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NMWMP - Hanford



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Kennewick

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
DIVISION OF RADIATION PROTECTION

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April 27, 1998



Phil Staats
Washington State Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336-6018

Dear Mr. Staats:

The Department of Health (DOH) has reviewed the following documents: Proposed Plan for Interim Remedial Action and Dangerous Waste Modified Closure of the Treatment, Storage, and Disposal Units and Associated Sites in the 100-NR-1 Operable Unit (DOE/RL-97-30); Proposed Plan for Interim Remedial Actions at the 100-NR-1 Source Sites Operable Unit and the 100-NR-2 Groundwater Operable Unit (DOE/RL-96-102); Engineering Evaluation/Cost Analysis for the 100-N Area Ancillary Facilities and Integration Plan (DOE/RL-97-22); Corrective Measures Study for the 100-NR-1 and 100-NR-2 Operable Units (DOE/RL-95-111); and 100-NR-1 Treatment, Storage, and Disposal Units Corrective Measures Study/Closure Plan (DOE/RL-96-39).

We appreciate the opportunity to review the Proposed Plan and associated documents that will guide the cleanup of the 100-N area. We are pleased that work is starting on this unit because we believe that 100-N is currently the main area of the Hanford Site where the public can receive radiation exposure from Hanford pollutants. The evaluation of the cleanup levels based on various land uses and controls coincides with the approach that DOH has recommended in its Hanford Guidance for Radiological Cleanup. DOH hopes that remediation of this area can proceed on schedule and using a sound technical basis that will give priority to those areas that have a current measurable dose impact on the public.

We have the following more specific comments.

- 1) The rural residential scenario used to evaluate future potential risks is sometimes referred to as an unrestricted use scenario (for example, DOE/RL-97-30, page 13). This scenario also is implied to not preclude any future land use (for example, DOE/RL-96-102, page 4). Since this scenario restricts the use of 100-N Area groundwater, terms other than 'unrestricted use' or 'not precluding any future land use' would be more appropriate when referring to this scenario.
- 2) Reference is made to a 15 mrem/y dose standard for cleanup of sites contaminated with radioactivity. This cleanup level is sometimes referred to as an EPA standard, other times as an EPA draft standard, and other times as EPA guidance. For members of the public not familiar with radiation regulations, use of the term 'EPA standard' implies an



EPA regulation with legally binding requirements. Since this EPA cleanup level has not been promulgated and has been withdrawn from consideration for promulgation, it would be more appropriate to consistently refer to it as EPA guidance.

3) DOE/RL-96-102, page 19, Receptor Pathway Descriptions

The text states that 'access control by the DOE currently prevents potential exposure to contaminated groundwater emanating at 100-N-Springs'. This is not the case at times of very low river stage, where ample dry land is exposed above the water line but below the marked radiation zones. This land is below the river's high water mark and is accessible to humans.

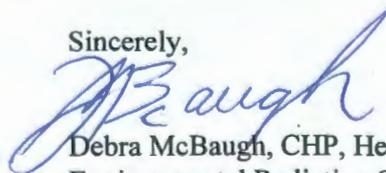
4) The documents discuss cases where radiological contaminants either exist or may exist at concentrations above cleanup standards at depths greater than 4.6 meters below grade (for example, DOE/RL-97-30, page 8, and DOE-RL-96-102, page 12). Are these cleanup standards the soil concentrations corresponding to 15 mrem/y from contaminants in the first 4.6 meters below grade, for example those listed in Table 3, page 12 of DOE/RL-97-30?

The cleanup concentrations listed in this table, and other similar tables, are for contaminants located from grade to a depth of 4.6 meters, and they do not refer to contaminants at greater depth. Contaminants at depth would have a different set of concentrations corresponding to 15 mrem/y or some other criterion. It would be helpful to point out exactly what cleanup standards are being referred to when discussing contaminants at depths greater than 4.6 meters.

5) Exactly how contaminants at depth are dealt with, and how they correspond to the depths of concern for the two exposure scenarios (4.6 m for rural residential and 3 m for ranger/industrial), is not clear. For example, the discussion in the CMS for the 116-N-1 Trench (DOE/RL-96-39) indicates remediation to 21 feet (6.4 m) below grade, or 5 feet below the bottom of the engineered structure (located 16 feet below grade) for both exposure scenarios. The document did not make it clear why remediation to this depth was needed to meet the dose criterion for these scenarios, particularly for the ranger/industrial scenario.

We hope these comments are helpful with the final preparation of these documents. If you have any questions, please don't hesitate to contact Scott Van Verst at 360-236-3256 or Dick Jaquish at 509-377-3818.

Sincerely,



Debra McBaugh, CHP, Head
Environmental Radiation Section



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