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MEMORANDUM FOR: John J. Linehan, Acting Chief, WMRP
 Division of Waste Management

THRU: Myron H. Fliegel, WMGT
 Division of Waste Management

FROM: Michael F. Weber, WMGT
 Division of Waste Management

SUBJECT: CONSIDERATION OF I-129 DATA IN THE HANFORD FINAL EA

During the week of October 6, 1986, we met with you and F. Robert Cook several times to discuss his concern about DOE's consideration of Iodine-129 (I-129) data in the Hanford Final EA. Mr. Cook's principal concern seems to be DOE's omission of a reference to a report that provides most of the I-129 data (i.e., "I-129, Co-60, and Ru-106 measurements on Water Samples from the Hanford Project Environs, 1962-1974 (draft)" by Brauer and McFadden, 1975). As we discussed, we have indirectly included the concern about I-129 data in our comment on groundwater travel time analyses in the final Hanford EA in the context of uncertainties associated with conceptual models and available data for the hydrogeologic system.

The staff has previously expressed to DOE the importance of considering radiochemical information in evaluating the groundwater flow system at Hanford. This was communicated to DOE in a letter from R. Browning to J. Purcell in June 1985. The letter identified two references that contain radiochemical data for the Hanford site but had not been cited in the draft EA. In preparing the final EA, DOE included information about the distribution of I-129 in groundwater at the Hanford site. In Chapter 3 (pages 3-112 and 113), DOE acknowledged that I-129 and H-3 have been detected in shallow groundwater at the site. DOE also indicated that it cannot currently explain the anomalously high concentrations of I-129 that have been detected in confined groundwater at borehole DB-7. DOE stated "The source of the iodine-129 in borehole DB-7 is unknown and will be addressed by the U. S. Department of Energy." DOE also stated (page C.4-50) that "To assess the potential use of [I-129] data, the U. S. Department of Energy will carry out a technical review to evaluate published and unpublished iodine-129 information. The support role iodine-129 data might have in addressing ground-water travel times must await completion of this review." We consider that DOE's response addresses Mr. Cook's concern about the uncited Brauer and McFadden (1975) report by stating that "one of the documents referenced by the commenter" (page C.4-50) was not used in the draft EA because it was never released as a final report.

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The BWIP Hydrology review team recognizes Mr. Cook's concern and we intend to pursue resolution of the concern at the upcoming Hydrology Testing Strategy Meeting with DOE. Please contact me if you have any questions or comments about our consideration of I-129 data at Hanford.

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Michael F. Weber
Geotechnical Branch
Division of Waste Management

cc: F. Robert Cook, BWIP-OR

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