GTZ-01-142

STATE OF WASHINGTON

ENERGY FACILITY SITE EVALUATION COUNCIL

PO Box 43172 • Olympia, Washington 98504-3172

September 24, 2001

Mr. D.W. Coleman, Manager
Performance Assessment and Regulatory Affairs
Energy Northwest
PO Box 968 (MD PE20)
Richland, Washington 99352-0968

Subject: **Resolution No. 300 – Sanitary Waste Treatment Facility**

Dear Mr. Coleman:

During its regular meeting of September 10, 2001, the Council approved Resolution No. 300 (see enclosed), thereby authorizing operational and monitoring requirements for Energy Northwest's Sanitary Waste Treatment Facility (SWTF) that serves the Columbia Generating Station and WNP-1/4 sites. This action closes out Resolution No. 259, Amendment 1, and modifies certain monitoring requirements for plant effluent sampling and discharge limits. In addition, the resolution allows Energy Northwest to accept and treat sanitary waste from offsite waste sources, provided that no radiological waste or other non-sanitary waste streams are to be accepted and processed at the facility.

The resolution also notes that Energy Northwest and the Nuclear Regulatory Commission (NRC) are continuing to discuss any possible issues with the tritium that is found in the waste accepted at the SWTF from the U.S. Department of Energy's Fast Test Flux Facility (FFTF). The state Department of Health and NRC agree that the FFTF waste is not a health hazard and the approved resolution includes specific provisions for monitoring FFTF wastes before they are received at the Sanitary Waste Treatment Facility.

The Council wishes to recognize the cooperation extended by Energy Northwest in working with Health and Ecology staff to ensure that the operational and monitoring procedures for the Sanitary Waste Treatment Facility continue to meet state regulations and protect the public health and environment.

Sincerely,

Allen J. Fiksdal
EFSEC Manager

Enclosure

cc: John Arbuckle, Energy Northwest
Lynn Albin, Health
Jeff Ayres, Ecology

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WASHINGTON STATE
ENERGY FACILITY SITE EVALUATION COUNCIL (EFSEC)

RESOLUTION NO. 300
ENERGY NORTHWEST
SANITARY WASTE TREATMENT FACILITY

Nature of Action. Resolution No. 259, Amendment 1, permits the operation and sets monitoring requirements for operating a Sanitary Waste Treatment Facility (SWTF) at Energy Northwest's Columbia Generating Station (Columbia). This action closes Resolution No. 259, Amendment 1, and approves this resolution for the purpose of expanding the sources of sanitary waste that can be accepted by the SWTF and amending some of the monitoring and reporting requirements.

Background. The Energy Northwest Sanitary Waste Treatment Facility at the Columbia site was constructed in 1981. The SWTF serves the Columbia Generating Station and WNP-1/4 sites, and, in addition, accepts and treats sanitary waste from the U.S. Department of Energy (USDOE) Fast Flux Test Facility (FFTF) located nearby on the Hanford Site. The SWTF operations conform to requirements set by the State for this type of facility. Additional monitoring requirements are in place to assure that no radiological waste streams are entering the SWTF.

Energy Northwest's SWTF is designed for variable loads and can be operated as either a flow-through or a batch release with lagoons in a series or operating in a parallel configuration. The system is designed to process 170,000 gallons per day (gpd). The current typical daily volume is considerably less, averaging 30,000 gpd.

In June 2000, Energy Northwest requested approval to modify certain monitoring requirements set out in Resolution 259, Amendment 1. Specifically, a request was made to remove some non-radiological requirements that are not used to assess plant performance, nor add value to the monitoring program. Energy Northwest also requested that the sample location for pre-discharge (effluent) radiological monitoring be replaced with a sampler that would assess radionuclides in the influent stream.

In June 2001, Energy Northwest requested another change to Resolution 259, Amendment 1, that would permit Energy Northwest to receive and treat additional sanitary waste that is trucked from other USDOE projects operating on the Hanford site and from offsite locations. The state Department of Health and Department of Ecology reviewed this request and concur that the additional waste sources be permitted provided the plant does not exceed its capacity and that only sanitary waste be accepted.

In a letter dated September 6, 2001, The Department of Health specified that the waste from other USDOE Hanford areas and from private entities off the Hanford Site may not contain radionuclides above levels that would be found in the environment. Energy Northwest may not accept sanitary waste from any licensed user of radioactive materials.

The Department of Health (Department) further specified that any new sanitary waste stream considered for processing at the SWTF must be fully characterized for radionuclides prior to initial acceptance. Waste containing man-made radionuclides will not be accepted. A listing of sanitary waste generators, waste volumes received, and initial radionuclide characterization, will be available for review upon request.

During the Department of Health's review of Energy Northwest's proposal, it was discovered that the Nuclear Regulatory Commission (NRC) might have an issue with the tritium that is found in the sanitary waste coming from FFTF. The source the tritium is the potable water at FFTF that is drawn from the aquifer contaminated with tritium from past practices at the USDOE Hanford Site. The Department and the NRC agree that the NRC's concern with the tritium in the FFTF sewage is regulatory in nature, not one of a health hazard. The regulatory responsibility for this issue resides with the NRC and they will peruse this issue directly with Energy Northwest.

Within the State's regulatory arena, the SWTF is an acceptable disposal method for FFTF sanitary waste. The approval is documented in Amendment No.1 of EFSEC Resolution 259, dated November 14, 1994. The Department recognizes that tritium in the drinking water at FFTF will enter the SWTF. Drinking water at FFTF is monitored and the levels of tritium are below the standard listed in the Safe Drinking Water Act. The influent from FFTF is monitored before it joins the waste stream from Columbia Generating Station, prior to entering the SWTF. Monitoring data support that the tritium is at the same levels as the FFTF drinking water. The Department of Health, therefore finds no reason to reverse its decision to allow treatment of the FFTF sanitary waste in the SWTF.

In conclusion, the Department of Health and the Department of Ecology have reviewed the Energy Northwest requests and supplemental information on the operation and monitoring of the Sanitary Waste Treatment Facility and find that the proposed amendment meets State regulations and provides sufficient protections for public health and the environment. Accordingly, Council staff has recommended that this resolution, No. 300, and Attachment 1, supersede the requirements of Resolution No. 259, Amendment 1, and its Attachment No. 1. The following summarizes the changes resulting from the adoption of Resolution No. 300:

1. Energy Northwest will be allowed to accept and treat sanitary waste from new sources that include other USDOE projects operating on the Hanford site and from offsite locations. The approval is for sanitary waste only. No radiological waste or other non-sanitary waste streams are permitted to be accepted and processed at the facility.
2. Fecal coliform will not be tested for in the influent sample. This test is not used to assess treatment plant performance and adds no value to the monitoring program
3. Non-radiological parameters (pH, BOD, TSS, fecal coliform) will not be tested for in the annual USDOE 400 Area influent monitoring sample. These tests have been conducted for three years and sampling data show no unexpected conditions in the 400 Area portion of the influent.

4. The requirement for radiological monitoring of the pre-discharge effluent sample will be replaced by a new requirement for monitoring the influent waste. This change aids management of the SWTF by allowing discharges from the ponds to occur more timely without having to wait weeks for results of radiological sampling to be returned from the laboratory. Monitoring at the influent further provides better assessment of waste as it enters the SWTF.

Resolution. The Council hereby closes Resolution No. 259, Amendment 1, and authorizes the approval of Resolution No. 300, covering the operation and monitoring of Energy Northwest's Sanitary Waste Treatment Facility that serves the Columbia Generating Station and the WNP-1/4 sites, subject to the conditions specified in Resolution No. 300, Attachment 1.

Dated and effective this 10th day of September, 2001.

Washington State Energy Facility Site Evaluation Council

By: _____
Charles J. Carelli, Acting EFSEC Chair

Attest: _____
Allen J. Fiksdal, EFSEC Manager

Attachment 1. Sanitary Waste Treatment Facility Monitoring and Reporting Requirements
Figure 1. SWTF Flow Diagram/Monitoring Plan

Resolution No. 300, Attachment 1
ENERGY NORTHWEST SANITARY WASTE TREATMENT FACILITY
MONITORING AND REPORTING REQUIREMENTS

Energy Northwest will monitor the operation of its Sanitary Waste Treatment Facility (SWTF) as described below:

1. Initial Characterization of New Sanitary Waste Sources

Sampling Location: From appropriate location before waste is added to the SWTF.
Sample Type, Frequency, and Analysis Parameters:

- Type – grab sample take to determine if a new sanitary waste stream meets acceptance criteria
- Non-radiological Parameters – none
- Radiological Parameters – grab sample analyzed for gross beta, tritium, and gamma-emitting radionuclides

2. Combined Influent Sampling

Sampling Location: Headworks
Sample Type, Frequency, and Analysis Parameters:

- Flow – accumulated volume, monthly basis
- Non-radiological Parameters – monthly grab sample analyzed for biological oxygen demand (BOD), dissolved oxygen (DO), total suspended solids (TSS), pH
- Radiological Parameters – monthly grab sample or monthly composite analyzed for gross beta, tritium, and gamma-emitting radionuclides

2. USDOE 400 Area Influent to SWTF (if discharging)

Sampling Location: Upstream of entry to Energy Northwest sewer
Sample Type, Frequency, and Analysis Parameters:

- Flow – accumulated volume, monthly basis
- Non-radiological Parameters – annual grab sample analyzed for priority pollutants
- Radiological Parameters – monthly composite sample analyzed for gross alpha, gross beta, tritium, and gamma-emitting radionuclides

3. Effluent Sampling and Discharge Limits

Sampling Location: Stabilization pond(s) planned for discharge
Number of Samples: Two grab samples prior to discharge; must meet limits before discharge
Analysis Parameters and Discharge Limits:

BOD	≤45 mg/l

Analysis Parameters and Discharge Limits (cont.):

BOD Removal Efficiency	≥65%
TSS	≤45 mg/l
Fecal Coliform	≤200 organisms/100 ml
pH	6.0 – 9.0
Nitrate	≤10 mg/l
Quantity	report total volume discharged

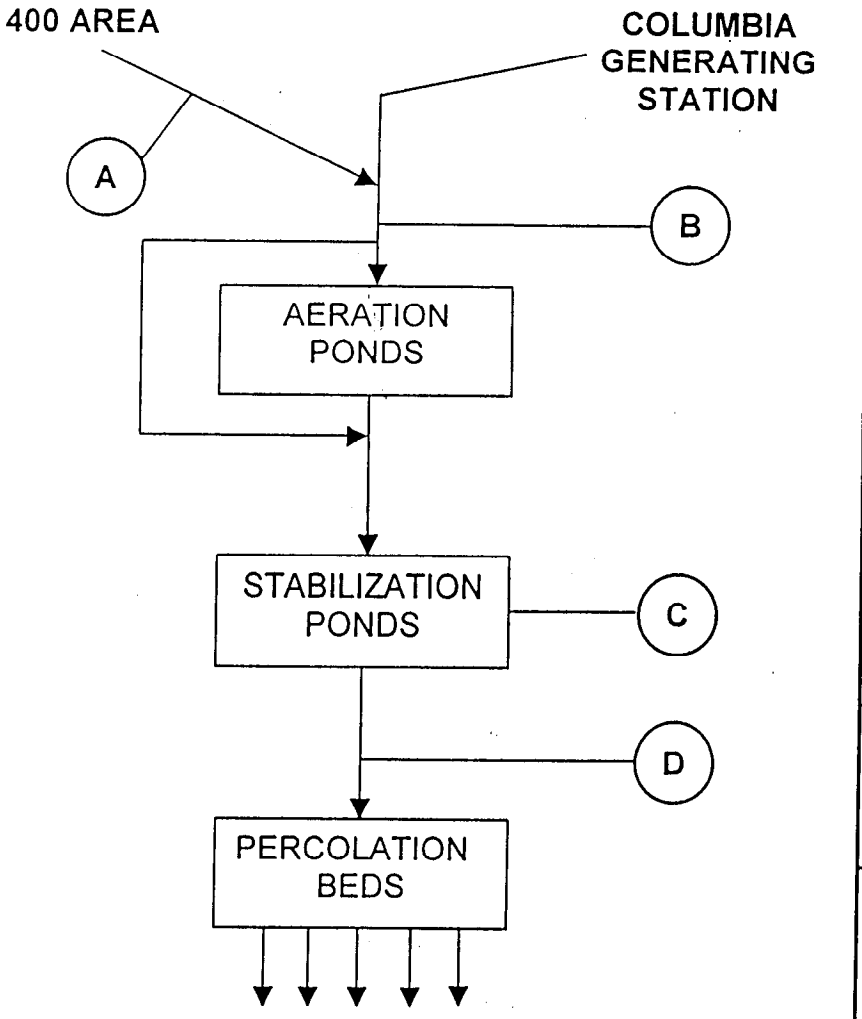
4. Reporting

Reports summarizing the monthly non-radiological monitoring results will be submitted to the Council within 30 days of the close of each quarter. Information regarding unusual circumstances or monitoring results that exceed specified limits will be promptly reviewed with the Department of Ecology. Radiological monitoring results will be reported annually in the Columbia Generating Station Radiological Environmental Monitoring Program report. Monitoring results that indicate influent tritium concentrations greater 20,000 pCi/l will be promptly reviewed with the Department of Health.

Energy Northwest will keep on file a listing of sanitary waste generators, waste volumes received, and initial radionuclide characterization, and will make this file available upon request.

ENERGY NORTHWEST
SANITARY WASTE TREATMENT FACILITY (SWTF)
MONITORING REQUIREMENTS

SEWAGE FLOW DIAGRAM



MONITORING POINT	FREQUENCY	CONSTITUENTS
A FFTF Influent	Annual	PRIORITY POLLUTANTS
	Monthly	Rad (alpha, beta, gamma)
	Continuous	FLOW
B HEADWORKS SAMPLER	Monthly Composite	Rad (gross alpha, beta, gamma, tritium) BOD pH DO TSS
	Continuous	FLOW
C	Prior to Discharge 2X	BOD, TSS, Fecal Coliform, pH, Nitrate (as N)
D	During Discharge	FLOW (Volume)