



June 1, 1992

Steven H. Wisness
Hanford Project Manager
U.S. Department of Energy
P.O. Box 550, A5-19
Richland, Washington 99352

Re: Review of the PUREX CLS Sampling and Analysis Plan 19537

Dear Mr. Wisness:

The Environmental Protection Agency (EPA) has completed the review of the PUREX CLS Sampling and Analysis Plan.

The document is well written and adequately addresses the scope of the sampling activity. In particular, the authors should be commended for the addition of the section pertaining to minimization of this waste stream. Deficiencies in the document are discussed in the specific comments enclosure.

Also enclosed for your convenience are the general comments pertaining to the Liquid Effluent Sampling Quality Assurance Project Plan. If you have any comments or questions, please call me at (509) 376-8631.

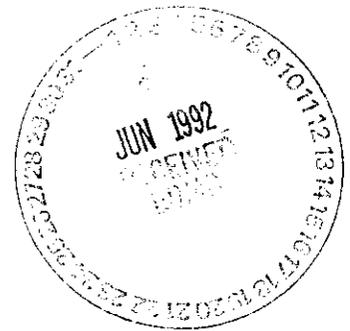
Sincerely,

Dennis A. Faulk
Environmental Scientist

Enclosure

cc: Gary Anderson, Ecology
Chris Midgett, WHC
Jim Mecca, DOE
Dave Nylander, Ecology
Tim Veneziano, WHC

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Specific Comments on the PUREX CSL Sampling and Analysis Plan

Comment, Section A, Objectives:

Objective one should be rewritten to state that the objective of the sampling is to determine the variability (if any), of the waste stream, over time.

Comment, Section B.5.1, Standby Reductions:

This section should also list the reduction of effluents in gallons per minute to give the reader a better understanding of the amount of flow reduction.

Comment, Section B.5.4, Corrosivity Control:

More information is needed in regards to the retention basin. Is there leak detection equipment and what is the approximate hold up time for liquids diverted to this basin?

Comment, Section B.5.7, Vacuum Fractionator:

The text states that slightly radioactive and slightly acidic effluents are contributors. The word slightly is uninformative. It would be beneficial if actual numerical values were used in this section to describe the stream. Also does this stream have the potential to be diluted so that the initial pH may be higher than noted?

Comment, Section F.2, Protocol Samples:

This section is incomplete. Samples will need to be taken for PCB/Pesticides, herbicides, total dissolved solids, and conductivity. If these analytes are not going to be measured then the document must contain a justification for deletion of these substances. In addition, EPA requires that the holding times for each analysis be included.

In addition this section should address chain of custody for the samples taken.

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LIQUID EFFLUENT SAMPLING QUALITY ASSURANCE PROJECT PLAN

1. Section 2.1 Objectives, page 2-1

Comment: Two additional objectives should be added to the Objectives section of the QAPjP. One objective not included in the current plan is "...provide data to support a RCRA delisting petition for those streams designated as dangerous waste". The second objective that should be included is "...provide data to support National Pollutant Discharge Elimination System permits or permit modifications subject to future surface water discharge".

Recommendation: Modify objectives.

2. Section 3.0 Figure 3.2, page 3-2

Comment: Figure 3.1 needs to be revised to identify the organization responsible for data reporting.

3. Section 10.0 Internal Quality Control, page 10-11

Comment: The QAPjP suggests that in cases where a one-time single analysis is performed, these requirements may be limited in scope. EPA considers this approach to be severely flawed. If DOE's position is to obtain a minimum number of samples, they then should consider a more thorough internal quality control program to ensure that those analyses are valid. One example of the importance of internal quality control can be illustrated by a review of past liquid effluent data. A review of previous UO₃ Plant Process Condensate analyses indicate that field, equipment, or trip blanks have not been collected and analyzed for metals, cyanide, or semi-volatile organics, therefore, if these constituents are found in the liquid effluent Ecology and EPA will attribute those contaminants to the process. If these constituents exceed effluent quality criteria, treatment for these substances may be required. EPA considers blanks, splits, and duplicates to be the most cost effective method to identify the presence of sample contaminants not attributable to the process in liquid effluent samples.

Recommendation: Consider the use of additional internal quality control measures for these liquid effluents and analytes previously identified in Hanford liquid effluents to verify their presence in these liquids as opposed to sample contaminants introduced into the sample in either the laboratory or in the field.

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4. Section 15.0 Quality Assurance Reports, page 15-1

Comment: Data reporting language is inconsistent with the TPA. EPA and Ecology can request unvalidated data any time after completion of analysis. EPA does not consider specific quality assurance reports to be a requirement. EPA will request data packages from the appropriate organization and perform independent reviews of the QA/QC program. This effort will be performed on selected samples identified by EPA through a written request.

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