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TRI-PARTY AGREEMENT

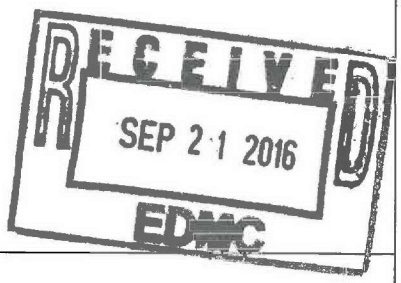
Change Notice Number TPA-CN- 0747	TPA CHANGE NOTICE FORM	Date: 9/8/2016
Document Number, Title, and Revision: DOE/RL-2001-27, *Remedial Design/Remedial Action Work Plan for the 100-NR-2 Operable Unit*, Rev. 2 1239736		Date Document Last Issued: July 2016
Approved Change Notices Against this Document: N/A		
Originator: Art Lee		372-1763

Description of Change:
Modify Section 3.1.3.2 of the *Remedial Design/Remedial Action Work Plan for the 100-NR-2 Operable Unit* as shown in the attached pages to provide clarification that triple rinsing is performed only if required to meet the ERDF waste acceptance criteria. This change constitutes request for concurrence from the Washington State Department of Ecology.

M.W. Cline and N.M. Menard agree that the proposed change
DOE **Lead Regulatory Agency**
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.*

The *Remedial Design/Remedial Action Work Plan for the 100-NR-2 Operable Unit* (DOE/RL-2001-27, Rev. 2) is updated to clarify that triple rinse of vessels, piping and manifolds during demolition of the 100-NR-2 pump and treat system is performed only if required to meet the ERDF waste acceptance criteria.

Added text is shown with double underline. Deleted text is shown with ~~strikethrough~~.



Note: Original affected pages are pages 3-33 and 3-34.

Justification and Impacts of Change:

Triple rinsing of 100-NR-2 pump and treat system vessels, piping and manifolds as stated *Remedial Design/Remedial Action Work Plan for the 100-NR-2 Operable Unit* would result in unnecessary work, waste generation, and increased worker risk if the waste profile already meets in the ERDF waste acceptance criteria. Triple rinsing of 100-NR-2 pump and treat system vessels, piping and manifolds is not required if the waste profile for the components already meet the ERDF waste acceptance criteria.

Approvals:

DOE Project Manager	9/8/16 Date	[X] Approved [ ] Disapproved
N/A EPA Project Manager	Date	[ ] Approved [ ] Disapproved
Ecology Project Manager	9/9/16 Date	[X] Approved [ ] Disapproved

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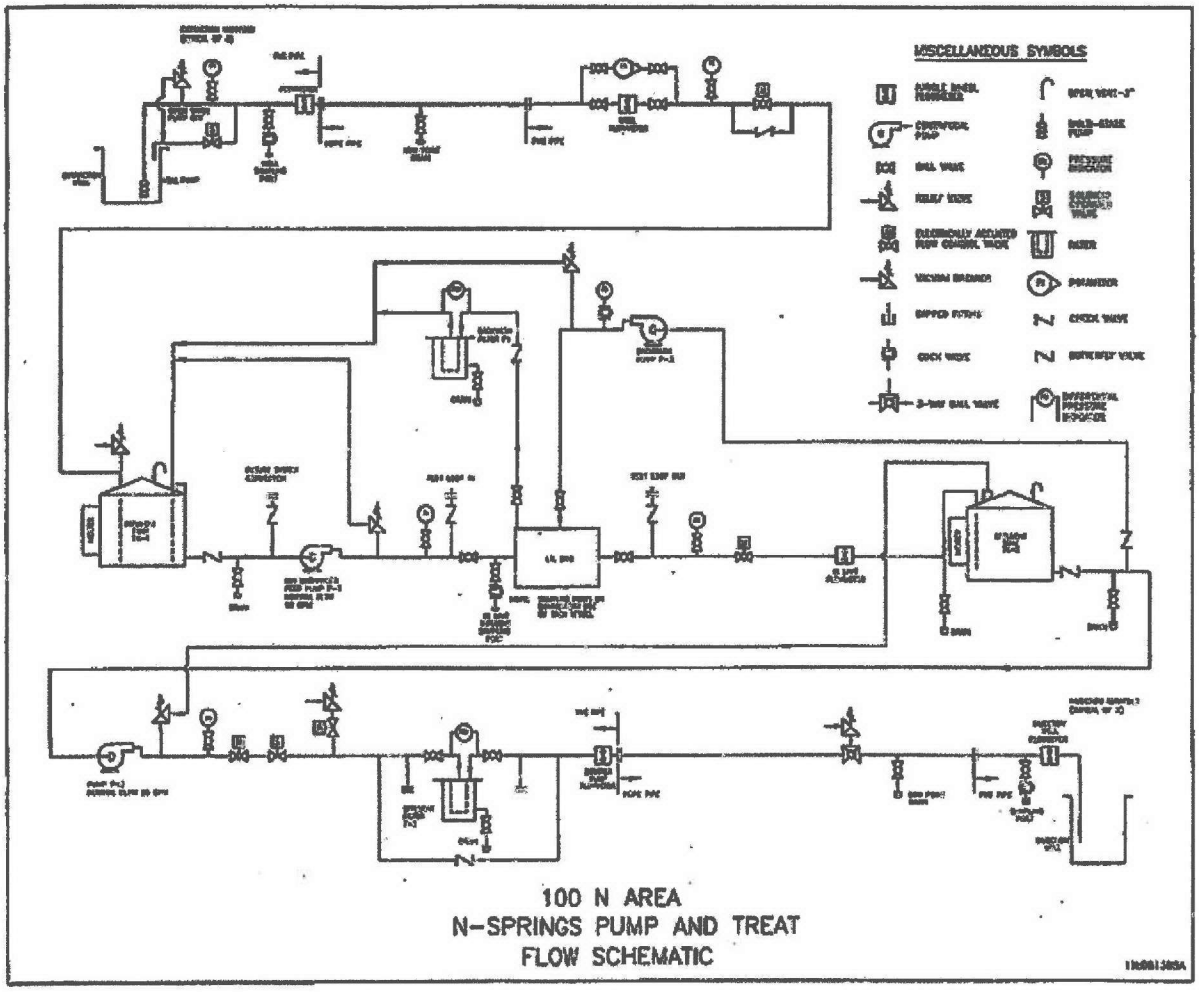

Figure 3-25. P&T Facility Flow Diagram

3.1.3.2 Shutdown Plan

The 100-NR-2 OU P&T system was placed in cold-standby status on March 9, 2006, in support of TPA (Ecology et al., 1989a) Milestone M-16-06-01, "Complete a Permeable Reactive Barrier at 100-N." Treatability testing for an apatite PRB began in April 2006. The system shutdown was required to allow equilibration before placement of the PRB.

The P&T system is scheduled to be permanently shut down, which will include the following:

- Residual IX media will be removed and disposed at ERDF. The IX vessels will be triple-rinsed if required to meet the ERDF waste acceptance criteria, and disposed at ERDF. If flushing is required to meet the ERDF waste acceptance criteria, ~~All~~ rinse/flushwater will be supplied by a portable tank or purgewater truck. The flushwater will be sent to the Purgewater Storage and Treatment Facility or the Effluent Treatment Facility, as appropriate, in accordance with DOE/RL-2000-41. All noncontact treatment system hardware will be dismantled and reused or salvaged. The shed also will be dismantled and reused or salvaged.

- Aboveground extraction piping will be triple-flushed with clean water if required to meet the ERDF waste acceptance criteria, disconnected at the wellhead tees, and disposed at ERDF.

- Manifolds and influent storage vessels that contacted untreated groundwater containing COCs will be triple-flushed with clean water if required to meet the ERDF waste acceptance criteria, disconnected, and disposed at ERDF.

- The down-well equipment in the extraction wells (e.g., pump, piping, and level transducer) will be disconnected where attached to the wellhead. The wellhead will be blanked and secured to meet Washington State regulations. The down-well equipment will be disposed in accordance with DOE/RL-2000-41.

- Pipe downstream from the IX skid has only been contacted by treated water and does not need to be flushed. The lines will be drained or blown out with air and then isolated by closing the valves.

- Extraction wells 199-N-75, 199-N-103A, 199-N-105A, and 199-N-106A will be maintained as monitoring wells in the 100-N Area groundwater monitoring network. The well completions (including surface seal, cap, and protective casing or monument) will be altered, if required, to comply with Washington State regulations for monitoring well construction.

- Injection well 199-N-104A will be maintained for use as a monitoring well in the 100-N Area groundwater monitoring network. Injection well 199-N-29 and backup injection well 199-N-31 will be maintained as potential monitoring wells. The well completions (including surface seal, cap, and protective casing or monument) will be altered, if required, to comply with Washington State regulations for monitoring well construction. Any well rack equipment located at the injection wells will be disconnected and disposed in accordance with DOE/RL-2000-41.

3.1.4 Petroleum Hydrocarbon Contamination

The Interim Action ROD, as amended (EPA, 2010), requires any free-floating product observed in any 100-N Area wells to be remediated. Petroleum hydrocarbon contamination as free product has occasionally been observed at wells 199-N-17 and 199-N-18. Well 199-N-17 went dry and was taken out of service and decommissioned. A passive removal method (Smart Sponge) was initiated in 2003 to remove the small amount of free product in Well 199-N-18. This approach was taken because the layer of floating petroleum was too thin for removal by active methods. The average mass removal rate in 2004 was 0.4 kg per month. Any additional wells with observed free product will be subject to this remediation approach.

The apatite barrier is located downgradient of the TPH-D source area and cuts across a relatively dilute, dissolved-phase plume that spreads from the TPH source area to the Columbia River (Figure 1-7). TPH-D was detected in samples from a number of wells in the upriver section of the PRB that were installed during implementation of the shoreline SAP and as reported in the borehole summary report (SGW-47791) (see Section 1.3.1 and Table 1-2). The apatite barrier injections have the potential to displace and dilute the dissolved-phase TPH mass located downgradient of the apatite barrier injection wells. Any TPH contaminant mass potentially mobilized upgradient (i.e., away from the river) will be spread into the surrounding aerobic zones where it is susceptible to aerobic biodegradation.

Along the shoreline, groundwater samples collected annually from the following monitoring wells and the aquifer tubes will continue to be analyzed for TPH-D: 199-N-173, 199-N-346, 199-N-96A, 199-N-347, 199-N-348, 199-N-349, 199-N-123, N116mArray-0A, and N116mArray-2A.

If additional groundwater monitoring or remediation is required for the petroleum release sites, the change control procedures specified in Chapter 4 will be used to amend this document.