



1245247
[0069335H]

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

July 10, 2017

17-NWP-080

Mr. Doug S. Shoop, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 99352

Re: Department of Ecology's (Ecology) Review of the *General Sewer Plan Hanford Site – 200 East*
(General Sewer Plan), HNF-55909, Revision 0

Reference: See page 2

Dear Mr. Shoop:

Ecology has reviewed the referenced General Sewer Plan, received on May 25, 2017 for approval. Under Revised Code of Washington (RCW) 90.48.110(3), as incorporated by Washington Administrative Code (WAC) 173-240-050, Ecology must either approve, conditionally approve, reject, or request amendments within 90-days of receiving the General Sewer Plan.


Ecology is requesting amendments to the General Sewer Plan. We identified areas in need of clarification. The amendments are specified in our enclosed Review Comment Record (RCR).

Ecology requests the United States Department of Energy – Richland Operations provide the requested information in the enclosed RCR to Ecology by September 15, 2017.

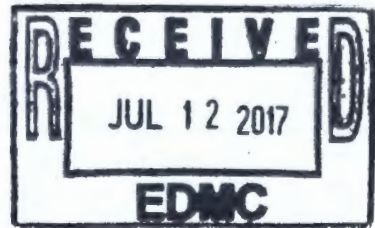
Once all comments have been addressed and a revised copy of the General Sewer Plan is received, Ecology will perform a subsequent review of the revised General Sewer Plan. Per RCW 90.48.110(1), as incorporated by WAC 173-240-030, no construction may begin until the General Sewer Plan is approved by Ecology.

If you have any questions, please contact Katie Wilson, Permit Lead, at (509) 372-7885 or katie.wilson@ecy.wa.gov, or Stephanie Schleif, Facility Transition Project Manager, at (509) 372-7929 or stephanie.schleif@ecy.wa.gov.

Sincerely,


Ron Skinnerland
Waste Management Section Manager
Nuclear Waste Program

kw/jvs
Enclosure
cc: See page 2



Mr. Doug S. Shoop
July 10, 2017
Page 2 of 2

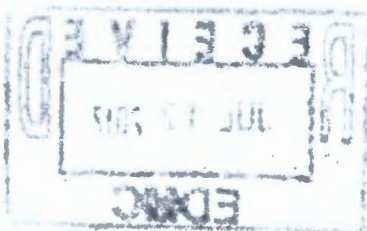
17-NWP-080

Reference: Letter 17-ESQ-0059, dated May 22, 2017, "Transmittal of the General Sewer Plan for the 200 East Area of the Hanford Site"

cc electronic:

Dennis Faulk, EPA
Rana Evans, USDOE-ORP
Mark Kamberg, MSA
Jon Perry, MSA
Michael Wilson, MSA
Rose Ferri, YN
Ken Niles, ODOE
Stephanie Schleif, Ecology
Ron Skinnarland, Ecology
Katie Wilson, Ecology
Environmental Portal
Hanford Facility Operating Record
MSA Correspondence Control
USDOE-RL Correspondence Control
USDOE-ORP Correspondence Control

cc: Rod Skeen, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Administrative Record
NWP Central file



Review Comment Record

Washington State Department of Ecology Nuclear Waste Program

Date: 7/10/2017

Page 1 of 5

Document Title(s)/Number(s):

General Sewer Plan for the 200 East Area of the Hanford Site/HNF-55909

Document Manager	Telephone Number	Project Manager	Telephone Number	Facility Site ID	Cleanup Site ID
Katie Wilson	(509) 372-7885	Stephanie Schleif	(509) 372-7929	19404	

Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/Close	Reviewer Initials
1.	General Comment	Washington Administrative Code (WAC) 173-240-050(3)(b) is not directly answered. The text needs to be specific on who is performing this function. If it is MSA, then a contract change will require updating if/when a contractor change occurs. Assigning all 3 functions to the Department of Energy (DOE) with acknowledgment that contractors could be responsible for day-to-day operations under DOE's oversight would be acceptable.	Need to specifically answer the requirements of WAC 173-240-050(3)(b).	WAC 173-240-050(3)(b)				
2.	General Comment	This document does not identify or describe how the project would address Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) waste sites that sewer lift station and/or pipelines would impact. These include: <ul style="list-style-type: none"> Main Lift Station (LS) Pipeline intersects with 4 waste sites in the 200-EA-1 OU (216-B-2-1, 216-B-2-2, 216-B-2-3, and 216-B-63) Pipeline to the 2607-E10 Lift Station intersects with the 216-A-29 ditch (200-EA-1) The new lift station, 2607-E12, could impact the 2607-E12 septic tank and drainfield Pipeline between 2607-E6 and 2607-E12 intersects with 3 unplanned release waste sites. (UPR-200-E-10, UPR-200-E-12, UPR-200-E-20.) 	Please consult with the project managers for the operable units where there are waste sites that intersect the proposed pipelines and lift stations. The impacted operable units are 200-EA-1 and 200-OA-1.	To prevent the spread of contamination from these waste sites during sewer system construction. This spread of contamination would impact human health, the environment and workers.				
3.	General Comment	The document does not specifically state that the pipelines will be constructed to reduce or eliminate leaks from the pipelines.	Add section or appendix that would state the design specifications for the pipelines to minimize/eliminate leakage.	Soil contamination in the 200 Area is quite extensive and leakage from these pipelines could drive this soil contamination deeper into the vadose zone creating a much more expensive cleanup.				
4.	General Comment	The document does not contain page numbers that align with the table of contents.	Please insert page numbers, or renumber the Table of Contents to be consistent with the numbering at the top of the pages.	It is difficult for the reader to locate topics listed in the Table of Contents without page numbers.				

Review Comment Record		Washington State Department of Ecology Nuclear Waste Program				Date: 7/10/2017			
Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/Close	Reviewer Initials	
5.	Pg. 2	The General Sewer Plan (GSP) must be prepared under the supervision of a professional engineer licensed in the state of Washington and shall bear the engineer's seal and signature. The seal is not signed.	Submit final document that has been sealed and signed. Include Professional Engineer signature on final submittal of the GSP.	WAC 196-23-070 WAC 196-33-500 Guidance document #98-37 Section G1-3.3					
6.	Pg. 12, figure ES-1	The planning boundary presented in the figure covers the 200E area, but doesn't connect to the 200W Sewage lagoon. It is assumed that a main will be used to take 200E sewage to the lagoon. As such, shouldn't the location of that line and the lagoon be part of the planning boundary?	Recommend that a complete planning boundary from collection to treatment be used.	WAC 173-240-050(3)(d)(i) and then subparts.					
7.	Pg. 12 Sec. 1.2.2	Does the "Hanford Site Sewer System Master Plan HNF-6612 Revision 5" include the proposed 200E sanitary sewer system? Revision 5 is not in the Hanford Administrative Record (AR).	See comment.						
8.	Pg. 13 Sec. 1.3 Last sentence	Appendix G contains a technical memorandum for hydrogen sulfide. Appendix H contains the checklist of criteria for WAC 173-240-050. Revise the last sentence of the Section to correct the reference.	Revise text.						
9.	Pg. 13 Sec. 1.4 Para. 1 Sent. 2-3	<i>"There are 10 active subsurface soil absorption systems (drainfields) which serve the 200E Area of the Hanford Site. In addition, there are 3 permitted holding tanks in 200E."</i> Figure 1-2 appears to show 14 drainfields. Are these drainfields not active? Provide an explanation for the discrepancy between the text and the figure. Provide location, size, slope, capacity, and direction of flow for the drainfields as part of the existing sewer system. Only one storage tank is depicted on Figure 1-2. Where are the other storage tanks? Provide location, size, slope, capacity, and direction of flow for the storage tanks as part of the existing sewer system.	Revise text and provide clarifying information.	WAC 173-240-050(3)(d)(ii)					
10.	Pg. 13 Sec. 1.4	Provide slope and size for the existing sewer lines. Provide size and capacity for existing lift stations.	See comment.	WAC 173-240-050(d)(ii)					
11.	Pg. 13 Sec. 1.4	The system overview should include information on all portions of the existing system.	Provide this information.						
12.	Pg. 15, Figure 1-2	Include the permitted storage tanks with identifiers and identifiers for all drainfields. All identifiers must be consistent with the text.	Update figure as stated in the comment.	WAC 173-240-050(d)(ii)					

Review Comment Record		Washington State Department of Ecology Nuclear Waste Program				Date: 7/10/2017				
Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/Close	Reviewer Initials		
13.	Pg. 15, Figure 1-2	Is "Existing Storage Tank" in the figure legend equivalent to "permitted holding tank" text stated in Section 1.4? If so, the location of the existing storage tank on Figure 1-2 is not in the same vicinity as W-519 in Figure 5-2. As depicted in Figure 1-2, it appears that the tank is on a different street and farther away from where the lift station (depicted in Figure 5-2) for the tank will be located.	Identify where the permitted holding tanks are located.	WAC 173-240-050(d)(ii)						
14.	Pg. 16, Sec. 1.4.1, Sent. 1	LOSS is not defined.	Add to acronym list and define the acronym prior to using it in the text. Please review document to verify that all acronyms are first defined before they are used.	Need to understand this acronym.						
15.	Pg. 16, Sec. 1.4.5, Sent. 1	Although OSS is present in the list of commonly used abbreviations, it is not defined within the text before it is used.	Define OSS in the text.	Need to understand this acronym.						
16.	Pg. 19, Sec. 2.1	Will an updated GSP be used if any work in the 200W area is planned? What about the tie in from East to West? It seems an overlap could exist and create the potential for future 'issues.'	The text delineates between 200W and 200E, but E needs to transit through and into W. Full coverage from E to the lagoon needs to be included in this GSP.							
17.	Pg. 21, Figure 2-2	Hanford roads/routes are depicted in Figure 2-2 but the roads have no names. Include major road names for clarity.	Revise figure.	WAC 173-240-050(3)(d)(v)						
18.	Pg. 22, Sec. 2.3.3	Grammatical error—please correct "general" to "generally."	See comment.	Grammatical						
19.	Pg. 24 Sec. 2.5	The section does not provide a brief description of the method used to determine future population trends.	Provide a brief description of the method used in the Hanford Site population Projections 2016-2026 report.	WAC 173-240-050(3)(e): "Briefly describe the method used to determine future population..."						
20.	Pg. 24 Sec. 2.5	WAC 173-240-050(3)(e) requires the estimated future population for the stated design period. No design period is discussed in the GSP. Population projection is provided for years 2016-2026, so it is implied that the design period is until 2026. The 200 West Area sewer lagoon engineering report states a 35 year design period, which would be until 2047. As well, other facilities in 200E will be operating past year 2026.	See comment—the population trend needs to be evaluated for the additional factors. State the design period of the 200 West Area sewer lagoon.	WAC 173-240-050(3)(e)						
21.	Pg. 24, Sec. 2.5, Para. 2 and 3	Paragraph 2 states that the 200E sewage load is anticipated to grow from 29,359 gpd to 35,679 gpd. Paragraph 3 states that the 2015 average processed rate was 49,738 gpd which is a great increase from what just goes to the lagoon.	State the other sources of wastewater that contributes to the 49,738 gpd number.	Need this additional information to understand the entire system.						
22.	Pg. 26 Sec. 3.2 Para. 3 Sent. 2	Approximately where are these future facilities to be located? Will they tie in directly to the new gravity pipe leading to the main lift station, as indicated in Figure 5-3?	See comment.							

Review Comment Record

**Washington State Department of Ecology
Nuclear Waste Program**

Date: 7/10/2017

Page 4 of 5

Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/Close	Reviewer Initials
23.	Pg. 30, Sec. 4.1	Specify that Ecology is the "Department of Ecology"	The second paragraph states "...is permitted by the Ecology under..." Please reword to include the language in the comment column.					
24.	Pg. 30, Sec. 4.1, Para. 1. Sent.1	This sentence states that the lagoon has a National Pollutant Discharge Elimination System (NPDES) Permit. This is not correct. It has a State Waste Discharge Permit (SWDP) under the WAC 216 regulations. NPDES is only for direct discharge to waterways of the US.	Add the correct permitting information.	Correct permit needs to be in this master plan.				
25.	Pg. 31, Sec. 4.2	Change the title and the verbiage to reflect that the sewage treatment facility has a SWDP and not a NPDES Permit.	Add the correct permitting information.	Correct permit needs to be in this master plan.				
26.	Pg. 34, Sec. 5.1	The last sentence of the section contains a typo.	Correct "them" to "then."	Grammatical				
27.	Pg. 35, Figure 5-1	Is the Y-axis in feet amsl? Include elevation label on figure and the datum used.	Revise figure.					
28.	Pg. 35, Figure 5-1	2607-EP and 2607-E8A are shown as connecting first before connecting to 2607-E1 in Figure 5-2, whereas Figure 5-1 shows them connecting to 2607-E1 independently. Which is correct?	Revise figure.					
29.	Pg. 36, Figure 5-2	Here is a drawing showing the main LS outside of the plan area. It is colored purple indicating it is a 'new' force main. The issue is that it is outside of the plan area and isn't addressed. How is this line planned on being installed if it isn't part of this GSP?	Make this GSP cover collection to treatment.					
30.	Pg. 37, 5.3.2.1	"LF" is not defined within the text or in the list of acronyms.	Define this acronym prior to using it within the text.					
31.	Pg. 37 Sec. 5.3.2.2 Para. 1	"Three existing lift stations are proposed to be utilized in the GSP..." What will be done with the fourth existing lift station that is depicted in Figure 1-2?	Revise text.					
32.	Pg. 40 Sec. 5.4	What model is being used for this analysis? Appendix B and C provide the assumptions and the results, but not what program or basis is being used for the model.	Provide all design inputs and calculations used in the hydraulic model analysis. Also provide the standard design criteria that will be met.					
33.	Pg. 41, Figure 5-4/Appendix C	The hydraulic model results in Appendix C do not provide two significant figures for d/D to evaluate the consistency of the figure with the model result.	Revise figure or update Appendix C.					
34.	Pg. 42, Figure 5-5	Reserve Capacity labeling is incorrect. Many of the pipeline segments have >1.0 cfs reserve capacity based on the hydraulic model results presented in Appendix C.	Revise figure.					

Review Comment Record		Washington State Department of Ecology Nuclear Waste Program				Date: 7/10/2017		
						Page 5 of 5		
Item No.	Pg. # Sec. # Para./Sent.	Comment or Question	Modification Needed	Basis/Justification	Permittee Response	Ecology Response	Open/Close	Reviewer Initials
35.	Pg. 43, Sec. 5.5	What is the difference between a "wetwell" and a "wet well"? Both versions are present within Section 5.	Please correct the text to use the term consistently throughout the document.	Consistency				
36.	Pg. 43, Sec. 5.5. Para. 1, Sent. 1	The existing lift stations numbered 2607-E3 and 2607-E6 have abandoned septic tanks and leach fields associated with the lift stations.	Please add a statement that the associated septic tank and leach field have been abandoned and will not be used for the updated sewer system.	Clarifying the system and its status.				
37.	Pg. 47, Sec. 5.5.11	The existing lift station numbered 2607-E12 have abandoned septic tanks and drain fields.	Please add a statement that the associated septic tank and leach field have been abandoned and will not be used for the updated sewer system.	Clarifying the system and its status.				
38.	Pg. 51, Figure 6-1	The topography contours on are not legible for the area within the service area. Additionally, the figure does not provide a datum used for the elevation values.	Revise figure.	WAC 173-240-050(3)(d)(v)				
39.	Pg. 51, Figure 6-1	The figure does not show the surface drainage.	Revise figure.	WAC 173-240-050(3)(d)(v)				
40.	Pg. 51, Figure 6-1	The figure does not include the drainfields and tanks that are not proposed to be replaced in the new sewer system. These drainfields and tanks will remain part of the collection system master plan in the service area, even though they are not being connected to the new sewer system.	Revise figure.					
41.	Pg. 62, Appendix B	The hydraulic model assumption uses a Manning's "n" of 0.012 regardless of material, size, and age. Ecology guidance states that "an "n" value of 0.013 shall be used in Manning's formula for the design of all sewer facilities (regardless of pipe material) except inverted siphons..." The hydraulic model must use a Manning's "n" of 0.013.	Use "n" value of 0.013 and present new results of the hydraulic model.	Guidance document #98-37 Section C1-4.3				
42.	Appendix B/C	Appendix B, Parameter: Design Pipe Slope Determination states that the model assumption uses Ten State Standards minimum slopes and the minimum slopes for design pipes of 8" size is 0.40%. Appendix C uses a slope of 0.30% for pipe segment P-10. Which is correct? Additionally, Ecology guidance indicates that the minimum slope should be 0.40% for a sewer size of 8". Correct the hydraulic model to include a minimum slope of 0.40% for all pipe segments.	Use 0.40% slope for all pipe segments and present new results of the hydraulic model.	Guidance document #98-37 Section C1-4.4 and Table C1-1				
43.	Pg. 68, Appendix D	Nothing is provided in Appendix D, Environmental Documents.	Provide supporting documents for Appendix D, or remove the appendix.					
44.	Pg. 153, Appendix H	Information to satisfy WAC 173-240-050(3)(f) and (m) was not included and no information provided as to why the regulations are not applicable.	Provide information to satisfy WAC 173-240-050(3)(f) and (m).	WAC 173-240-050(3)(f) WAC 173-240-050(3)(m)				