduction, ALARA practices, and, if practical, the release of material for unrestricted use
- Provide a remote monitoring system for flooding and temperature monitoring with a readout at a central monitoring station.

2.1.6 Waste Site Integration

The D&D/D4 and ISS activities will need to be integrated with the remediation of the 100-KR-1 and 100-KR-2 soils such that there are no negative impacts between the two efforts.

Wells may be located near or within the footprint of the structures undergoing D&D/D4 and ISS activities. The wells may or may not be affected by the D&D/D4 and ISS activities. If required to facilitate D&D/D4 and ISS, the wells will be decommissioned.

Other contaminated underground structures (including french drains, pipelines, pipe tunnels, and pipe trenches) may be exposed or affected by removing the below-grade facility structures. The condition of these sites will be documented as part of the D&D/D4 and ISS process. The documentation shall include location of pipelines/pipe tunnels/pipe trenches (as appropriate) that intersect the site as an aid to future remediation

CHPRC-0900289 R28
Attachment 12

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 504	TPA CHANGE NOTICE FORM	Date: February 10, 2012
Document Number, Title, and Revision: Action Memorandum for the Non-Time-Critical Removal Action for the 105-KE and 105-KW Reactor Facilities and Ancillary Facilities		Date Document Last Issued: 2/21/2007
Originator: Dottie Norman		Phone: 373-0040

Description of Change:
Update to identify alternate approach for design / construction of the Safe Storage Enclosure supporting 105-KE/KW Reactor(s) Interim Safe Storage.

T.K. Teynor (**DOE**) and R.A. Lobos (EPA) (**Lead Regulatory Agency**) agree that the proposed change modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Updated pages 15 & 16. Section 5.1.2 Alternative II: ISS of the 105-KE and 105-KW Reactors followed by long-term S&M, and D4 of Ancillary Facilities and portions of the 105-KE and 105-KW reactor buildings. (See attached redline / ~~strikeout~~); changes are indicated by ~~strikeout~~ of removed text. And double underline for added text..

Total number or pages, including this cover: 3/4 including email from T.K. Teynor. DN 3/2/12

Note: Include affected page number(s)

Justification and Impacts of Change:

This change notice provides an alternate approach to the design and construction of a Safe Storage Enclosure for the 105-KE/KW Reactor(s) during Interim Safe Storage.

Approvals:

DOE Project Manager	2-28-2012 Date	[X] Approved [ ] Disapproved
N/A See attached email T.K. Teynor to D.L. Norman 3/28/2012 EPA Project Manager	Date	[ ] Approved [ ] Disapproved
Not Applicable Ecology Project Manager	Date	[ ] Approved [ ] Disapproved

A-6005-413 (REV 1)

5.1.2 Alternative II: ISS of the 105-KE and 105-KW Reactors followed by long-term S&M, and D4 of Ancillary Facilities and portions of the 105-KE and 105-KW reactor buildings

Alternative II would consist of D4 of portions of the two reactor buildings (up to the reactor shield walls) and all of the remaining ancillary facilities, implementing ISS for the 105-KE and 105-KW Reactors, and associated waste disposal. Also included in this alternative is the construction of an SSE over the reactor block that would prevent advanced structural deterioration and potential release of radionuclide or other hazardous substances to the environment, followed by long-term S&M of the 105-KE and 105-KW Reactor Facilities with the Hanford Site institutional controls prescribed in the Remaining Sites ROD (EPA 1999a)." The goal of the ISS is to ensure that the SSE structure provides durable, long-term storage and safe access for interim inspections for the duration of the ISS period, through 2068, during which the reactor block for 105-KE and 105-KW would be prepared for transportation and transported to the 200 Area Plateau for disposal, as determined in the *Final Environmental Impact Statement, Decommissioning of Eight Surplus Production Reactors at the Hanford Site* (DOE 1992). Until the start of work within this alternative, the facilities will remain in the present S&M mode.

Demolition would apply to the ancillary facilities and portions of the 105-KE and 105-KW Reactor Facilities and may be preceded by dismantling building components, such as severing and removing ductwork or selectively removing a wall or structure. Demolition generally means large-scale destruction using heavy equipment (e.g., excavator with a hoe-ram, shears, and concrete pulverizer), explosives, or other industrial methods. Demolition of the facilities would consist of removing all above-grade structures. In some cases, it would also involve removing portions of the below-grade structures and underlying soil, as described in Section 2.3. The first phase of demolition at the 105-KE and 105-KW Reactor Facilities would involve removing the reactor support areas and any associated foundations outside the reactor shield walls, whether at grade or subsurface. Below-grade structures would be removed to a minimum of 0.9 m (3 ft) below surrounding grade. The second phase of reactor demolition would involve removing selected equipment, materials, and structural components from inside the reactor shield walls to prepare for the SSE.

The 100K Area ISS reactor facilities will be enclosed to provide the SSEs, either by construction of an independent metal structure (option A) or by using the existing walls as the primary enclosure with construction of a new roof (option B). Either option may be used for each reactor.

Option A is to remove applicable components from inside the SSE and construct an independent metal structure around the reactors that will enclose the reactors to grade. Under this approach, a reinforced concrete foundation will be built that is supported entirely by the adjacent soil. The foundation will be a continuous grade beam with no connections to the existing reactor building. Upon this foundation, a steel-framed metal-sheathed building will be constructed to entirely enclose the reactor(s).

Under option B, ~~The~~ ~~The~~the existing reactor shield walls would be used as the primary enclosure for safe storage. Option B includes ~~Upon~~ ~~Upon~~ removal of the applicable components from inside the SSE and D4 of the reactor support areas surrounding the shield wall, and the construction of a roof ~~would be constructed~~ (as required) to enclose the top of the reactor block and adjacent rooms. The roof would consist of structural steel and metal roof decking. The shield walls have supported the roof in earlier SSE structures, and the KE and KW designs are expected to be similar if option B is used. Openings between

the new roof and top of the shield walls would be closed with wall panel siding similar to that of the new roof. Openings and penetrations within the shield walls would be closed; i.e., large and small openings or penetrations would be sealed by concrete pourbacks or steel plates, as appropriate.

A single-door entry into each SSE would be provided to limit and control access and ~~would be~~ will have the capability of being welded shut. Necessary ventilation ducting would be installed inside the SSE that ~~would~~ can be connected to an external portable exhaust unit prior to entry for maintenance activities, as needed. A remote monitoring system would be installed inside the reactor enclosure so that key parameters could be monitored between S&M entries. ~~The final configuration of the building would feature the existing shield walls as the exterior of the building, a single-entry door that would be used for inspections, and a metal roof with similar siding.~~ The equipment associated with the monitoring and electrical power and lighting would be installed in a utility room located outside of the SSE so that entry into the SSE would not be necessary to service this equipment.

As summarized in Table 5-1, the estimated cost of implementing Alternative ~~11~~ II for buildings included in the scope of the EE/CA is $80.5 million. The cost estimates for Alternative II are provided in Table 5-1 in both the nondiscounted (2006 dollars) and discounted (present-worth) dollars. Discounting of the estimated costs was conducted in accordance with Sections 4 and 5 of the EPA, guidance in *A Guide to Developing and Documenting* Cost *Estimates During Feasibility Study* (EPA 2000b). A discount rate of 3.1 % was used as noted in Appendix C of *Guidelines and Discount* Rates *for Benefit-Cost Analysis of Federal Programs* (OMB 1992). All D4 and ISS actions were discounted over a 6-year period to reflect the expected project duration of 2006 to 2012. The long-term S&M costs for the SSE were discounted over a 48-year period to reflect the S&M from the end of ISS work until the start of reactor block removal.

Table 5-1. Cost Summary.

Cost Elements	Nondiscounted Alternative II	Discounted Alternative II	Nondiscounted Alternative III	Discounted Alternative III
All S&M - to include reactor buildings (with roof replacements) and all ancillary facilities	N/A	N/A	$ 13,924,695	$ 9,108,969
D4 of ancillary facilities	$ 34,687,941	$ 31,214,984	$ 34,687,941	$ 24,047,755
D4 of 105-KE and 105-KW without SSE	N/A	N/A	$ 25,157,349	$ 4,838,346
D4 of 105-KE and 105-KW with SSE	$ 33,461,609	$ 30,111,447	N/A	N/A
Long-term S&M of SSE	$ 1,440,000	$ 665,405	N/A	N/A
D4 waste from 105-KE and 105-KW	$ 2,080,142	$ 1,871,878	$ 2,080,142	$ 400,060
D4 waste from ancillary facilities	$ 8,832,920	$ 7,948,568	$ 8,832,920	$ 6,123,508
Alternative Totals	$ 80,502,612	$ 71,812,282	$ 84,683,047	$ 44,518,638

D4 = deactivation, decontamination, decommissioning, and demolition
N/A = not applicable
S&M = surveillance and maintenance
SSE = safe storage enclosure

CHPRC-0900289 R28
Attachment 12

Norman, Dottie L

From: Teynor, Thomas K
Sent: Tuesday, February 28, 2012 3:36 PM
To: Norman, Dottie L; Kehler, Kurtis L
Cc: Dowell, Jonathan A; Bryson, Dana C; 'Roger_A_Quintero@orp.doe.gov'; Dagan, Ellen B
Subject: Fw: Scanned Documents
Attachments: TPA Change Notice Forms.pdf

Signed CNs for your records. Rod agreed EPA was not a signatoree of the Action Memo and did not sign it. Please let me know how to get the originals to you.

R/Tom

From: Snook, Julie A
Sent: Tuesday, February 28, 2012 03:26 PM
To: Teynor, Thomas K
Subject: Scanned Documents

Here you go!

Julie Snook
YAHSGS LLC Support to
U.S. Department of Energy
Richland Operations Office
AMRC / Federal Building Rm# 394
Office: 509-376-0554
Cell: 509-531-1891