



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Evaluation Report

Results of Independent Groundwater Sampling at Neal's Dump Superfund Site

Report No. 09-P-0110

March 4, 2009



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Abbreviations

EPA	U.S. Environmental Protection Agency
NPL	National Priorities List
OIG	Office of Inspector General
PCBs	Polychlorinated biphenyls
Site	Neal's Dump Superfund Site

Cover photo: Grass cover over the remediated Neal's Dump Superfund Site, Spencer, Indiana, May 2008 (photo by EPA OIG).



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The Office of Inspector General (OIG) is testing long-term monitoring results at Superfund sites the U.S. Environmental Protection Agency (EPA) has deleted from the National Priorities List (NPL). Neal's Dump Superfund Site, located near Spencer, Indiana, is one of eight sites being reviewed.

Background

Neal's Dump was contaminated with polychlorinated biphenyls (PCBs) from disposal of electrical equipment and other PCB-contaminated materials. EPA deleted Neal's Dump from the NPL in 1999, which signified clean-up goals had been achieved.

For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.

To view the full report, click on the following link:
www.epa.gov/oig/reports/2009/20090304-09-P-0110.pdf

Results of Independent Groundwater Sampling at Neal's Dump Superfund Site

What We Found

The OIG obtained groundwater samples from two private drinking water wells on residential properties adjacent to the Neal's Dump Superfund Site on May 28, 2008. Groundwater samples from these residential wells have been part of EPA's long-term monitoring conducted at Neal's Dump. Our results showed that PCBs in the two residential wells did not exceed safe levels for drinking water. These results are consistent with EPA's monitoring results.

EPA Region 5 reviewed a draft of this report and had no comment.



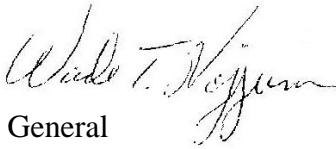
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
INSPECTOR GENERAL

March 4, 2009

MEMORANDUM

SUBJECT: Results of Independent Groundwater Sampling
at Neal's Dump Superfund Site
Report No. 09-P-0110

FROM: Wade T. Najjum 
Assistant Inspector General
Office of Program Evaluation

TO: Bharat Mathur
Acting Region 5 Administrator

This is our final report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains sampling results from residential wells adjacent to the Neal's Dump Superfund Site. The OIG obtained its samples in May 2008.

The estimated cost of this report – calculated by multiplying the project's OIG staff days by the applicable daily full cost billing rates in effect at the time, then adding in the contractor costs – is \$99,200.

Action Required

Because this report contains no recommendations, you are not required to respond to this report. We have no objections to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff have any questions, please contact Carolyn Copper, Director for Program Evaluation, Hazardous Waste Issues, at 202-566-0829 or copper.carolyn@epa.gov; or Pat Milligan, Project Manager, at 215-814-2326 or milligan.patrick@epa.gov.

Purpose

The Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA) is evaluating long-term monitoring at Superfund sites deleted from the National Priorities List (NPL). The overall objective is to evaluate whether EPA has valid and reliable data on the conditions of these sites. Neal's Dump Superfund Site near Spencer, Indiana, is one of eight sites being reviewed.

Background

Neal's Dump (the Site) received residential and industrial wastes between 1967 and 1972, including materials contaminated with polychlorinated biphenyls (PCBs). The half-acre Site is located in Owen County, approximately 15 miles northwest of Bloomington, Indiana. Two residential properties are adjacent to the southern boundary of the Site.

Construction of final remedy was completed in March 1999, and included removing all contaminated materials. EPA deleted Neal's Dump from the NPL in October 1999, which signified clean-up goals were achieved through remedial action. Groundwater monitoring was conducted to evaluate the effectiveness of the Site clean-up. Following the first Five-Year Review in 2003, the four monitoring wells were closed. However, private residential wells continued to be sampled up to 2008. The 2008 Five-Year Review concluded that sampling in the residential wells also should be eliminated. EPA concluded in the 2003 and 2008 Five-Year Reviews that the remedy was protective of human health and the environment.

Noteworthy Achievements

EPA ensured that over 7,000 tons of PCB-contaminated material were excavated at the Site and disposed of in a commercial landfill permitted to accept this material. The excavation was filled with clean soil and reseeded with a grassy cover. A deed restriction was implemented that prohibited use of groundwater underlying the site. Post construction activities included monitoring groundwater quality for 5 years in four monitoring and two residential wells.

Scope and Methodology

We conducted our work from May 2008 to February 2009 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the evaluation to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our evaluation objectives. We reviewed key historic documents, including past sampling results and decision documents such as the Record of Decision Amendment and Five-Year Reviews. We also interviewed the remedial project managers from EPA Region 5 and the Indiana Department of Environmental Management. We collected groundwater samples and conducted a limited site inspection.

We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our evaluation objectives. This report only transmits the results of the

sampling we conducted. We plan to issue a summary report that, as appropriate, will include additional findings from all or some of the eight sites we are evaluating.

Sampling Method

We acquired a qualified environmental contractor from the list of General Services Administration contractors to take groundwater samples and conduct a site inspection. On May 28, 2008, our contractor collected samples from two residential wells for laboratory analysis. The samples were analyzed in the laboratory for seven different manufactured blends of PCBs, also known as Aroclors. Due to the scope of the OIG evaluation, our contractor tested only for PCBs and did not analyze for other contaminants typically monitored in drinking water. OIG staff members were present to ensure that proper sampling and site inspection quality assurance protocols were followed. Historically, EPA sampled four on-site groundwater monitoring wells, along with the residential wells. EPA closed these monitoring wells in 2004, and as a result, the wells were not available for us to sample.

For both sampling locations [Resident Well A (RW-A) and Resident Well B (RW-B)], the groundwater was collected from exterior taps. See Figure 1 for well locations.

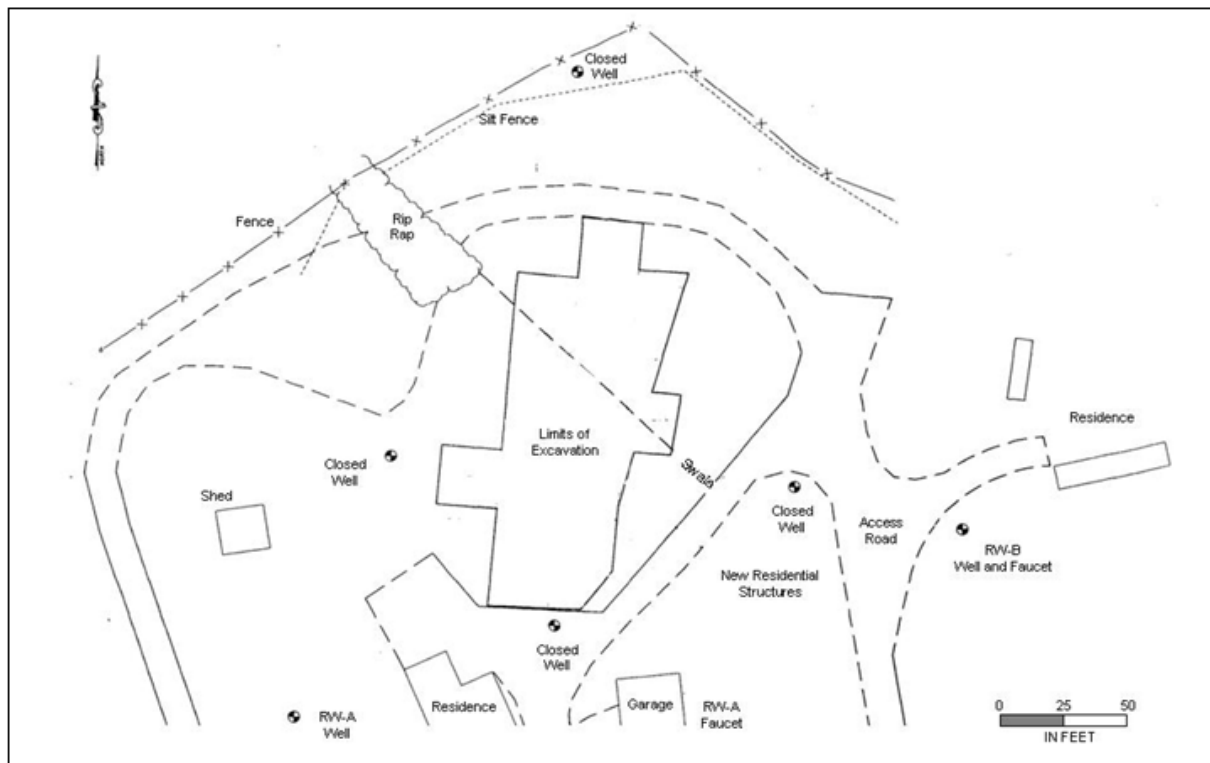


Figure 1. Location of two residential wells (RW-A and RW-B) sampled at the remediated Neal's Dump Superfund Site by the OIG on May 28, 2008. Map from EPA, with labels added by the OIG.

The tap for RW-B was located at the well head. The tap for RW-A was located about 150 feet east of the well head. Prior to taking the samples, the wells were purged at a rate of 6 gallons per minute for approximately 15 minutes using the submersible pumps installed in the wells. The temperature, conductivity, pH, oxidation-reduction potential, dissolved oxygen concentration, and turbidity were monitored to ensure that all standing water in the wells had been purged prior to sampling. Samples were collected from each well using proper sampling and quality assurance protocols. Each sample was analyzed at a qualified laboratory using EPA method 8082. In addition, sets of samples were given to the contractor for the responsible party and to EPA Region 5 for their own analyses.

We compared our results to the national primary drinking water standard for PCBs of 0.5 micrograms per liter. We also compared our results to the most recent historical data for the site, collected in 2003, to test the reliability of the historical data.

A limited site inspection was conducted by OIG staff and the contractor.

Results

We observed that the site was generally well maintained. The grass cover appeared healthy and no signs of erosion or settling of the soil used to fill the excavation were observed. Our sample results showed that PCBs in the two residential wells did not exceed safe levels for drinking water. The samples were not analyzed for other substances, and therefore are not an overall assessment of the safety of the water in these residential wells. Our results are consistent with the results reported in Region 5's 2003 and 2008 Five-Year Reviews for the Site. Further, Region 5 reports that no analyses of water collected in the residential wells since 1991 have detected PCBs above the drinking water standard.

EPA Region 5 reviewed a draft of this report and had no comment.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
No recommendations							

¹ O = recommendation is open with agreed-to corrective actions pending
C = recommendation is closed with all agreed-to actions completed
U = recommendation is undecided with resolution efforts in progress

Appendix A

Distribution

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