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Mr. Paul T. Day
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Richland, Washington 99352

Mr. David B. Jansen
Hanford Project Manager
Washington State
Department of Ecology
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Olympia, Washington 98504-8711

Dear Messrs. Day and Jansen:

N REACTOR EFFLUENT INTERIM OPERATING RESTRICTIONS, TPA MILESTONES M-17-15A, M-17-15B, M-17-15C, LIQUID EFFLUENT CONSENT ORDER DE-91NM-177

This letter and its enclosures serve the purpose of satisfying the N Reactor effluent interim operating restrictions as contained in the subject TPA Milestones and Liquid Effluent Consent Order.

Enclosure 1 to this letter lists these interim operating restrictions and a discussion as to how these have been satisfied.

On September 20, 1991, DOE announced that N Reactor was no longer needed as a defense materials production contingency and that activities directed at the preservation of the reactor were to cease. Future activities at N Reactor were to proceed leading to the ultimate decommissioning of the reactor. Therefore the liquid effluent in the future will consist of two components; (1) that derived from routine activities and (2) that derived from the draining of liquid inventories. The flow restriction of 2 gpm negotiated last summer did not address this second component. However, the 2 gpm restriction will be adhered to.

The N Reactor Effluent BAT/AKART Evaluation, Enclosure 2, is a thorough assessment of treatment technologies for the removal of contaminants from both routine activities and that derived from the draining of liquid inventories, but not yet conclusive until additional sampling and analysis of the effluent stream is completed as scoped in the N Reactor Sampling/Analysis Plan WHC-SD-NR-PLN-008, Rev. 0. This sampling analysis plan was forwarded to your offices in September 1991.

Following regulatory concurrence on the sampling/analysis plan, the effluent stream will be sampled and chemistry will be confirmed. Based on this additional data the BAT/AKART evaluation will be reviewed for final technology selection. This will also include a determination as to where, on the Hanford Site, BAT/AKART will be implemented, i.e. locally at N Reactor or remotely in the 200 Areas. If one of the existing or proposed projects in the 200 Areas is selected for implementation of BAT/AKART, it will not be necessary to undertake a NPDES permitting action.

If you have any questions, please contact Mr. J. E. Mecca on (509) 376-7471.

Sincerely,

S. H. Wisness
Hanford Projects Manager

OPD:JEM

Enclosures
1. Interim Operating Restrictions
2. N Reactor Effluent Treatment Technology Study (BAT/AKART)

cc: H. L. Debban, WHC, w/encl.
J. L. Monhart, EM-442, w/o encl.
R. E. Lerch, WHC, w/encl.
J. E. Mecca, RL, w/o encl.
T. B. Veneziano, WHC, w/encl.

ENCLOSURE

1

INTERIM OPERATING RESTRICTIONS

INTERIM OPERATING RESTRICTIONS

Enclosure 1

Second Amendment to the
Hanford Federal Facility Agreement and Consent Order, Item 9

> Implement flow restrictions to reduce the monthly average flow rate to less than 2 gpm (reduction from 300 gpm completed).

Prior to April 1991, effluent control activities led to a reduction in effluent volumes and an increase in effluent holding capacity at N Reactor. These activities were designed to minimize subsequent discharges to the soil column. Since April 1991, there has been no need to discharge effluents to the soil column, although effluent holding volumes have increased. As required by TPA Milestone M-17-15A and the Liquid Effluent Consent Order, flow restrictions have been achieved by implementing administrative controls on those processes which control the effluent flow rate to the 1325-N Liquid Waste Disposal Facility to be less than 2 gallons per minute.

> Develop a plan by January 1992 to reroute 1325-N influent following best available technology (BAT).

This BAT/AKART evaluation contains a N Reactor Effluent Plan and a Plan for rerouting 1325-N effluent surface water following BAT/AKART which have been prepared to describe the methodology for applying BAT/AKART to the N Reactor effluent in order to cease discharge of all effluents to the 1325-N Liquid Waste Disposal Facility. These plans are submitted to fulfill milestone M-17-15C. How BAT/AKART will be implemented will consider such factors as utilization of existing Hanford facilities, utilization of future effluent treatment capability, permitting requirements, economics, etc. These determinations may influence the need and type of future permitting actions such as TPA Milestone M-17-15(D), "Submit to EPA and Ecology a NPDES permit modification request for the N Reactor effluent," June 1992.

Hanford Federal Facility Agreement and
Consent Order Milestones (pending)

M-17-15A	Limit discharges to the liquid waste disposal facility (LWDF) to less than or equal to 2 gallons per minute, averaged over the calendar month, by September 1991. (flow rate to be determined using sumps or discharge to 1325-N LWDF)

Prior to April 1991, effluent control activities led to a reduction in effluent volumes and an increase in effluent holding capacity at N Reactor. These activities were designed to minimize subsequent discharges to the soil column. Since April 1991, there has been no need to discharge effluents to the soil column, although effluent holding volumes have increased. As required by TPA Milestone M-17-15A and the Liquid Effluent Consent Order, flow restrictions have been achieved by implementing administrative controls on

those processes which control the effluent flow rate to the 1325-N Liquid Waste Disposal Facility to be less than 2 gallons per minute.

M-17-15B Submit the N Reactor Effluent BAT/AKART Evaluation to the EPA and Ecology, by January 1992.

On September 20, 1991, DOE announced that N Reactor was no longer needed as a defense materials production contingency and that activities directed at the preservation of the reactor were to cease. Future activities at N Reactor were to proceed leading to the ultimate decommissioning of the reactor. Therefore, the liquid effluent in the future will consist of two components; (1) that derived from routine activities and (2) that derived from the draining of liquid inventories.

In light of the reduction in effluent volume, the BAT/AKART to satisfy milestone M-17-15B, was scoped. The scoping considered effluent water quality data used in the N Reactor Stream-Specific Report, WHC-EP-0342, Addendum 3. The scoping also recognized that remaining non-process effluent plant water inventories, such as the 1 million gallon fuel storage basin coolant inventory would also have to be disposed of as a part of reactor shutdown activities. Since the process effluent and non-process effluent inventories are of nearly identical chemistry it was determined to be expedient and proper to determine treatment technology for both potential process effluent discharges beyond holding capacity and liquid inventories. Therefore, a study using BAT/AKART methodology was applied to both the potential effluent stream assumed to be up to the 2 gpm flow restriction limit and a stream assumed to be 25 gpm for treatment of the liquid inventories.

The study identified treatment alternatives and two preferred methods subject to confirmation of organic levels by subsequent sampling and analysis under the N Reactor Sampling/Analysis Plan WHC-SD-NR-PLN-008, Rev. 0. This forward-looking study, which is attached, is submitted to satisfy milestone M-17-15B.

M-17-15C Submit a plan to cease discharge of all effluents to the 1325-N LWDF to EPA and Ecology. This plan shall be based on the implementation of BAT/AKART, by January 1992. (Reassigned from M-17-11A)

This BAT/AKART evaluation contains a N Reactor Effluent Plan and a Plan for rerouting 1325-N effluent surface water following BAT/AKART which have been prepared to describe the methodology for applying BAT/AKART to the N Reactor effluent in order to cease discharge of all effluents to the 1325-N Liquid Waste Disposal Facility. These plans are submitted to fulfill milestone M-17-15C. How BAT/AKART will be implemented will consider such factors as utilization of existing Hanford facilities, utilization of future effluent treatment capability, permitting requirements, economics, etc. These determinations may influence the need and type of future permitting actions

such as TPA Milestone M-17-15(D), "Submit to EPA and Ecology a NPDES permit modification request for the N Reactor effluent," June 1992.

Liquid Effluent Consent Order

> Immediately limit N Reactor discharge to the Crib system to less than or equal to 2 gallons per minute, averaged over the calendar month.

Prior to April 1991, effluent control activities led to a reduction in effluent volumes and an increase in effluent holding capacity at N Reactor. These activities were designed to minimize subsequent discharges to the soil column. Since April 1991, there has been no need to discharge effluents to the soil column, although effluent holding volumes have increased. As required by TPA Milestone M-17-15A and the Liquid Effluent Consent Order, flow restrictions have been achieved by implementing administrative controls on those processes which control the effluent flow rate to the 1325-N Liquid Waste Disposal Facility to be less than 2 gallons per minute.

> Develop a plan to reroute the 1325-N effluent to surface water following BAT/AKART implementation and submit to Ecology for approval by January 1992.

Appendix B to the BAT/AKART evaluation is a plan for rerouting N Reactor effluent to the Columbia River following treatment by BAT/AKART if N Reactor is the site chosen for implementing BAT/AKART.

ENCLOSURE

2

N REACTOR EFFLUENT TREATMENT TECHNOLOGY STUDY (BAT/AKART)

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
S. H. Wisness, RL	P. T. Day, EPA D. B. Jansen, Ecology	Incoming: 9200850

Subject: N REACTOR EFFLUENT INTERIM OPERATING RESTRICTIONS, TPA MILESTONES M-17-15A, M-17-15B, M-17-15C, LIQUID EFFLUENT CONSENT ORDER DE-91NM-177

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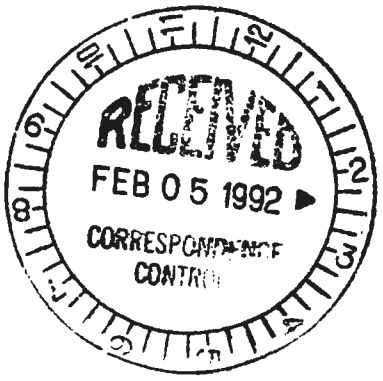

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