MEETING MINUTES Subject: Double-Shell Tank Emergency Pumping Guide	
Date of Meeting: 11/13/2013	Location: Ecology/Room 3A Time: 2:00-4:00
Attendees: Jeff Lyon, Ecology Michelle Hendrickson, Ecology Kristi Wold, Ecology	 Mary Burandt, ORP Tony Miskho, WRPS Todd Blaak, WRPS

1. **Agenda:**
   a. Previous Meeting minutes: The issues are not resolved on the past minutes. See new action.
   b. DST tank configuration to the first transfer system tie in: A file was passed out for discussion, see Appendix. A discussion occurred on whether this information can be used to shorten the response time to pump a tank. The agreement was made to wait for the time deployment studies to determine what factors can affect response time to pump a tank. Ecology requested that a drawing reference be added to the work product. See new action.
   c. Flowchart and Companion Section discussion: A revised flowchart and companion section was discussed, see Appendices. Ecology expressed a desire to have "decision points" inserted into the flow chart when Ecology would to make decisions. Ecology would like to see time frames associated with boxes 6, 7, and 8 for different types of leaks (large vs small) because they expect to be involved. Ecology also asked whether a "formal leak assessment" is always required and whether there is a "fast track" that is possible. A discussion on the process for pumping the annulus took place, An agreement was reached to avoid revisions of the flow chart and companion section until such time the time deployment studies are complete.
   d. Time Deployment Studies: The statement of work has been drafted. Need to finalize the statement of work.

2. **Issues:**
   a. The 10-day pumping requirement from HNF-3484 was not met once the AY-102 leak was declared (May 30, 2013)
   b. A potential difference of interpretation on what leak scenarios are addressed by HNF-3484 (July 30, 2013).
      - Ecology: Specific scenarios listed in HNF-3484 are examples and not met to be all inclusive. It does not exclude any waste types or leak locations.
      - DOE: HNF-3484 addresses the removal of supernatant.
   c. Need to identify what an emergency is (July 30, 2013).
   d. The number of plans needed for revision of the DST Pumping Guide has not been agreed upon (August 26, 2013)
   e. Adequacy of DST leak detection from the SY Settlement agreement for meeting requirement to detect "24 hours or as soon as practical" (September 25, 2013).
   f. Should LDPs be considered in HNF-3484 as a leak detection method. (September 25, 2013)

3. **Actions:**

Action	Description	Status
2013-07-30-1	Ecology to discuss comment resolution of 5/30/2013 minutes	Complete
2013-07-30-2	WPRS to determine schedule for performing Time Deployment Study	**Open**

	for sludge and for salt cake, and updating Time Deployment Study for supernatant	
2013-08-26-1	Ecology to discuss comment resolution of 5/30/2013 and 7/30/2013 minutes	Complete
2013-09-25-1	Ecology action to finalize any comments on 8/26/2013 minutes.	Complete
2013-09-25-2	DOE prepare the 4 pumping templates and 4 time deployment studies.	**Open**
2013-09-25-3	DOE to develop companion section to describe the steps in the flowchart.	Complete
2013-09-25-4	DOE to evaluate 27 remaining DST tank configuration to the first transfer system tie in.	Complete
2013-09-25-5	Ecology to provide comments on flowchart	Complete
2013-09-25-6	DOE/WRPS to evaluate the actions necessary to complete the decision blocks and demonstrate timeliness for #3, #4, #5, and #11. Also, DOE/WRPS will add a corrective action box should a leak to the environment be detected. Need to define how other tank farms activities (such as UT activities) will lead to entering the first step of the flowchart.	**Open**
2013-11-13-1	DOE to prepare revision of logic flowchart after time deployment studies are complete (Mid April meeting)	New
2013-11-13-2	DOE to review Ecology comments on minutes provided 10/9/2013 from meetings held on 5/30, 7/30, 8/26 and 9/25/2013.	New
2013-11-13-3	DOE to add drawing reference column to the "DST tank configuration to the first transfer system tie in" work product.	New

4. **Agreements:**
   a. Revision of HNF-3484 is necessary (May 30, 2013).
   b. Finalize the minutes in the meetings and then submit the approved meeting minutes for inclusion into the monthly project manager meeting (August 26, 2013).
   c. The emergency space limit of 1.265Mgallons will be used in future revisions of the document (August 26, 2013).
   d. A decision process flow sheet will be used in the document revision to outline decision points by the agencies in the case of a future event covered by the pumping guide (August 26, 2013).
   e. The 4 templates will be reviewed to determine if additional templates addressing configuration of equipment would be needed (September 25, 2013).

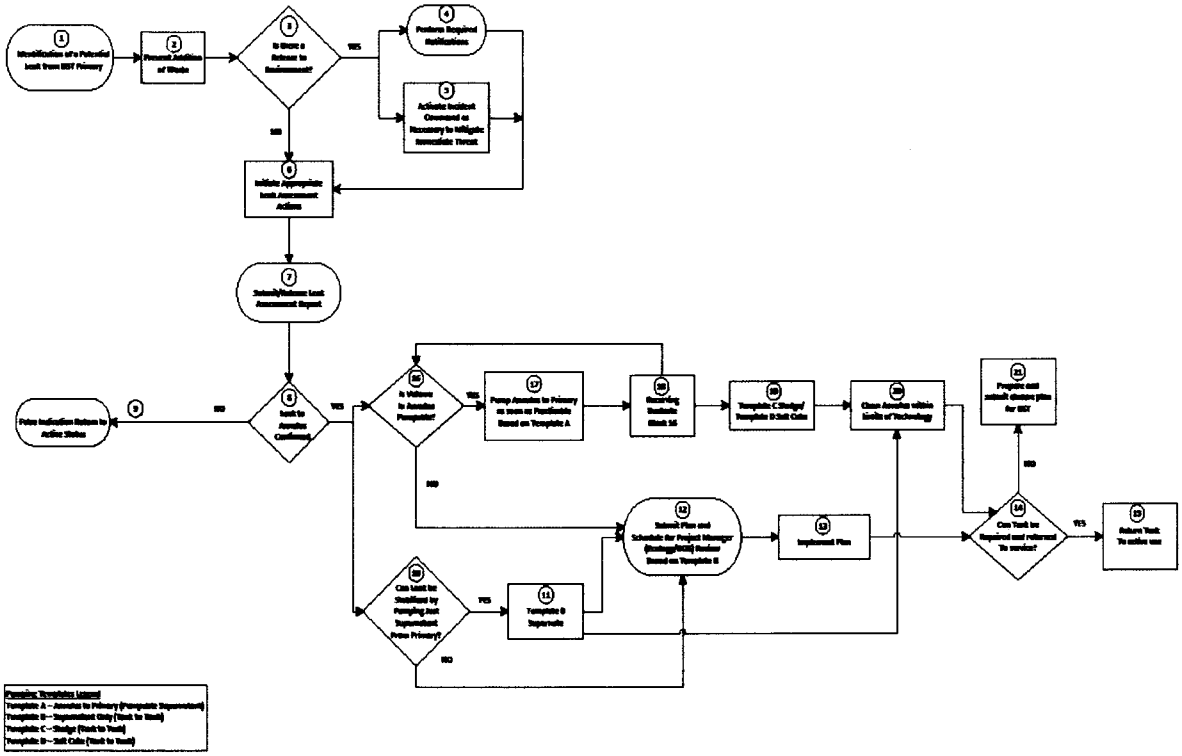
5. **Next Meeting:** January 8, 2014,
   Agenda: Status of Time Deployment Studies
   Appendix (3)

Appendix 1

Revised Flow Chart

Attachment 5: November 13, 2013 Meeting minutes

TOC DST PUMPING DECISION LOGIC



Attachment 5: November 13, 2013 Meeting minutes

Appendix 2

Companion Section to Flow Chart

Decision logic that may be utilized to enter TOC DST Pumping Decision Logic Table:

- Visual observation of annulus identifies substance providing an indicator that waste may be present;
- Annulus leak detectors alarm;
- Annulus CAM alarm received;
- Interconnected leak detection pit has increased radiological does rates or high pH.

1. Identification of a Potential Leak from DST Primary
    a. TMACs operator monitors DST alarms
    b. Field operator takes daily readings
    c. Shift manager reviews round sheets and receives reports from TMACs operator
    d. System Engineer performs evaluation of data
2. Prevent Addition of Waste
    a. Halt ongoing transfers
    b. Initiate processes to prevent introduction of waste to tank
    c. If necessary, initiate Chemical/Radiological event processes
3. Is There a Release to Environment?
    a. Building Emergency Director immediately determine areal extent of release.
    b. Obtain technical assistance in evaluation of conditions (Engineering, Radiological and/or IH evaluation
    c. Notify management of conditions and data
4. Perform Required Notifications
    a. Environmental Protection organization evaluates event and notifies DOE and external organizations as appropriate
    b. Immediately provide notification to Ecology. Provide notification to other applicable regulatory agencies and stake holders according to required time frames.
5. Activate Incident Command as Necessary to Mitigate Immediate Threat
    a. Implementation of emergency responses processes governed by the Tank Farms Building Emergency Plan
    b. Immediately initiate response
6. Initiate Appropriate Leak Assessment Actions
    a. Review existing data or acquire new data.
    b. Engineering with support from Radiological (Health Physics) and IH evaluate operational data within 90 days
    c. Engineering initiate Tank Leak Assessment Process, if necessary
    d. Engineering provides results to Senior Management, if necessary
    e. Senior Management declares tank leak status
7. Submit/Release Leak Assessment Report
    a. ORP transmits leak assessment report to Ecology within 90-days after completion of step 6
8. Leak to Annulus Confirmed?

   a. Implement conclusions of leak assessment report
9. False Indication Return to Active Status
10. Can Leak be Stabilized by Pumping Just Supernatant From Primary Tank?
    a. Engineering technical evaluation
11. Template B Supernate
    a. Use Template B written for pumping supernatant from one DST to another DST as the basis for submittal of pumping plan/retrieval plan.
12. Submit Plan and Schedule for Project Manager (Ecology/DOE) Review Based Upon Template B
    a. Evaluate recommendations
    b. Draft waste pumping plan
        i. Tank annulus pump pit and central pit preparations
        ii. Tank annulus pumping equipment preparations
        iii. Transfer route (pits, jumpers, leak detection) preparations
        iv. Process control plan
        v. Transfer procedures
13. Implement Plan
14. Can Tank be Repaired and Returned to Service?
    a. Engineering obtain structural tank information
    b. Obtain information of tank leak location and failure mechanism
    c. Identify potential waste removal methods (see templates)
    d. Identify potential waste transfer routes and storage locations
    e. Identify potential tank repair methods
    f. Provide recommendations to management & ORP
15. Return Tank to Active Use
16. Is Volume in the Annulus Pumpable?
    a. Engineering and Projects initiate technical evaluation
    b. Evaluation of waste volume, composition, location and other factors
    c. Evaluation of pumping capabilities
    d. Recommendation for pumping
17. Pump Annulus to Primary as soon as Practicable Based on Template A
    a. Pump waste from the annulus until waste cannot be pumped using available equipment.
18. Recurring – Evaluate Block 16
19. Template C Sludge/Template D Salt Cake
    a. Use Template C written for retrieving Sludge/Template D written for salt cake from one DST to another DST as the basis for submittal of pumping plan/retrieval plan.
20. Clean Annulus Within Limits of Technology
21. Prepare and Submit Closure plan for DST

Appendix 3

DST tank configuration to the first transfer system tie in

Tank	Point A	Point B
241-AP		
241-AP-101	AP-01A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-611 connected to nozzle A.	AP-VP, nozzle 18. Multiple jumpers installed in AP-VP connected to nozzle 18.
241-AP-102	AP-02D. No jumpers connected to pump. Rigid jumper connected to nozzle A connected to Line SN-622. A jumper will connect pump to existing jumper this fiscal year.	AP-02A, nozzle Q. Rigid jumper to nozzle A connected to Line SN-612.
241-AP-103	AP-03A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-613 connected to nozzle A.	AP-VP, nozzle 17. Multiple jumpers installed in AP-VP connected to nozzle 17.
241-AP-104	AP-04A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-614 connected to nozzle A.	AP-VP, nozzle 20. Multiple jumpers installed in AP-VP connected to nozzle 20.
241-AP-105	AP-05A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-615 connected to nozzle A.	AP-VP, nozzle 24. Multiple jumpers installed in AP-VP connected to nozzle 24.
241-AP-106	AP-06A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-616 connected to nozzle A.	AP-VP, nozzle 21. Multiple jumpers installed in AP-VP connected to nozzle 21.
241-AP-107	AP-07A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-617 connected to nozzle A.	AP-VP, nozzle 23. Multiple jumpers installed in AP-VP connected to nozzle 23.
241-AP-108	AP-08A. Rigid jumper connected to pump, nozzle E and nozzle A. Transfer line SN-618 connected to nozzle A.	AP-VP, nozzle 22. Multiple jumpers installed in AP-VP connected to nozzle 22.
241-AW		
241-AW-101	AW-01A. No jumpers connected to pump. Nozzle A connected to transfer line SN-261.	AW-A Valve Pit, nozzle L16. Multiple jumpers installed in AW-A Valve Pit connected to nozzle L16.
241-AW-102	AW-02E. Rigid jumper connected to pump, nozzle B. Transfer line SN-269 connected to nozzle B. SN-269 to nozzle 13 in 242-A Evaporator. Current configuration requires waste to be routed through 242-A Evaporator.	242-A Evaporator, nozzle 19 connected to transfer line SL-167 to nozzle R3 in AW-B Valve Pit.
241-AW-103	AW-03A. No jumpers connected to pump. Nozzle A connected to transfer line SN-263.	AW-A Valve Pit, nozzle L14. Multiple jumpers installed in AW-A Valve Pit connected to nozzle L14.

Tank	Point A	Point B
241-AW-104	AW-04A. No jumpers connected to pump. Nozzle A connected to transfer line SN-264.	AW-B Valve Pit, nozzle R14. Multiple jumpers installed in AW-B Valve Pit connected to nozzle R14.
241-AW-105	AW-05A. Rigid jumper connected to pump, nozzle G and nozzle A. Transfer line SN-265 connected to nozzle A.	AW-A Valve Pit, nozzle L15. Multiple jumpers installed in AW-A Valve Pit connected to nozzle L15.
241-AW-106	AW-06A. Rigid jumper connected to pump, nozzle G and nozzle A. Transfer line SN-266 connected to nozzle A.	AW-B Valve Pit, nozzle R15. Multiple jumpers installed in AW-B Valve Pit connected to nozzle R15.
241-AY		
241-AY-101	AY-01A. Rigid/Flex jumper connected to pump discharge nozzle A, B and U13. Transfer line SN-635 connected to nozzle U13.	AY-02A, SN-635 connected to nozzle U12. Flex to Rigid jumper to nozzle U5. Transfer line SN-633 connected to nozzle U5.
241-AY-102	AY-02A. Rigid jumper connected to pump discharge nozzle P1, nozzle D and nozzle U5. Transfer line SN-633 connected to nozzle U5.	AZ-VP Valve Pit. Transfer line SN-633 to AZ-VP nozzle F. Jumper manifold connected to nozzle F.
241-AZ		
241-AZ-101	AZ-01A. Rigid jumper connected to nozzle U12. Transfer line SN-632 connected to nozzle U12. No pump installed. Multiple rigid jumpers installed to support transfer into AZ-101 and AZ-102 and transfers out of AZ-102.	AZ-VP Valve Pit, nozzle H. Multiple jumpers installed in AZ-VP Valve Pit connected to nozzle H.
241-AZ-102	AZ-02A. Rigid jumper connected to pump, nozzle U13. Transfer line SN-631 connected to nozzle U13.	AZ-01A, nozzle U11 connected to Transfer line SN-631. Rigid jumpers from nozzle U11 to nozzle U12. Transfer line SN-632 connected to nozzle U12.
241-AN		
241-AN-101	AN-01A. Flex jumper connected to nozzle D. Multiple jumpers interconnected to nozzle D, which connects to SN-630.	AZ-VP Nozzle A connects to transfer line SN-630 to multiple rigid jumpers connected, including nozzle A.
241-AN-102	AN-02A. Chemical addition jumper connected to pump. Transfer line SN-262 connected to nozzle A. A new jumper needed to transfer waste out of tank.	AN-B Valve Pit, nozzle R16 connected to Transfer line SN-262. Multiple jumpers installed in AN-B Valve Pit connected to nozzle R16.
241-AN-103	AN-03A. No jumpers installed on pump. Transfer line SN-263 connected to nozzle A.	AN-B Valve Pit, nozzle R14 connected to Transfer line SN-263. Multiple jumpers installed in AN-B Valve Pit connected to nozzle R14.

Tank	Point A	Point B
241-AN-104	AN-04A. No jumpers installed on pump. Transfer line SN-264 connected to nozzle A.	AN-A Valve Pit, nozzle L15 connected to transfer line SN-264. Multiple jumpers installed in AN-A Valve Pit connected to nozzle L15.
241-AN-105	AN-05A. No jumpers installed on pump. Transfer line SN-265 connected to nozzle A.	AN-A Valve Pit, nozzle L16 connected to transfer line SN-265. Multiple jumpers installed in AN-A Valve Pit connected to nozzle L16.
241-AN-106	AN-06A. Rigid/Flex jumper connected to pump discharge nozzle 2 and nozzle A. Transfer line AN-266 connected to nozzle A.	AN-A Valve Pit, nozzle L14 connected to transfer line SN-266. Multiple jumpers installed in AN-A Valve Pit connected to nozzle L14.
241-AN-107	AN-07A. Chem A and B flex jumper connected to pump, nozzle G and nozzle K. Flex jumper needed to nozzle A. Transfer line SN-267 connected to nozzle A.	AN-A Valve Pit, nozzle L1 connected to transfer line SN-267. Multiple jumpers installed in AN-A Valve Pit connected to nozzle L1.
241-SY		
241-SY-101	SY-PPP Prefabricated Pump Pit. Pump installed to SY-PPP, manifold connected to pump. HIHTL required to connect to SY-AVP.	SY-A needs new jumpers installed.
241-SY-102	SY-02A. Flex jumper connected to pump. SN-277, SN-285, SN-286, SL-177 may be utilized to transfer waste.	SY-A needs new jumpers installed.
241-SY-103	SY-03A. No jumpers installed to pump. Transfer line SN-279 connected to nozzle A.	SY-B Valve Pit, nozzle R14 connected to transfer line SN-279. No jumpers installed in SY-B Valve Pit.

*Configuration above is based on waste being transferred to AW-105.