

START

0017272

REVIEW COMMENTS ON QAPJP OF DOE/RL-89-09 FI/CMS WORK PLAN DRAFT C FOR 100-DR-1

SUBJECT: Review of Project Specific Quality Assurance Plan (QAPJP) for the 100-DR-1 Operable Unit (Appendix "A" of 100-DR-1 Work Plan Draft C).

REFERENCE DOCUMENTS:

- #1 TPA Document #89-10 of 5/89 and Rev #1 of 9/90 and Rev #2 of 9/91
- #2 QAMS-004 of 9/80 and QAMS-005 of 12/80
- #3 DQO for Remedial Response Activities Document EPA/540/G-87/003 Of 3/87-Description of Requirements
- #4 DQO for Remedial Response Activities Document EPA/540/G-87/004 of 3/87-A RI/FS Example of a DQO Case Study
- #5 WHC-EP-0383 of 12/90 - QAPP for Env Engineering/Technology/Permitting
- #6 DOE Letter 91-ERB-171 of 9/30/91 (RI/FS Work Plan Review Instructions)

GENERAL COMMENTS:

- o The document reviewed, Appendix "A" of Work Plan, is the QAPJP, the project specific QA plan. It addresses QA requirements. The QAPJP frequently references sections of the Work Plan to fulfill QA requirements. The referenced sections were reviewed for compliances.
- o Each numbered comment below is a non-compliance to the indicated DOE/EPA QA criteria. The EPA QA criteria are found in the documents #1, #2, #3, #4, and #5 of "Reference Documents". The comments are in the specified format.
- o The document reviewed is a TPA Primary Document and represents the result of a continuous consensus/decision process between DOE/EPA/WDOE.
- o The QAPJP is a project specific document. The final version it is expected would consider and incorporate such comments, as necessary, appropriately.
- o The FI/CMS Limited Field Investigation work (LFI) in this Work Plan (WP) is limited to Source and Vadose Zone Investigations. WP Table 2-1 and Table 4-2 show Sources for Investigation. Table C-2 shows investigation/analysis work.
- o The comments are made keeping in mind the above features and that quality achievement is a line responsibility.

COMMENT #1: QAMS-005 Sec 5.5 & QAPJP Sec 3.0 (Pg A-3) -Data Quality Objectives for Measurements

o The QAPJP refers to Work Plan (WP) Sec 4.1.1, Sec 4.1.2, and Sec 4.2.1.5. The QAPJP states that Sec 4.2.1.5 provides justification for established DQOs. Sec 4.2.1.5 is not present in the WP or in the QAPJP.

o Table QAPJP-1 lists various pollutants and the analytical Methods to be used to quantify them. Precision and accuracy statements for the selected method (in Table QAPJP-1) are not linked to the experimental conditions or detection limits for each pollutant, as required by QAMS-005.

o In Table QAPJP-1: "Precision" is defined "Relative Percent Difference" (RPD). The EPA document EPA/540/G-87/003 illustrates the use of the "Relative Standard Deviation" (RSD) and "Variances" (S) for evaluating data values of like samples analyzed with like procedures at various laboratories and to determine the acceptable range of values. WHC needs to formalise RPD usage as RPD use is not illustrated in the EPA/DQO documents.

COMMENT #2: QAMS-005 Sec 5.6 & QAPJP Sec 4.0 (Pg A-8) - Sampling Procedures QAMS-005 Sec 5.7 & QAPJP Sec 5.0 (Pg A-12) - Sample Custody

The QAPJP refers to WHC-CM-7-7 for Project Specific Sampling Procedures. WHC-CM-7-7 has many procedures that describe segments of the Sampling Effort but there is no procedure in WHC-CM-7-7 for project specific "Sample Labelling" or



for "Frequency of Sampling" or for "Sampling Time Variant Data". The existing procedure for "Sample Custody" does not provide tracking mechanisms for the labelled sample that have the same rigor as that described in QAMS-005. Table QAPjP-2 has inadequate information to perform project specific "Sample Site Selection". Project specific procedures for Geodetic Control indicated in WP Sec 5.1.2.2 to be present in QAPjP are not found there. Procedures in Table QAPjP-2 are generic not project specific and some are yet to be done (TBD).

COMMENT #3: QAMS-005 Sec 5.8 & QAPjP Sec 6.0 -Calibration Procedures/Frequency.

QAMS-005 Sec 5.9 & QAPjP Sec 7.0 -Analytical Procedures (Pg A12/13)
The QAPjP refers to Tables QAPjP-1 and QAPjP-3 for achieving compliance with criteria requirements. These tables identify ASTM standards and EPA documents through which compliance would be achieved. Project specific Standard Operating Procedures (SOPs) describing Calibration of each pollutant measurement system, with planned recalibration frequencies with information on calibration standards is not in the QAPjP or the WP. Since all requirements of any analytical test standard may not be applicable to all situations, specific analysis procedures for each pollutant are required but are missing. The analysis work is partly a "Purchased Service" and partly performed in-house by WHC: example radio assays. Project specific procedures for in-house analysis, analytical levels, and instrument sensitivity/calibration/frequency are not stated. Analytical levels, which make precision and accuracy statements useful, are not given in the QAPjP or in Work Plan for the selected methods.

COMMENT #4: QAMS-005 Sec 5.10 & QAPjP Sec 8.0 (Pg A-13/15)-Data Reduction, Validation, and Reporting.

The QAPjP lists criteria that shall be contained in procedures used for the validation of data. The criteria that is listed does not provide adequate information or include the data reduction scheme for each measured parameter, the set of principal criteria to be used to validate data/integrity, or the reporting scheme and/or flow-chart for the planned data flow for the entire data collection process. This applies to the in-house effort and as applicable to purchased services.

COMMENT #5: QAMS-005 Sec 5.14 & QAPjP 12.0 (Pg A-19) - Routine Procedures to Assess Data Precision, Accuracy, and Completeness.

The QAPjP states that statistical techniques may be used to perform this activity. If such techniques are used then the required written instructions shall be generated. QAMS-005 requires that the specific procedures needed to perform any task(s) on a routine basis must include statistical detail and must be described for all environmental measurement and monitoring. These procedures are not described in the Work Plan or the QAPjP for the in-house work and/or applicable strategy for the purchased services as applicable.

COMMENT #6: QAMS-005 Sec 6.0 - QAPjP vs Project Work Plans

A significant number of the QA elements are addressed minimally in the QAPjP and the details on these elements are integral to the Work Plan. QAMS-005 requires a "QA Project Plan Locator Page" be provided that enables reference of QA elements/WP text for assessing QA compliance. This page is missing.

91123651601

REVIEW COMMENT RECORD (RCR)	1. Date	2. Review No.
	10/31/91	0
	3. Project No.	4. Page
		1 of 12

5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
RCRA Facility Investigation/ Corrective Measures Study Work Plan for the 100-DR-1 Operable Unit		Bill Fryer Mike Gasser Chris Wilber	GSSC	6-9830

17. Comment Submittal Approval:

10. Agreement with indicated comment disposition(s)

11. CLOSED

Organization Manager (Optional)

Date

Reviewer

Date

Reviewer

Project/Cognizant Engineer

Project/Cognizant Engineer

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1.	General Comment: The approach to the 100 Area rescoped work plans could be changed to reduce the review cost. Much of the information in certain chapters of the work plans is identical. Consequently, the work plans could be divided into two volumes, one of which could contain all of the programmatic information (inclusive of the appendixes). The second volume could then contain the source information and proposed operable unit-specific investigative program. The programmatic volume would only have to be reviewed once for the entire 100 Area.			
2.	General Comment: It appears that there is a general lack of information on the location and types of wastes disposed at the 100-DR-1 unit. These data gaps will need to be filled in order to do a reasonable risk analysis and to identify those sites requiring an EA or IRA.			

REVIEW COMMENT RECORD (RCR)	1. Date 10/31/91	2. Review No. 0
	3. Project No.	4. Page 2 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
3.	General Comment: The wide spread referencing of other reports is generally appropriate, but the level of documentation included on the tables and figures needs to be improved. For example, on Table 3-18 the time frame for which this data is representative should be included on the table so that a referenced document does not have to be consulted to evaluate the applicability of the information.			
4.	Page WP 1F-1, Figure 1-1: The WPPSS operated a steam electrical generation plant at the N-Reactor site. This should be noted on the figure. Also a label should be added which identifies the Hanford boundary.			
5.	Page WP 2-1, Sec. 2.0, Par. 2: The citation for "DOE-RL (1989, 1991b)" should be corrected to 1989 "a" or "b".			
6.	Page WP 2-4, Sec. 2.1.3.1.1, Par. 2, Sen. 4: Describe what chemicals the organic polyelectrolyte filter aid consists of.			
7.	Page WP 2-5, Sec. 2.1.3.1.2, Sen. 3: The make up of the proprietary compounds needs to be identified. At the very least, the material needs to be designated as to whether it is a dangerous/hazardous waste.			
8.	Page WP 2-18, Sec. 2.2, Par. 1, Sen. 6: The reference "DOE-RL 1991d" is not found in the list of references.			
9.	Page WP 2-20, Sec. 2.2.2.1, Sen. 1: The reference "DOE(1988)" should be corrected to 1988 "a" or "b".			

REVIEW COMMENT RECORD (RCR)	1. Date 10/31/91	2. Review No. 0
	3. Project No.	4. Page 3 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
10.	Page WP 2-20, Sec. 2.2.2.2, Par. 2: The text description does not match what is presented in Figure 2-6. In particular, the FSA unit, according to the cross-section, is present along the axis of the asymmetrical syncline and pinches out along the northern limb. The text indicates it is not present along the axis of the syncline. Also the FSD1 unit described in the text cannot be found on the cross-section.			
11.	Page WP 2-31, Sec. 2.2.7.4, Sen. 1: The reference "(Ecology et al. 1990b)" is not found in the list of references.			
12.	Page WP 2F-2a, Figure 2-2: The 2nd and 3rd items from the top on the legend are not distinct enough so that the underground facility can be located. Also, this figure does not match with the one presented in the 100-HR-3 (Figure 2-2). The shapes, for example of the "coal storage area" are different along with the call outs used for this structure. Additionally, not all of the labeled items on the figure are discussed in the text and conversely all of the sites called out in Table 2-1 cannot be found. A list of these follows: 103-D 1607-D2 184-DA 1729-D 166-D			
13.	Page WP 2F-4: The stippled pattern used to designate the basalt is not the same as that found in the legend. In fact the pattern looks closer to the pattern for gravels.			

REVIEW COMMENT RECORD (RCR)		1. Date 10/31/91		2. Review no. 0	
		3. Project No.		4. Page 4 of 12	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)		16. Status
14.	Page WP 2F-6, Figure 2-6: The axes of the Wahluke Syncline and Gable Mt. Anticline should be shown either in the plan view of this figure or in a separate figure which also shows the units present at the surface. Also, the figure does not contain a north arrow. Additionally, the stratigraphy of the area west of well 199-B3-2 appears inconsistent with the reported depositional environment of the unit.				
15.	Page WP 2T-1d, Table 2-1, 115-D: The date of the demolition should be stated. If the building was demolished after the solid waste landfill (site designation # 126-2-2) was opened in the 70's it is possible that the debris and/or filters were disposed in this landfill.				
16.	Page WP 2T-1h, Table 2-1: Several of the items listed under "Tanks and Related Facilities" lack information on service life.				
17.	Page WP 3-2, Section 3.1, Par. 2, Sen. 1: Sec. 3.3.2.2 does not list the half-life of radionuclides found at the site. Please correct the inconsistency.				
18.	Page WP 3F-5, Figure 3-5: The number of samples (N) for each of the years for Cs and Sr should be shown on the figure so that a determination of the significance of these median values can be made.				

REVIEW COMMENT RECORD (RCR)

1. Date 10/31/91	2. Review No. 0
3. Project No.	4. Page 5 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
19.	Page WP 3F-6, Figure 3-6: In the areas where major process effluent wastes were discharged to the soil column, saturated flow conditions probably existed from the surface downward. The contaminants once in the groundwater system would have then flowed directly to the river. Some of these contaminants, such as tritium, have little or no interaction with the soils that they flow through. As such, a flow line on the figure should go from "Infiltration" to "Groundwater" by-passing "Soil" as a secondary source. Additionally, a line should go from "Soils" to "Direct Contact" to take into account exposure of burrowing animals.			
20.	Page WP 3-7, Sec. 3.1.1.4.2, Par. 2, Sen. 1: Identify the location of the disposal site of the equipment. At least state if it was within the 100-DR operable unit.			
21.	Page WP 3-9, Sec. 3.1.1.7, Par. 3, Last Sentence: You could strengthen your case for not investigating the fly ash by stating that, as an ARAR, RCRA provides a hazardous waste exclusion for fly ash.			
22.	Page WP 3-11, Sec. 3.1.1.10.3: The details of the discrepancies in the location should be discussed. The general area should be located on Figure 2-2 with a footnote indicating the exact location is not known.			
23.	Page WP 3-14, Sec. 3.1.6, Par. 1: A description of which species of plants were sampled for the data listed in figure 3-20 for off-site sampling locations needs to be stated. Different plant species can bio-accumulate and/or tolerate different elements to varying degrees.			

REVIEW COMMENT RECORD (RCR)

1. Date

10/31/91

2. Review No.

0

3. Project No.

4. Page

6 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
24.	Page WP 3-14, Sec. 3.1.6, Par. 2: The text states that the data was collected in 1986 yet the figure which is referenced shows that the data was collected during the period 1981 to 1986. Correct the inconsistency.			
25.	Page WP 3-15, Sec. 3.2, Par. 2: Check the reference "40 CFR 264.100" for correctness in relation to ARARs.			
26.	Page WP 3-20, Sec. 3.2.5: This section should also include the proposed list of additional MCLs which have not yet been formally accepted.			
27.	Page WP 3-23, Sec. 3.3.2.1: The reason given for eliminating several radionuclides is not adequately quantified. It would be helpful if the percentage or total activity contributed by the eliminated radionuclides was presented so that the reader could confirm that this is warranted.			
28.	Page WP 3-26, Sec. 3.3.4.1 & 3.3.4.2: It is premature to make the statement that no imminent endangerment exists without gathering a complete list of known contaminants, sites and preparing a formal risk assessment. How can you, by casual examination of the data, determine that you will not have an increase in the death rate of 1 in 100,000 or 1 in 1,000,000? Add additional text to soften this statement.			
29.	Page WP 3-26, Sec. 3.3.4.2: This sentence not complete; it appears some of the text has been left out. The 100-HR-3 text contains the complete statement.			
30.	Page WP 3F-2, Figure 3-2 and WP 2F-2a, Figure 2.2, Sheet 1: The locations of the effluent pipelines are not the same.			

REVIEW COMMENT RECORD (RCR)	1. Date 10/31/91	2. Review No. 0
	3. Project No.	4. Page 7 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
31.	Page WP 3F-2, Figure 3-2: Add a legend that explains what the black dots and associated labels "D1-D4" represent.			
32.	Page WP 3F-3, Figure 3-3: Add the distance to Yakima so that the reader knows how far away this sampling point is located.			
33.	Page WP 3T-1, Table 3-1: State what the units are for the numerical values presented in this table.			
34.	Page WP 3T-18, Table 3-18: It is unclear what is being presented in this table. Are these average values? What does the "plus" sign and the numerical value after it represent. Also, if these are average values as indicated by the text then the time frame for which the samples are representative of the contamination levels should be stated. Please clarify the table.			
35.	Page WP 3T-22, Table 3-22: The following should be deleted: 40 CFR 264.18 (a), 40 CFR 264.18 (b), These and additional siting requirements are found in WAC 173-303. The Washington State regulations should be used instead of the federal regulations for TSD requirements.			

REVIEW COMMENT RECORD (RCR)		1. Date 10/31/91	2. Review No. 0
		3. Project No.	4. Page 8 of 12
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)
36.	<p>Page WP 4T-1a, Table 4-1: "Source Date" should be changed to "Source Data".</p> <p>The title and subtask number, and number of subtasks mentioned in the text are different from those listed on the unit schedule (Figure 6-1). The title, number of subtasks under each task, and subtask number should be the same in both the schedule and text.</p> <p>The integration points for the transfer of data between the different work plans as called out in the text cannot be found on any of the schedules. These integration points should be clearly identified and the means of transfer of data expounded upon. This entire subject needs to be addressed with relation to the schedule and the description of sub tasks that have plainly been assigned to 100-HR-3. An example of this is drilling and logging of boreholes which shows up on the 100-DR-1 schedule (Figure 6-1) yet the text states that it will be done under 100-HR-3's investigation. Are these the integration points?</p> <p>Some of the data collected should be of full CLP data to help confirm the data quality of the samples collected.</p>		
37.	<p>Page WP 5-1, Sec. 5.0, Par. 3, Sen. 1: This statement does not make sense. It states that the work plan will not be modified but in the next sentence it effectively states that the entire scope of work can be changed at any time with agency approval. Suggest that the sentence be deleted.</p>		

REVIEW COMMENT RECORD (RCR)		1. Date	2. Review No.
		10/31/91	0
		3. Project No.	4. Page
			9 of 12
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)
38.	Page WP 5-1, Sec. 5.0, Par. 4: The schedules show no integration point for the 120-D-1 pond closure. Add the integration points to assure that the work is done in an efficient and timely manner.		
39.	Page WP 5-4, Sec. 5.1.2: The list of subtasks does not correlate with those found on Figure 6-1. This should be corrected.		
40.	Page WP 5-4, Sec. 5.1.2, Par. 3: Neither the schedule or the text identifies the location of any integration points. These integration points need to be identified to force an effective transfer of information.		
41.	Page WP 5-6, Sec. 5.1.2.3.2, Par. 2, Sen. 6: "Relatable" should be "related" or "relative".		
42.	Page WP 5-9, Sec. 5.1.3: This section states that all of the borings will be done as part of 100-HR-3 investigation and the information transferred to 100-DR-1. The integration points need to be identified and placed on Figure 6-1. If it is assumed that all of the borings listed on Table 4-2 will be done as part of the HR-3 investigation, why does Sec. 5.1.5.2 go into a complete discussion of drilling and logging of boreholes? Is this the integration point? If it is, it should be better presented. This entire subject area needs to be clarified. Change the text to more clearly present this relationship.		
43.	Page WP 5-19, Sec. 5.1.11.4: The synergistic effects of contaminants on human health should be addressed.		

REVIEW COMMENT RECORD (RCR)		1. Date 10/31/91		2. Review No. 0	
		3. Project No.		4. Page 10 of 12	
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)		16. Status
44.	Page WP 5-20, Sec. 5.1.2.3.3: The following sites are called out in the text but are not listed on Figure 6-1: 1. Electrical Facilities 2. 126-D-1 Ash Disposal Basin				
45.	Page WP 6-1, Sec. 6.0: The title of this section would more appropriately be titled "Schedules" instead of "Introduction", which is more appropriate for Chapter 1.0.				
46.	Page WP 6-1, Sec. 6.2: If there are any critical assumptions upon which the entire schedule depends, they should be listed. For example availability of funding.				
47.	Figure 6-1: The title should identify which operable unit this schedule is for. Additionally, item 6.2.3, covering water level measurement schedule, should extend out beyond the date of the final well installation.				
48.	Figure 6-1: This schedule contains tasks not identified or discussed in the text, and conversely, tasks discussed in the text are not on the schedule. Examples of this are: 1. Test pits discussed on Page WP 5-12, Sec. 5.1.5.3 are not found on the schedule. 2. The schedule does not contain a "task" for geophysical logging of the borehole as discussed in the text.				

REVIEW COMMENT RECORD (RCR)	1. Date 10/31/91	2. Review No. 0
	3. Project No.	4. Page 11 of 12

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
49.	Figure 7-1: It is stated in the box for the "RFI/CMS coordinator" that the structure of this branch of the organization chart is "to be determined" at some future date. An examination of Figure 7-2 exhibits what is apparently the organization branch that was called out as "to be determined". Please clarify this relationship.			
50.	Page WP 7F-1, Figure 7-1: The rationale for having two branches, RFI/CMS coordinators and Hanford site Technical Resource Team, is not apparent. These two branches could easily be combined and reduce potential communication problems and time delays due to paper work shuffle.			
51.	Page WP 7F-3, Figure 7-3: Shouldn't there be a solid line drawn to connect "H&S Officer" to "Industrial Hygiene and Safety"? Re-examine the flow chart to determine if this is needed.			
52.	Page WP 7T-1, Table 7-1: There are two identical subject headings "Geotechnical and civil engineering" which should be combined or an explanation added to the table explaining why they are different.			
53.	Page A-1, Sec. 1.3, Par. 1: The reference "Ecology et al. 1990" should be checked. It should be "Ecology et al. 1990a".			
54.	Page B-3, Sec. 1.4, Par. 2: An explanation needs to be added to indicate what the additional 8 hours of training covers. It is assumed by this reader to represent the 8 hr supervisory course required by 40 CFR 1910.120 for all supervisors. If this is the case then state it.			

REVIEW COMMENT RECORD (RCR)			1. Date 10/31/91	2. Review No. 0
			3. Project No.	4. Page 12 of 12
12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
55.	Page B-4, Sec. 2.1.1, Bullet 1: Strike from the text the word "certain". If medication is required outside of medical emergencies it should not be taken in the exclusion zone.			
56.	Page B-11, Sec. 5.0, Sen. 3: Work should NOT be initiated or continued until all health and safety equipment is in place.			
57.	Page B-12, Sec. 6.0, Last sentence: Replace "may" with "will". The regulations state that engineering controls and work practices will be undertaken to protect the worker from exposure and that Personal Protection will not be used as a substitute for these controls.			