

<b>TRI-PARTY AGREEMENT</b>		
Change Notice Number TPA-CN- 518	TPA CHANGE NOTICE FORM	Date: August 1, 2012
Document Number, Title, and Revision: DOE/RL-2005-93, Remedial Design Report/Remedial Action Work Plan for the 100-N Area, Rev. 0		Date Document Last Issued: November 2006
Originator: M.S. French (U.S. Department of Energy, Richland Operations Office [DOE])		Phone: (509) 373-9863
<b>Description of Change:</b> Modify the <i>Remedial Design Report/Remedial Action Work Plan for the 100-N Area</i> (DOE/RL-2005-93, Rev. 0) Section 1.3.2, 100-NR-1 Shoreline Site and Table A-1.		
<p><u>Mark S. French</u> and <u>Nina Menard</u> agree that the proposed change  <div style="display: flex; justify-content: space-around; width: 100%;"> <span><b>DOE</b></span> <span><b>Lead Regulatory Agency</b></span> </div>                     modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, <i>Documentation and Records</i>, and not Chapter 12.0, <i>Changes to the Agreement</i>.</p> <p>The following are authorized changes to the <i>Remedial Design Report/Remedial Action Work Plan for the 100-N Area</i> (RDR), (DOE/RL-2005-93, Rev. 0)</p> <ul style="list-style-type: none"> <li>Revise Section 1.3.2, "100-NR-1 Shoreline Site" to clarify that the 100-N-65 waste site overlaps the 100-NR-1 shoreline site and constitutes part of the site for institutional controls as determined in the <i>Interim Remedial Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units</i> (ROD) (EPA 1999) and also to correctly reference Section 2.1.6.1. on page 1-4. (Attachment 1)</li> <li>Revise Table A-1 to remove shoreline site and 100-N-65 waste site from pages A-12 and A-13 and transfer the site to new section "Institutional Controls," at the end of the table, page A-19. (Attachment 2)</li> </ul>		
<p>Note: Include affected page number(s)</p> <div style="text-align: right; border: 2px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>RECEIVED</b>                  AUG 29 2012  <b>EDMC</b> </div>		
<b>Justification and Impacts of Change:</b>		
<p>The 100-NR-1 and 100-NR-2 Interim Action Record of Decision (ROD) (EPA 1999) describes the shoreline site as consisting of radiological and diesel fuel-contaminated soil from discharges to the groundwater. The radiologically contaminated soil along the shoreline is contaminated primarily with strontium-90 as a result of the release of reactor cooling water and reactor decontamination solutions at the 116-N-1 and 116-N-3 cribs and trenches, which has migrated to N-Springs through groundwater flows and contaminated the shoreline soils. The diesel fuel-contaminated soil is the result of leaks to the groundwater during reactor operations. The 100-N-65 waste site is an interceptor trench that was built on the 100-N shoreline to collect diesel/fuel oil. The 100-NR-1 and 100-NR-2 ROD identifies Institutional Controls as the selected remedy for the 100-N shoreline.</p> <p>However, the Remedial Design/Remedial Action Work Plan for the 100-N Area (RDR) does not reflect the approved remedial actions for the shoreline. The RDR incorrectly identifies the 100-N-65 waste site with the other "burn pits and dumping areas" requiring Remove/Treat/Dispose (RTD), while the shoreline site is identified for "ex-situ bioremediation." The purpose of this change notice is to revise the RDR text to reflect that Institutional Controls are the selected remedy for the shoreline.</p>		
Justification and Impacts of Change continued on next page.		
<b>Approvals:</b>		
Mark S. French	<u>Mark S. French</u>	<u>8/21/12</u>
DOE Project Manager	<u>[Signature]</u>	Date
N/A	<u>[Signature]</u>	<u>8/22/12</u>
EPA Project Manager	<u>Kim Welsch for Nina Menard</u>	Date
Nina M. Menard		
Ecology Project Manager		Date

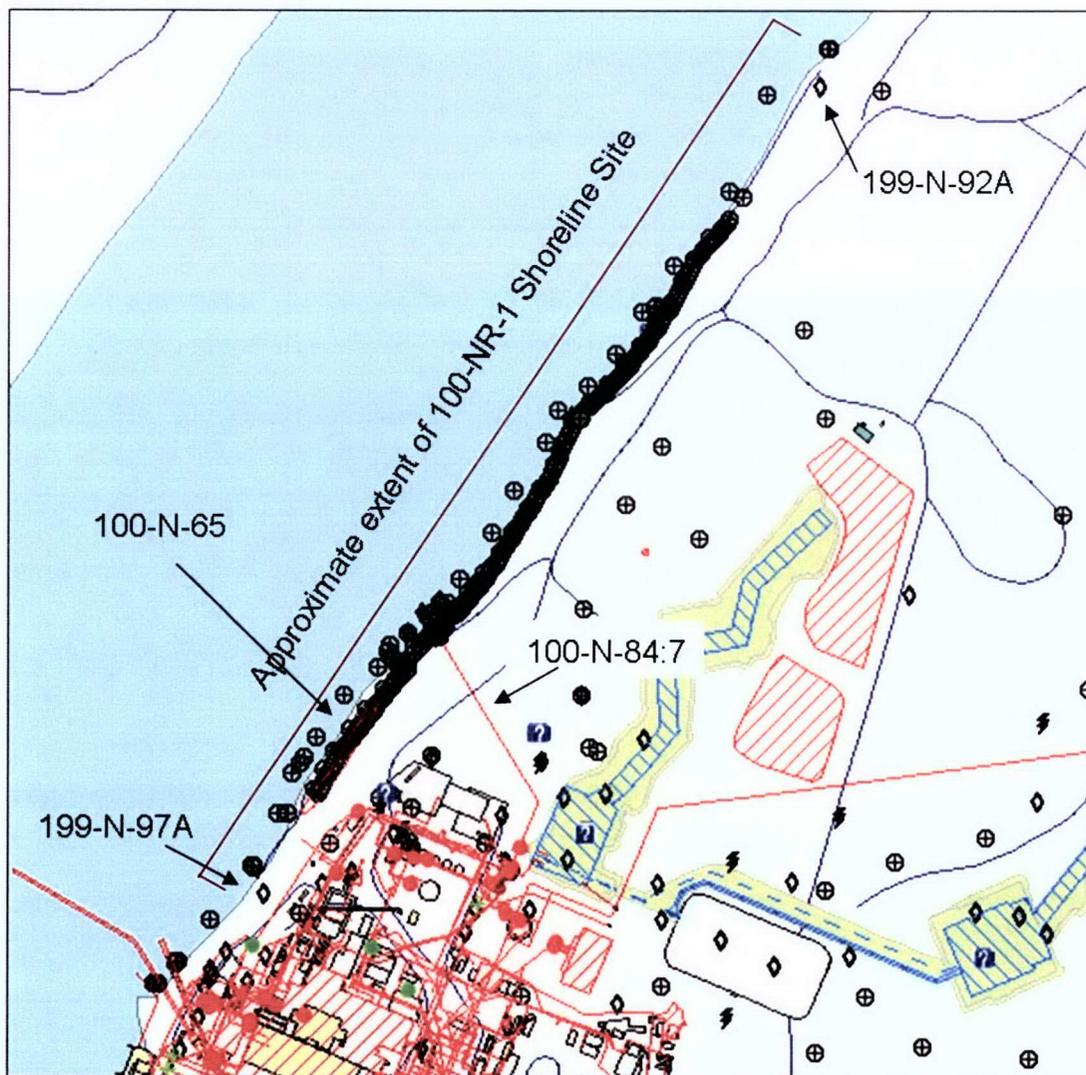
Administrative Record  
100-NR-1 Operable Unit

**Justification and Impacts of Change continued (TPA-CN-518, page 2)**

As shown in Figure 1, the 100-N-65 waste site is located along the 100-NR-1 shoreline, and this part of the shoreline is the focus of the 100-NR-2 groundwater operable unit project. The concentration of groundwater wells seen in Figure 1 primarily consists of the injection wells forming the apatite Permeable Reactive Barrier (PRB) to contain the strontium-90 contamination at N-Springs along the shoreline. In addition, a series of aquifer tubes and groundwater monitoring wells have been installed to support the shoreline groundwater project. As a result, any intrusive remedial actions in this area would compromise the mission of the groundwater project, which is having success containing the strontium-90 contamination through the implementation of the apatite barrier.

As also stated in Section 1.3.2 of the RDR (Attachment 1), a complex relationship exists between the contaminated groundwater operable unit, contaminated soils at the shoreline, and the Columbia River, and thus, the shoreline area was not included for RTD in the ROD (EPA 1999). Clarification is added to this section to indicate that the shoreline also includes the diesel oil-contaminated soil located within this area as well as the 100-N-65 interceptor trench waste site. According to the Waste Information Data System (WIDS) summary report for the 100-N-65 waste site, the interceptor trench was excavated along the Columbia River bank in 1966 to intercept and burn diesel from a large spill at the 166-N Building before reaching the Columbia River. The trench was utilized in 1984 and 1985 to intercept two other smaller-scale diesel spills. Petroleum is the primary contaminant of potential concern for the 100-N-65 waste site.

**Figure 1. Location of the 100-N-65 Waste Site within Shoreline Site and Overlapping the 100-NR-2 Apatite Barrier.**



## Attachment 1

Section 1.3.2. is modified as shown below using ~~strikeout~~ to indicate text deletions and double underline to indicate text additions:

### 1.3.2. 100-NR-1 Shoreline Site

Remediation of the shoreline site is closely tied to the final remediation of the groundwater OU because of the complex, dynamic relationships among the Columbia River, the contaminated groundwater in the 100-N Area, and the contaminated soils at the shoreline site.

The ROD (EPA 1999) defines the shoreline site as approximately 840 m (2,772 ft) long and 22 m (73 ft) wide. The lateral boundaries are generally defined as the river's edge at the low-river stage (115 m [378 ft] above mean sea level). The shoreline soil is in the vicinity of the N-Springs, which became contaminated primarily with strontium-90 as a result of the release of reactor cooling water and reactor decontamination solutions at the 116-N-1 and 116-N-3 cribs and trenches. The 100-N-65, Diesel Oil Interceptor Trench waste site and diesel fuel-contaminated soil are also present at the shoreline. As stated in the ROD (EPA 1999), the radiologically contaminated and diesel oil-contaminated areas overlap and together constitute the shoreline site for the purpose of interim actions.

Due to its relationship with the 100-NR-2 groundwater OU, the shoreline site is addressed separately as a single, unique waste site requiring institutional controls until a final remedy has been selected. The requirements identified in the ROD (EPA 1999) for institutional controls at the shoreline site are described in Section 2.1.86.1.

Attachment 2

Table A-1 is modified as shown below using ~~strikeout~~ to indicate text deletions and double underline to indicate text additions:

Table A-1. 100-N Area Waste Site Status and Information. (17 pages)

WIDS Designation	Waste and Other Information				Assumptions on Dimensions and Volumes	Contaminants of Potential Concern
	Dimensions			Waste Volume (m <sup>3</sup> )		
	Length (m)	Width (m)	Depth (m)			
<b>PETROLEUM CONTAMINATED WASTE SITES (BIOREMEDIATION)</b>						
<u>Shoreline Site</u> <del>Not an ROD Site. Institutional Controls shall be implemented along the shoreline.</del>						
<b>BURN PITS AND DUMPING AREAS</b>						
100-N-65, Diesel Burn Pit	20	20	±	400	No dimensions provided in WIDS on historical documents. Dimensions assumed based on dimensions of other 100-N Area burn pits and dumping areas.	Diesel Oil
<b><u>INSTITUTIONAL CONTROLS</u></b>						
<u>Shoreline Site</u>	<u>The shoreline site consists of radiologically contaminated soil associated with N-Springs and also diesel-oil contaminated soil, including the 100-N-65 waste site. The primary radionuclide contaminant of potential concern is strontium-90, resulting from the release of reactor cooling water and reactor decontamination solutions at the 116-N-1 and 116-N-3 cribs and trenches, which has migrated to N-Springs through groundwater flows and contaminated the shoreline soils. Selected Remedy in ROD (EPA 1999) is Institutional Controls.</u>					
<u>100-N-65, Diesel Oil Interceptor Trench</u>	<u>The diesel oil interceptor trench waste site is located along the shoreline where an approximately 140 m (469 ft) long and 12 m (40 ft) wide trench was excavated to intercept diesel spills and burn off the oil before entering the Columbia River. The site overlaps with the radiological contamination along the shoreline and constitutes part of the shoreline site, as stated in the ROD (EPA 1999). Institutional controls will be implemented at the shoreline site.</u>					