

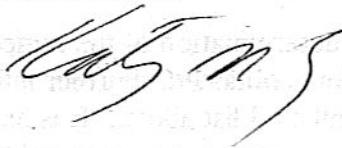


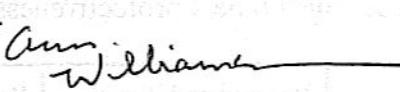
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

March 26, 2003

Reply To
Attn Of: ECL-113

SUBJECT: Request for Concurrence on the Five-Year Review Report for the Idaho National Engineering and Environmental Laboratory, Central Facilities Area, Waste Area Group 4, Operable Unit 4-12 Landfills

FROM: Kathy Ivy, WAG 4 Project Manager
Environmental Cleanup Office 

THRU: Ann Williamson, Unit 4 Manager
Environmental Cleanup Office 

TO: Mike Gearheard, Director
Environmental Cleanup Office

Enclosed is a Five-Year Review Report for the Operable Unit 4-12 Landfills I, II, and III that was completed in November 2002. The OU 4-12 Record of Decision that was signed in 1995 required installation of native soil covers over three landfills as a presumptive remedy. The OU 4-12 ROD also called for institutional controls and monitoring of groundwater, soil gas, and moisture infiltration. The landfill covers and monitoring systems were installed in 1997. The Five-Year Review covers five years of landfill monitoring data and assesses the overall performance of the remedy in protecting human health and environment.

One primary finding observed during the review is the continued detection of nitrates above the MCL of 10 mg/L in two downgradient monitoring wells. The source of nitrates in the groundwater had been attributed to the CFA-08 Sewage Plant Drainfield, which is addressed under the July 2000 OU 4-13 ROD. Nitrate levels were expected to decrease over time, so the OU 4-13 ROD called for ongoing sampling for nitrates as part of the comprehensive groundwater monitoring program required under the OU 4-12 ROD. Monitoring data indicates that the nitrate concentrations are not decreasing as expected, which calls into questions the conclusion about the source of the nitrates. Because there are also questions about the adequacy of the monitoring program for Landfills I, II, and III, the landfills could not be ruled out as an alternative source of the nitrates. It is also important to note that drinking water wells are located on-site. Therefore, the enclosed Five-Year Review Report includes the following recommendations:

- Continue landfill soil infiltration monitoring through September 2003. Based upon the monitoring results, a decision to discontinue monitoring or perform an "artificial rain"

infiltration test will be made prior to September 2003. The results of the monitoring and the test, if necessary, will be documented in the annual March 2004 monitoring report.

- Perform digital gyroscopic deviation surveys on suspect monitoring wells used to monitor the landfills and re-draw groundwater contour maps using this information.
- Decide whether additional wells are required to monitor groundwater underlying the landfills after groundwater contour maps have been re-drawn.
- Re-evaluate the source of nitrates in the groundwater based on the new groundwater contour maps and provide the results of this assessment in the annual March 2003 monitoring report, a document which EPA expects to receive from DOE soon.

A protectiveness determination of the remedy at OU 4-12 cannot be made at this time until further information is obtained. Further information will be obtained by taking the actions described in the bulleted list above. It is expected that these actions will take approximately one year to complete, at which time a protectiveness determination will be made.

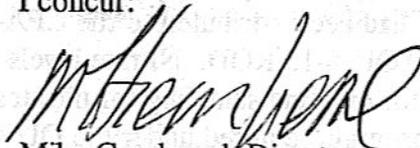
Issue	Recommendations/ Follow up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness?
Determine the adequacy of landfill moisture monitoring	Collect additional infiltration data and perform an artificial rain test, if necessary.	DOE	EPA/IDEQ	March 2004 Report	Decision Deferred
Determine the adequacy of landfill groundwater monitoring	Perform well surveys, redraw contour maps, and re-evaluate nitrate source and monitoring well configuration.	DOE	EPA/IDEQ	March 2003 Report	Decision Deferred

I request your concurrence on this Five-Year Review Report.

I do not concur:

I concur:

Mike Gearheard, Director
Environmental Cleanup Office


Mike Gearheard, Director
Environmental Cleanup Office

Enclosure:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

March 26, 2003

Reply To
Attn Of: ECL-113

SUBJECT: Request for Concurrence on the Five-Year Review Report for the Idaho National Engineering and Environmental Laboratory, Naval Reactors Facility, Waste Area Group 8, Operable Unit 8-05/06 Landfills

FROM: Kathy Ivy, WAG 8 Project Manager
Environmental Cleanup Office

THRU: Ann Williamson, Unit 4 Manager
Environmental Cleanup Office

TO: Mike Gearheard, Director
Environmental Cleanup Office

8-05/06

Enclosed is a Five-Year Review Report for the Operable Unit ~~4-12~~ Landfills 8-05-1, 8-05-51, and 8-05-53 that was completed in February 2001. This report was completed prior to finalization of EPA's Comprehensive Five-Year Review Guidance. The OU 8-05/06/07 Record of Decision was signed in 1994. The ROD called for installation of native soil covers as a presumptive remedy for the three landfills, which are included under OU 8-05/06. The landfill remedy also called for institutional controls and monitoring of groundwater and soil gas. The ROD recommended no action for an industrial waste ditch, which is included under OU 8-07. This determination was based on the results of the risk assessment, which included a future residential use scenario and demonstrated that there was no unacceptable risk to human health or the environment from the industrial waste ditch. The Five-Year Review covers landfill monitoring data obtained after landfill cover construction began in February 1996, and assesses the overall performance of the remedy in protecting human health and environment.

One finding observed during the review is that the levels of chromium in the groundwater appeared to be increasing, in particular, in a single groundwater monitoring well near the industrial waste ditch. This is thought to be partially attributed to the well being screened across a sedimentary interbed in combination with rising groundwater level trends at the site. Levels of chromium in downgradient monitoring wells are detected below MCLs. Also, it was found that two soil gas monitoring probes were partially or completely plugged at Landfill 8-05-01, affecting data acquisition. Two other probes located at this landfill were operating properly and providing good data. Therefore, the enclosed Five-Year Review Report includes the following recommendations: