REVIEW COMMENT RECORD	Date February 2012, revised on 5/10/12.	Review No. 1215062
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Document Number(s)/Title(s)	Program/ Project/ Building Number	Reviewer	Organization/ Group	Location/ Phone
Review Copy of 100-N Bioventing 90% Design Drawings and Specifications as attached to WCH Letter 161228, received by Ecology 9/15/2011 from S.L. Feaster to J.J. Short, USDOE-RL		Alicia Boyd, Dib Goswami, Alisa Huckaby, Jerry Yokel, Michelle Hendrickson		

Item	Page #, Line #, or Section and Paragraph	Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/ problem indicated.)	Hold Point	Disposition (Provide justification if NOT accepted.)	Status
1.	General Comment	**Comment:** The basis of design states "No nutrient or moisture amendments are planned at this time" and indicates the remediation timeframe using enhanced bioremediation treatment is estimated to require approximately 15 to 41 years. Ecology has previously stated that insufficient information is available to design a full-scale bioremediation because many design parameters are unknown (e.g., soil temperature, contaminant concentrations, soil moisture content, nutrient availability, concentration of constituents toxic to the microbial population, microbial population size, diversity, and health, physical soil parameters (such as bulk density), soil sample results for contaminant analyses, geotechnical parameter testing results, etc.). In addition, because the extent of vadose zone petroleum contamination has not been delineated, at this time, the configuration of the full-scale bioremediation system is unknown. Furthermore, at this time, the need to isolate the silty-sandy layer occurring ~59-64 feet below ground surface has not been determined. Milestone M-16-00 requires remedy completion by 9/30/2024. Due to the lengthy remediation timeframe projected, it is appropriate for bioremediation testing to include nutrient, moisture, and bacteria amendments. Per IROD Section 4.6.2.2, "in situ bioremediation will consist of adding nutrients, bacteria, and oxygen to treat petroleum-contaminated soils." More specifically, the IROD states: "…in situ bioremediation will consist of adding nutrients and bacteria into the deep petroloeum-contaminated soils through use of injection wells to be constructed and various locations within the contamination zone. Nutrients and bacteria will continue to be added		**Closed via agreement to develop a Test Plan** RECEIVED JUN 29 2012 EDMC	- -

until characterization data collected from injection wells and from nearby monitoring wells indicated groundwater and Columbia River RAOs have been achieved."

Chapter III of OUST's publication *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers* (EPA 510-B-95-007) states: "Bacteria require inorganic nutrients such as ammonium and phosphate to support cell growth and sustain biodegradation processes. Nutrients may be available in sufficient quantities in the site soils but, more frequently, nutrients need to be added to soils to maintain bacterial populations."

Modification Needed: Additional characterization is needed. Specifically, the extent of the vadose zone contamination occurring within the silty-sandy layer occurring ~59-64 feet below ground surface. Additional design parameters are needed (e.g., soil temperature, contaminant concentrations, soil moisture content, nutrient availability, concentration of constituents toxic to the microbial population, microbial population size, diversity, and health, physical soil parameters (such as bulk density), soil sample results for contaminant analyses, geotechnical parameter testing results, etc.). The Radius Of Influence (ROI) of the silty-sandy layer occurring ~59-64 feet below ground surface is needed. Therefore, provide a Phase II Treatability Test Plan to obtain the above identified additional information.

Response: A test plan will be developed during the construction and operation of the system to collect additional characterization data identified in the comment. The test plan will include performance monitoring data discussed below.

Acknowledge comments relating to IROD and UST guidance document on the addition of nutrients and bacteria. As indicated in the UST guidance: oxygen is the primary component for enhancing biodegradation and adding nutrients "if necessary". The test plan will evaluate the need to add nutrients and bacteria. An analysis of archived soil samples taken during construction of the bioventing wells and the recently installed groundwater monitoring well (199-N-183) near this waste site will be performed in an attempt to speciate the bacteria and fungii, pending approval of off-site release of the samples. This analysis will also attempt to determine which nutrients are most beneficial in stimulating and maintaining bacterial and fungii growth. If archived samples cannot be released then an alternative plan acceptable to

		Ecology will be found. The 6 month pilot test demonstrated active indigenous microorganisms when enhanced with oxygen. Sufficient nutrients are currently available to sustain this activity since nutrients are not destroyed during the biodegradation process (EPA/540/R-95/534a, 1995, *EPA Manual Bioventing Principles and Practice Volume I*). Performance data will be collected during system operation and utilized to reduce the uncertainty in the estimation of remediation duration.			
2.		**Comment:** The basis of design and design drawings appear to represent an implementation of the proposed full-scale bioremediation. During the bioventing briefing and previous UMM meetings, this work has been referred to as "Phase II testing". Ecology cannot approve a design for full-scale bioventing design that does not reach remedial action goals by the M-16-00 milestone due in 2024. Ecology believes that more data is needed prior to final design. The *Bioremediation Well Borehole Soil Sampling and Data Analysis Summary Report for the 100-N Area Bioremediation Project (UPR-100-N-17)* (WCH-370 Rev. 0) concluded that the lateral and upgradient boundaries of the TPH diesel vadose contamination zone had not been fully defined. Because the vadose contamination zone has not been delineated, it is premature to design a system and characterize it as "full scale". In addition, the *UPR-100-N-17: Bioventing Pilot Plant Performance Report* (WCH-490 Rev. 0) indicated the equation used to calculate microbial degradation of hydrocarbon "is sensitive to assumptions made about physical soil parameters such as bulk density". In other words, without soil samples, it is difficult to verify the success of bioventing. **Modification Needed:** Modify this design and all associated documentation to more accurately be called "Phase II testing". **Response:** The bioventing system has been designed to cover the extent of contamination from the area of known contamination near the UPR-100-N-17 waste site to the outer		**Closed via agreement to develop a Test Plan**	

		groundwater monitoring network. Text will be revised to indicate the system will cover the extent of contamination in the vadose zone associated with the UPR-100-N-17 waste site. Soil samples were collected during the installation of the bioventing boreholes along with other wells in the area. Data will be evaluated to determine appropriate physical soil parameters. Data from the bioventing wells and the near-by 199-N-183 well were provided to Ecology on April 12, 2012. Soil samples from 199-N-183 included testing for bulk density. See comment #1 response concerning request for additional characterization data.			
3.	Supplemental Information, General	**Comment:** A Supervisory Control and Data Acquisition (SCADA)/call out system or Operations Procedures regarding inspection of the operating system is missing from the Draft Design information. Please also see comment #5. This system is slated to operate for 15 to 41 yrs unmanned in the 100-N Area away from most populated facilities. **Modification Needed:** To ensure adequate and continuous operations, either add a SCADA/call out system to call when the system malfunctions or needs assistance or add to the supplemental information, the inspection procedure and checklist to monitor the system to ensure it operates appropriately. **Response:** The current design has the capability for a call out system. Drwg 0100N-DD-E0295 identifies a Sensaphone 2000 to collect data if the system shuts down. A cell phone notification system will be added. Note: No phone land-lines area available. Cell phone service will be evaluated during construction.		**Accept/Closed per 4/10/12 facilitated session**	
4.	Supplemental Information, pg. 2	**Comment:** Ecology needs a copy of the system operations plan to ensure it contains adequate information for continuous operations. **Response:** The operation plan will be developed during the construction and testing of the bioventing system. A copy will be provided to Ecology **within 6 month of installation of the system**.		**Accept/Closed per 4/10/12 facilitated session**	

5.	Supplemental Information, pg.3	**Comment:** Unit Managers Meetings (UMMs) are used to provide status and updates of projects. However, these were not noted in the supplemental information. **Modification Needed:** Add a statement to the paragraph that begins "Annual performance reports will be prepared…" stating that project updates and status reports will be provided during the UMMs. **Response:** Annual performance report will be prepared and monthly status will be provided at the UMMs.		**Accept/Closed per 4/10/12 facilitated session**	
6.	Specification Piping Section and Design Drawings	**Comment:** Nowhere is it stated in the Specifications or design drawings that the piping will be tested for leaks prior to or after installation **Modification Needed:** Add that the system will undergo a pressurized testing prior to commencing. **Response:** Leak testing protocol will be added to the specifications.		**Accept/Closed per 4/10/12 facilitated session**	
7.	Drawing 0100N-DD-E0295	**Comment:** Note 8. States that Pressure sensors will provide telemetry to MCC/Sensaphone and shut down the respective blower. How does this system work? Who does it call? How is this different than a SCADA/call out system? Please also see comment #1. **Modification Needed:** Add this information in more detail to the Supplemental Information. **Response:** See comment #3. Notification will be to an individual responsible for system operations and notifications.		**Accept/Closed per 4/10/12 facilitated session**	
8.	Specifications	**Comment:** Specifications for the motors, compressor, and blowers were not provided. **Modification Needed:** Either add this information in the Supplemental Information or add		**Accept/Closed per 4/10/12 facilitated session**	

		separate specifications. **Response:** The specs are provided in Section 26 00 00, Basic Electrical Specifications, Part III, Subsection 3.1 (D): All three installed blowers (B-A to B-C) shall be installed and wired for 480VAC - 3-PH power. All blowers shall consist of Ametek Rotron model DR808AY72MX (7.5HP, 230/460VAC, 3-PH, 60Hz TEFC motor) regenerative blowers.			
9.	General	**Comment:** The bioventing test design does not propose to test treatment/remediation in the "intermediate zone". One conclusion of *UPR-100-N-17: Bioventing Pilot Plant Performance Report* (WCH-490 Rev. 0) indicates that microbial degradation in the shallow wells was not measurable using the protocols established for Phase I testing. Therefore, at this time, the effect on microbial degradation rates resulting from shallow well bioventing is unknown. Although the same report concludes bioventing in the shallow soils will have a negligible effect on microbial degradation rates, it also concludes that bioventing has been shown to affect a large area around injection wells (which suggests the soils are relatively permeable to air flow). **Modification Needed:** Include shallow well bioventing and testing protocols that will measure microbial degradation rates. **Response:** The test plan to be prepared in response to comment #1 will address bioremediation in the "intermediate zone". **Existing data (WCH-370)** results show the intermediate zone contains TPH near the current RAGs. The shallow wells will be monitored as part of the system operations. Additional insitu performance data will be collected as part of the system evaluation discussed in Comment #1 response.		**Closed via agreement to develop a Test Plan**	
10.	General	**Comment:** During Phase I testing, additional soil samples for contaminant analyses, geotechnical parameter testing, and nutrients and moisture evaluation were not collected. Therefore, the success of the deep vadose zone Phase I bioventing testing has not been		**Closed via agreement to develop a Test**	

		quantifiably determined. **Modification Needed:** Include the collection of soil samples for contaminant analyses, geotechnical parameter testing, and nutrient and moisture evaluation. **Response:** Nutrient and moisture content data was collected during installation of the bioventing boreholes (WCH-379). Additional data as needed will be evaluated during development of the test plan. In addition, analysis of archived soil samples is planned. See Comment #1 response.		**Plan**	
11.	Drawing 0100N-DD-C0733	**Comment:** The deep monitoring point (DMP-2) is incorrectly labeled 199-N-169. **Modification Needed:** Relabel the monitoring point "199-N-170". **Response:** Comment accepted. Drwg will be revised.		**Accept/Closed per 4/10/12 facilitated session**	
12.	Drawing 0100N-DD-C0733 And Basis of Design	**Comment:** During the Ecology briefing, it was indicated that injection well 199-N-172 may need to be decommissioned. At well 199-N-18, it is indicated the well may be used as an "optional injection/monitoring well". However, the basis of design states: "If the well requires decommissioning, a replacement well (199-N-183) directly north will be utilized." Per email from Jeff Ayres (Ecology) on March 2, 2011, Ecology authorized the decommissioning of well 199-N-172 and recommended assessing the need to replace the bioventing well. **Modification Needed:** Clarify in the Basis of Design and Drawings the proposed use of wells 199-N-18 and 199-N-183, which are subject to Ecology approval. Note: if 199-N-183 is to be used as an injection well, the Basis of Design must include a description of how the system will be monitored during bioventing. **Response:** Decommissioning of well 199-N-172 was not necessary. Text will be modified.		**Accept/Closed per 4/10/12 facilitated session**	
13.	Drawing	**Comment:** A monitoring well symbol is used for what may actually be a waste site (116N).		**Accept/Closed**	

	0100N-DD-C0733	**Modification Needed:** Correct figure as applicable. **Response:** Comment accepted. Drwg will be revised.		**per 4/10/12 facilitated session**	
14.	Drawing 0100N-DD-C0733	**Comment:** Well 199-N-156 is not depicted on the figure. **Modification Needed:** Include symbol and well designation. **Response:** A separate figure will be provided with the well location. The well is located on the lower river bench near the interceptor trench (100-N-65) and outside the remediation boundary.		**Accept/Closed per 4/10/12 facilitated session**	
15.	Drawing 0100N-DD-C0733	**Comment:** A shallow monitoring well symbol is not included for 199-N-166 (SIW-1). **Modification Needed:** Include symbol. **Response:** Comment accepted. Drwg will be revised.		**Accept/Closed per 4/10/12 facilitated session**	
16.	Drawing 0100N-DD-C0733	**Comment:** There are two waste sites (near 100-N-60) that are not shown on figure. **Modification Needed:** If petroleum contamination is potentially associated with these waste sites, include respective waste site symbols and waste site names/numbers. **Response:** A separate figure will be provided showing the location of waste sites in the area. The current design is associated with UPR-100-N-17 **as currently described in WIDS**.		**Accept/Closed per 4/10/12 facilitated session**	
17.	Drawing 0100N-DD-C0733	**Comment:** Because relevant monitoring data exists in HEIS for decommissioned wells, the drawing should show all decommissioned wells. **Modification Needed:** Include symbols and names/numbers for all nearby decommissioned wells (e.g., 199-N-20, 199-N-84, 199-N-17, etc.). Also, include a symbol for		**Accept/Closed per 4/10/12 facilitated session**	

		decommissioned wells in the drawing's explanation section. **Response:** A separate figure will be provided for decommissioned wells in the UPR-100-N-17 area.			
18	Basis of Design	**Comment:** The 5th bullet of summary conclusions states recent groundwater data indicate reduction of TPH concentrations in the groundwater beneath the bioventing system. This information is not documented in the *UPR-100-N-17: Bioventing Pilot Plant Performance Report* (WCH-490). **Modification Needed:** Include all supporting data in the basis of design. **Response:** Groundwater data from the May 2011 sampling events of the bioventing wells will be provided to Ecology prior to the June 5, 2012 session.		**Closed via agreement to develop a Test Plan**	
19	Basis of Design	**Comment:** The basis of design states: "…the intermediate injection wells did not have an appreciable effect on the vadose zone…" *UPR-100-N-17: Bioventing Pilot Plant Performance Report* (WCH-490) indicates that microbial degradation in the shallow wells was not measurable "using the protocols established for this testing". The same document also concludes that bioventing has been shown to affect a large area around injection wells, suggesting the soils are relatively permeable to air flow. Because the remediation timeframe has been estimated to require ~15-41 years, testing (using the shallow wells) to reduce the remediation timeframe should continue. **Modification Needed:** Revise the basis of design to indicate the intermediate injection wells will be used for further Phase II testing. Also, describe in detail how they'll be used. **Response:** See comment #9 response.		**Closed via agreement to develop a Test Plan**	
20	Basis of Design	**Comment:** The basis of design states: "If the well requires decommissioning, a replacement well (199-N-183) directly north will be utilized." **Modification Needed:** Delete the sentence and indicate that a replacement well will be		**Accept/Closed per 4/10/12 facilitated session**	

		constructed. **Response:** Injection well 199-N-172 was not decommissioned. Reference to 199-N-183 will be deleted.			
21	Basis of Design	**Comment:** The basis of design states: "Although soil contaminations have not been delineated, the estimated 500 µg/L groundwater contour was used to estimate soil impacts." The estimated 500 µg/L groundwater contour may not accurately "estimate soil impacts". TPH observations at several wells indicate groundwater and Columbia River RAOs have not yet been achieved and include: 199-N-172 (2,400 µg/L on 8/20/2009, 2,200 µg/L on 9/10/2009, 2,200 µg/L on 4/23/2010, and 1,600 µg/L on 5/25/2011), 199-N-169 (760 µg/L on 5/20/2011), 199-N-18 (1,700 µg/L on 12/5/2010, 48,000 µg/L on 2/27/2011), 199-N-183 (2,200 µg/L on 4/18/2011), N116mArray-0A (440 µg/L on 3/8/2010, 570 µg/L on 9/16/2010, 700 µg/L on 2/8/2011). **Modification Needed:** Include a discussion of the above TPH observations and uncertainties associated with using the 500 g/L groundwater contour as an estimate of soil impacts. **Response:** TPH has been identified in many wells near the UPR-100-N-17 spill area. Remediation of groundwater is being completed under a separate IROD. Due to changes in river levels and the impact on the rewetted zone, the 500 µg/l contour was conservatively identified for the potential of the groundwater recontaminating the vadoze zone. Text will be added to indicate that the large ROI of the bioventing system covers this area.		**Closed via agreement to develop a Test Plan**	
22	Basis of Design	**Comment:** The basis of design states: "No nutrient or moisture amendments are planned at this time". Because the remediation timeframe has been estimated to require ~15-41 years, testing to reduce the remediation timeframe should continue. In addition, the basis of design discussion of the remediation timeframe indicates the remediation timeframe may be affected by: soil temperature, contaminant concentrations, soil moisture content, nutrient availability, concentration of constituents toxic to the microbial population, and microbial population		**Closed via agreement to develop a Test Plan**	

		size, diversity, and health. These parameters represent some of the very information that is appropriate to collect during testing. The full-scale bioremediation should be designed with these parameters measured, identified, and evaluated. **Modification Needed:** Delete statements referring to delaying nutrient, bacteria, or moisture amendments. Develop a Phase II Treatability Test Plan that identifies necessary investigation. Include cost estimates of implementing amendments See comment #7. **Response:** See comment #1 response regarding: 1) evaluations of archived samples of bacteria and fungi, 2) addition of bacteria and nutrients will be addressed through the Test Plan.			
23.	Basis of Design	**Comment:** The "TPH in Soil" section of the basis of design only partially describes soil petroleum observations in the 100-N Area. A description of all waste sites where petroleum contamination has been confirmed during remediation should be provided. In addition, an identification of all 100-N Area boreholes where petroleum contamination has been documented should be included. In addition, the analytical test results, field parameter measurements, and field observations associated with the construction of well 199-N-183 were not included. The section should also acknowledge that the extent of the vadose zone petroleum contamination has not been determined. Without delineation of the vadose zone petroleum contamination, it cannot be determined if IROD bioremediation remedial action goals will be met by 9/30/2024. **Modification Needed:** In the Phase II Test Plan include a figure and discussion to include: all waste sites where petroleum contamination has been confirmed during remediation, identification of all 100-N Area boreholes, wells, and aquifer tubes where petroleum contamination has been documented. Also, include a discussion/description of the analytical test results, field parameter measurements, and field observations associated with the construction of well 199-N-183. **Response:** The 100 N IROD describes the remediation technology for the known petroleum waste sites. Remediation of these sites has not been completed and any impacts to the vadose zone is unknown. Data will be collected during the remediation of these waste sites		**Accept/Closed per 4/10/12 facilitated session**	

		to determine the impacts to the deep vadose zone. The current bioventing design is associated with the release of TPH from the UPR-100-N-17 waste site. Information from the RI/FR work plan and borehole summary report for 199-N-183 will be included in the test plan.			
24	Basis of Design	**Comment:** The "TPH in Soil" section of the basis of design includes the following conceptual site model: "This 15-foot interval is thought to be affected by the 'smearing' of the original non-aqueous phase liquid (NAPL) layer due to fluctuations in the groundwater table caused by river stage changes." The conceptual site model does not address the silty-sandy layer. Similarly, the conceptual site model does not include a description of the depth of the silty-sandy layer in which diesel odor was noted on the borehole logs or the fact that the silty-sandy layer is overlain and underlain by sandy-gravel layers. **Modification Needed:** Revise the conceptual site model to describe the likely petroleum contamination retention occurring in the silty-sandy layer occurring at ~59-64 feet below ground surface at wells 199-N-167, 199-N-169, 199-N-170, and 199-N-171. **Response:** Air injection wells are screened across and through these intervals and will enhance biodegradation in these layers. Air will diffuse from the permeable areas into the silty areas via Ficks Law of Diffusion. In addition, sample data obtained during installation of the bioventing wells indicate the silty sandy layer concentrations of TPH is consistent with other layers. Text will be revised to include this discussion.		**Accepted/Closed per 4/10/12 facilitated session**	
25	Basis of Design	**Comment:** The second page of the basis of design appears to propose two injection wells based on the ROI testing/evaluation. However, the silty-sandy zone does not appear to have been isolated during the ROI testing/evaluation. Furthermore, the basis of design does not target the silty-sandy zone occurring at ~59-64 feet below ground surface as the zone of treatment. Chapter III of OUST's publication *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers* (EPA 510-B-95-007) states: "At a site with homogenous soil conditions, the well should be screened throughout the contaminated zone…..At a site with stratified soils or lithology, the screened interval can be placed at a depth corresponding to a zone of lower		**Closed via agreement to develop a Test Plan**	

		permeability. This placement will help ensure that air passes through this zone rather than merely flow through adjacent zones of higher permeability." **Modification Needed:** Phase II testing should include isolation of the silty-sandy layer occurring at ~59-64 feet below ground surface and testing/evaluation of the ROI of that layer. Also, the system design should acknowledge the layer and address isolation of the layer for purposes of bioventing remediation. **Response:** See comment #24 response			
26	Basis of Design	**Comment:** The UPR-100-N-42 section states: "Should additional remediation be required in the deep vadose zone, a limited number of wells could be installed and the existing bioventing pilot plant can be installed in a limited amount of time." The basis of design should describe in detail any bioventing remediation construction and characterization activities. **Modification Needed:** Example of recommended wording: "Should additional remediation be required in the deep vadose zone, X boreholes will be constructed to delineate the extent of deep vadose zone contamination. Testing and characterization will include_____. Bioventing injection wells will be completed and screened at the vadose zone interval of highest contamination. Etc." **Response:** A VWI will be developed for UPR-100-N-42. The VWI will consist of a deep vadose test-pit in the bottom the UPR-100-N-19 waste site (CCN#xxxx). Further remediation will be determined based on comparison with the RAGs. A separate remediation design will be developed if necessary.		**Accept/Closed per 4/10/12 facilitated session**	
27	General	**Comment:** The basis of design does not address potential air contaminants. EPA has developed a systematic approach, called an Air Pathway Analysis (APA), for determining what air contaminants are present and at what level these compounds may be released into the atmosphere. The APA method is outlined in a four-volume series (*Air Superfund National Technical Guidance Study* Series, EPA, 1989).		**Accept/Closed per 4/10/12 facilitated session**	

		Modification Needed: The basis of design should address potential air contaminants. **Response:** Potential air contaminants were evaluated during the phase I design. It was concluded that the only byproducts that will be seen in the air is carbon dioxide and water. This information was evaluated by Doug Hendrickson and he provided the following in an email response: "Upon review of the engineering study, technical specification, scope of work, and procurement drawing it is apparent that the project in not subject to permitting under WAC 173-400 as the operation does not constitute a stationary source subject to the General regulations for air pollution sources." During initiation of the bio-venting effort, well head measurements and surface flux measurements will be taken to determine the need for emissions to be addressed via an air monitoring plan.			
28	General	**Comment:** Underground Injection Control standards for injection of fluids (gas is considered a fluid in the UIC rule - "fluid" means any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.) in support of groundwater remediation are applicable. WAC 173-218-040 defines Class V remediation wells. WAC 173-218-060 states that in order to operate a UIC well in Washington, the UIC well must be registered and either rule-authorized or receive a permit. The definition of "rule-authorized" includes that a well must be registered and meet the nonendangerment standard. WAC 173-218-080 describes the nonedangerment standard for UIC wells. WAC 173-218-100 describes wells that automatically meet the nonendangerment standard. Note: Class V remediation wells are not listed as automatically meeting the nonendangerment standard in this section of the regulation. **Modification Needed:** Injection wells must be registered with Washington's Underground Injection Control program. For information, contact Mary Shaleen Hansen, Dept. of Ecology, Water Quality Program, PO Box 47600, Olympia, WA 98504, (360)407- 6143. **Response:** Registration is an administrative requirement under CERCLA and, as such, is preempted for on-site CERCLA actions by Federal law at 42 U.S.C. 9621(e)(1). A detailed explanation of the basis and scope of the CERCLA exemption with regard to state administrative requirements appears at 55 Federal Register 8756 (March 8, 1990). Commenters to the rule had argued the importance of providing information to		**Closed per 4/10/12 facilitated session**	

		programs and agencies outside of the CERCLA program, and urged EPA to require that such information be provided. Despite these comments, EPA concluded that on-site CERCLA actions would be subject only to substantive, and not administrative requirements of other laws, consistent with Congressional intent in establishing the exemption from administrative requirements in section 121(e)(1) of CERCLA. In their response, EPA acknowledged the importance of providing certain information to other agencies and strongly encouraged CERCLA implementing entities to provide useful information, but stated that compliance with administrative requirements (which would include registration) is not required under CERCLA. A state regulation cannot serve to override the exemption established in Federal law. Hence, the CERCLA on-site actions are exempted from administrative requirements such as registration of UIC wells. As a consequence, DOE will not pursue registration of Hanford UIC wells that are under CERCLA authority. However, DOE did provide Ecology with information (well type, depth, location, injection agent) on the bioremediation wells in a letter dated March 9, 2010 from DOE to Ecology (Mary Shaleen-Hansen) for purposes of assisting Ecology in maintaining a more complete database of the Hanford UIC wells. If additional UIC wells are installed, similar information will be provided to Ecology via a letter. The injection wells are required to meet the non-endangerment standards, which means the materials to be injected cannot result in a violation of groundwater quality standards (WAC 173-200) or primary drinking water regulations (40 CFR 142) or otherwise adversely affect the health of persons and must meet AKART. Injection of air would not be expected to impact the quality of groundwater or drinking water. If nutrients or addition of biota is required to facilitate bioremediation, this topic will be re-evaluated.			