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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

01-RCA-047

DEC 05 2000

Ms. Kathleen A. Conaway
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336

RECEIVED
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EDMC

Dear Ms. Conaway:

100 K AREA/PURGEWATER DISCHARGE INVESTIGATION – JULY 20, 2000

This is in response to your letter to M. Hughes, Bechtel Hanford, Inc., and me, "100 K Area/Purgewater discharge Investigation – July 20, 2000," dated October 5, 2000, expressing the State of Washington Department of Ecology's (Ecology's) concerns that resulted from your investigation into purgewater discharges in the 100 K Area. The U.S. Department of Energy, Richland Operations Office (RL) believes that there is unanimous agreement by Ecology and the U.S. Environmental Protection Agency (EPA) that the existing "Strategy for Handling and Disposing of Purgewater at the Hanford Site" (Purgewater Strategy) is outdated and in need of substantial revisions. Therefore, with this letter, RL invites Ecology and EPA together with RL to commence a dialogue toward reexamining and/or improving the strategy consistent with the requirements of the Hanford Federal Facility Agreement and Consent Order. 53822

In the meantime, as discussed with you in the exit meeting to this investigation, RL and the Hanford Site contractors have been working together to correct the concerns identified in the letter and manage purgewater appropriately. In September 2000, RL issued letters directing all Hanford Site contractors to manage purgewater through the strategy (enclosure). These letters reiterated pertinent requirements that apply to the collection and discharge of purgewater from groundwater monitoring wells. RL has also requested that an updated Purgewater Strategy Implementation List address a complete set of restrictions and management practices controlling purgewater discharges at the Hanford Site. The list is to be published semi-annually. Until this list is updated, all purgewater is being collected.

Additionally, the 100 K Area entry and collection requirements have been communicated to the contractors and personnel involved in groundwater well activities and will be included in the updated Purgewater Strategy Implementation List and subcontractor work related documents.

Also, as provided in Section 10.0 of the Pollution Prevention and Best Management Practices Plan for State Waste Discharge Permits ST 4508, ST 4509, and ST 4510 (DOE/RL-97-67 Revision 3) purgewater discharges are exempt from Washington Administrative Code 173-216 permitting. Furthermore, the "Plan and Schedule for Disposition and Regulatory Compliance for Miscellaneous Streams" (DOE/RL-93-94, Revision 1 – approved by Ecology), states that purgewater will be managed according to the Purgewater Strategy.

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Ms. Kathleen A. Conaway
01-RCA 047

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RL is committed and looking forward to working with Ecology and EPA to eliminate any ambiguity surrounding the management of purgewater and agrees that the Purgewater Strategy should be revised expeditiously. If you have any questions, please contact Alex Teimouri, RL, on (509) 376-6222,



Steven H. Wisness, Acting Director
Regulatory Compliance and Analysis Division



Michael C. Hughes, President
Bechtel Hanford, Inc.

RCA:AET

Enclosure:
Letters to Hanford Site Contractors

cc w/encl:

Administrative Record
M. A. Hughes, BHI
M. J. Graham, BHI
R. J. Landon, BHI
J. H. Richards, CTUIR
B. Baker-Kaleel, Ecology
M. A. Wilson, Ecology
D. R. Sherwood, EPA
L. E. Gadbios, EPA
W. E. Toebe, FHI
J. D. Williams, FHI
D. J. Watson, FHI
Environmental Portal, LMSI
P. Sobotta, NPT
J. S. Fruchter, PNNL
S. P. Luttrell, PNNL
D. J. Moak, WMTS
R. Jim, YN



Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

00-GWVZ-069

SEP 20 2000

Mr. R. D. Hanson, President
Fluor Hanford, Inc.
Richland, Washington 99352

Dear Mr. Hanson:

CONTRACT NO. DE-AC06-96RL13200 – PURGEWATER MANAGEMENT AT HANFORD

Through this letter, the U.S. Department of Energy, Richland Operations Office (RL), directs all Hanford Site contractors to manage purgewater through the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington," (DOE-RL 1990). Specifically, Table Four lists the wells requiring collection as determined by the data available in June 1990. The Pacific Northwest National Laboratory (PNNL) maintains Table Four, known as the "Implementation List." RL further requests Hanford Site contractors to assist PNNL in the upgrade of the list of wells requiring purgewater control at Hanford by providing input on the proximity of known or suspected surface and underground contamination that should be considered in the control of surface discharges of purgewater. The Implementation List will be maintained as a "living document" and will be distributed semi-annually to the Hanford Site contractors through PNNL Document Control. Section 3.7.3, "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-RL 1990) states that the provisions of this strategy shall be reviewed annually by the (Hanford Federal Facility Agreement and Consent Order [Tri-Party Agreement]) signatory parties or their designees for the purposes of amending the document if it is deemed necessary. RL requests the contractors to finalize the revised implementation list and provide any suggested improvements to the strategy by mid-November 2000 so that RL can initiate the review.

Purgewater is the groundwater discharged from a monitoring well prior to sampling to ensure that the sample reflects ambient groundwater conditions unaffected by the construction materials of the well. In general, a minimum of three saturated well bore volumes are discharged prior to sampling, resulting in a volume of water between a few gallons to perhaps as much as 150 gallons. Purgewater also includes groundwater discharged during well maintenance and testing activities. Maintenance and testing may produce larger volumes of water.

Early in the history of the Tri-Party Agreement it was recognized that most of the purgewater generated on the Hanford Site was environmentally safe to discharge to the ground. A strategy for the management of purgewater was negotiated with the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology) that was incorporated into the Tri-Party Agreement, "Strategy for Handling and Disposing of Purgewater

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at the Hanford Site, Washington," (DOE-RL 1990). The strategy identified specific wells from which purgewater needed to be controlled and not allowed to be discharged to the ground. The strategy further recognized that the list of wells requiring purgewater control would need to be periodically revised.

Teams that sample wells at Hanford use the Implementation List to know what wells require containment of purgewater. Up to now, wells identified in the Implementation List for purgewater controls were generally based on the concentration of contaminants. However, the strategy provides additional restrictions in Sections 3.2.2, considering the proximity of wells to surface or buried contaminants that might be mobilized by the infiltration and percolation of water discharged to the ground through well purging practices. It is the intention of RL to upgrade the Implementation List to address all of the constraints identified in the purgewater strategy for discharge to the ground.

A recent incident has highlighted the need to better control purgewater at Hanford. On July 14, 2000, a subcontractor performing well maintenance activities in the 100-K Area for Bechtel Hanford, Inc. was observed by Fluor Hanford, Inc. K Basins personnel discharging purgewater to the ground. The work was stopped because of potential conflicts with Spent Nuclear Fuel (SNF) Process Standard No. 409 (KE). Appropriate notification procedures to RL, EPA, and Ecology were followed and an Unusual Occurrence was declared.

The process standard is designed to implement requirements governing discharges to the ground to ensure environmental protection and regulatory compliance for these activities. RL commends the SNF Project for developing such controls. Enhanced vadose zone transport of subsurface contaminants from the infiltration and percolation of water discharged to the ground from purgewater, pressurized water line leaks, fire hydrant testing, runoff from buildings and parking lots, etc. are a significant concern at Hanford. To address this concern, SNF attempted to communicate the process standard to other site contractors via a letter. It is RL's intention to have all purgewater restrictions embodied in the Implementation List of the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-RL 1990). In this manner, the groundwater sampling, well maintenance and well testing crews will have one controlling document for purgewater management.

To remedy the issues cited above, RL has requested PNNL to expeditiously initiate a process to upgrade and maintain the Implementation List of the purgewater strategy to address the complete set of restrictions and management practices controlling purgewater at the Hanford Site. The list is to be published semi-annually and incorporated into the Tri-Party Agreement and Sitewide Permit annually unless renegotiation of the strategy provides different requirements. RL also requests the Hanford Site contractors to manage any additional facility-specific purgewater control measures through the Implementation List by communicating these measures to the PNNL interface, John Fruchter at (509) 376-3937, by September 29, 2000.

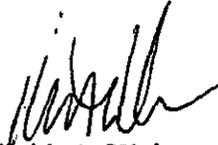
Mr. R. D. Hanson
00-GWVZ-069

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SEP 20 2000

If you have questions, please contact me, or your staff may contact K. Michael Thompson, Acting Program Manager, Groundwater/Vadose Zone Program, at (509) 373-0750.

Sincerely,



Keith A. Klein
Manager

GWVZ:KMT

cc: D. R. Sherwood, EPA
M. A. Wilson, Ecology



Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 20 2000

00-GWVZ-070

Mr. M. C. Hughes, President
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, Washington 99352

Dear Mr. Hughes:

CONTRACT NO. DE-AC06-93RL12367 - PURGEWATER MANAGEMENT AT HANFORD

Through this letter, the U.S. Department of Energy, Richland Operations Office (RL), directs all Hanford Site contractors to manage purgewater through the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington," (DOE-RL 1990). Specifically, Table Four lists the wells requiring collection as determined by the data available in June 1990. The Pacific Northwest National Laboratory (PNNL) maintains Table Four, known as the "Implementation List." RL further requests Hanford Site contractors to assist PNNL in the upgrade of the list of wells requiring purgewater control at Hanford by providing input on the proximity of known or suspected surface and underground contamination that should be considered in the control of surface discharges of purgewater. The Implementation List will be maintained as a "living document" and will be distributed semi-annually to the Hanford Site contractors through PNNL Document Control. Section 3.7.3, "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-RL 1990) states that the provisions of this strategy shall be reviewed annually by the (Hanford Federal Facility Agreement and Consent Order [Tri-Party Agreement]) signatory parties or their designees for the purposes of amending the document if it is deemed necessary. RL requests the contractors to finalize the revised implementation list and provide any suggested improvements to the strategy by mid-November 2000 so that RL can initiate the review.

Purgewater is the groundwater discharged from a monitoring well prior to sampling to ensure that the sample reflects ambient groundwater conditions unaffected by the construction materials of the well. In general, a minimum of three saturated well bore volumes are discharged prior to sampling, resulting in a volume of water between a few gallons to perhaps as much as 150 gallons. Purgewater also includes groundwater discharged during well maintenance and testing activities. Maintenance and testing may produce larger volumes of water.

Early in the history of the Tri-Party Agreement it was recognized that most of the purgewater generated on the Hanford Site was environmentally safe to discharge to the ground. A strategy for the management of purgewater was negotiated with the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology) that was incorporated into the Tri-Party Agreement, "Strategy for Handling and Disposing of Purgewater

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at the Hanford Site, Washington," (DOE-RL 1990). The strategy identified specific wells from which purgewater needed to be controlled and not allowed to be discharged to the ground. The strategy further recognized that the list of wells requiring purgewater control would need to be periodically revised.

Teams that sample wells at Hanford use the Implementation List to know what wells require containment of purgewater. Up to now, wells identified in the Implementation List for purgewater controls were generally based on the concentration of contaminants. However, the strategy provides additional restrictions in Sections 3.2.2, considering the proximity of wells to surface or buried contaminants that might be mobilized by the infiltration and percolation of water discharged to the ground through well purging practices. It is the intention of RL to upgrade the Implementation List to address all of the constraints identified in the purgewater strategy for discharge to the ground.

A recent incident has highlighted the need to better control purgewater at Hanford. On July 14, 2000, a subcontractor performing well maintenance activities in the 100-K Area for Bechtel Hanford, Inc. was observed by Fluor Hanford, Inc. K Basins personnel discharging purgewater to the ground. The work was stopped because of potential conflicts with Spent Nuclear Fuel (SNF) Process Standard No. 409 (KE). Appropriate notification procedures to RL, EPA, and Ecology were followed and an Unusual Occurrence was declared.

The process standard is designed to implement requirements governing discharges to the ground to ensure environmental protection and regulatory compliance for these activities. RL commends the SNF Project for developing such controls. Enhanced vadose zone transport of subsurface contaminants from the infiltration and percolation of water discharged to the ground from purgewater, pressurized water line leaks, fire hydrant testing, runoff from buildings and parking lots, etc. are a significant concern at Hanford. To address this concern, SNF attempted to communicate the process standard to other site contractors via a letter. It is RL's intention to have all purgewater restrictions embodied in the Implementation List of the "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-RL 1990). In this manner, the groundwater sampling, well maintenance and well testing crews will have one controlling document for purgewater management.

To remedy the issues cited above, RL has requested PNNL to expeditiously initiate a process to upgrade and maintain the Implementation List of the purgewater strategy to address the complete set of restrictions and management practices controlling purgewater at the Hanford Site. The list is to be published semi-annually and incorporated into the Tri-Party Agreement and Sitewide Permit annually unless renegotiation of the strategy provides different requirements. RL also requests the Hanford Site contractors to manage any additional facility-specific purgewater control measures through the Implementation List by communicating these measures to the PNNL interface, John Fruchter at (509) 376-3937, by September 29, 2000.

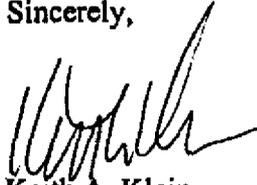
Mr. M. C. Hughes
00-GWVZ-070

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SEP 20 2000

If you have questions, please contact me, or your staff may contact K. Michael Thompson, Acting Program Manager, Groundwater/Vadose Zone Program, at (509) 373-0750.

Sincerely,



Keith A. Klein
Manager

GWVZ:KMT

cc: D. R. Sherwood, EPA
M. A. Wilson, Ecology



Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 20 2000

00-GWVZ-071

Dr. L. J. Powell, Director
Pacific Northwest National Laboratory
Richland, Washington 99352

Dear Dr. Powell:

CONTRACT NO. DE-AC06-76RL01830 - PURGEWATER MANAGEMENT AT HANFORD

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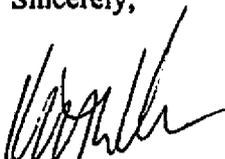
Dr. L. J. Powell
00-GWVZ-071

-3-

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Acting Program Manager, Groundwater/Vadose Zone Program, at (509) 373-0750.

Sincerely,



Keith A. Klein
Manager

GWVZ:KMT

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