New Hampshire Department of Environmental Services

Beede Waste Oil Site Newsletter

Volume II, No. 2 - October 1998

The U.S. Environmental Protection Agency and the N.H. Department of Environmental Services are working together to clean up the Beede Waste Oil Superfund Site located in Plaistow, NH. Below is an update on cleanup activities.

Non-Time Critical Removal Activities

Following a successful treatability study and the evaluation of various technologies,EPA and DES have decided on a non-time critical removal action for addressing the remaining bulk of mobile floating oil at the site. The three light non-aqueous phased liquid (LNAPL) plumes beneath the site, which consist of oil and various contaminants floating on the groundwater table, are a continuing source of groundwater and surface water contamination at the site and Kelley Brook.

The removal action includes extending the existing oil interceptor trench that borders the site and Kelley Brook, installing extraction wells and operating a vacuum enhanced extraction (VEE) system to remove the mobile floating oil from the groundwater table.

A network of 153 extraction wells will be installed in the three LNAPL plume areas and connected to the VEE system. In addition to floating oil, some

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Remedial Investigation

DES and EPA are going through mountains of data to make assessments of the Beede site's human health and ecological risks. The final remedial action chosen will need to address all of these risks.

That can be quite a job at a site as complicated as Beede. Just last July a new problem was found. A distillation tank left near the drum investigations tracked the contaminant plume over 400 feet. No residential wells have been impacted by this plume. Close monitoring

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Removal Activities

DES contractors have completed the latest set of removal activities at the site:

- ☐ 50 drums of waste that were generated during site investigation activities were removed.
- ☐ Old tarps covering the contaminated soil piles were removed and replaced with new tarps.
- ☐ 192 tons of contaminated soil generated during the recent EPA treatability study were removed.
- ☐ Miscellaneous solid waste and debris were removed from the site.
- ☐ A 275 gallon underground storage tank was removed from beneath the former wooden building.

US EPA

Jim DiLorenzo, Project Manager	617-918-1247
Angela Bonarrigo, Community Relations	617-565-2501

New Hampshire DES

Wayne Ives, Project Manager	603-271-2890
Bob Minicucci, Community Relations	603-271-2941

New Hampshire DHHS

Scott Sudweeks, Health Risk Analyst	603-271-4664

SITE HISTORY

The Beede Waste Oil site is comprised of two parcels of land totaling 39 acres. Parcel 1 totals 22 acres and is the site of former commercial waste oil recycling and fuel oil storage and distribution operations. Parcel 2, a former gravel pit, is 17 acres of primarily undeveloped land.

1926-94

- Commercial operations, including recycling of used oil, storage and distribution of virgin fuel oil and cold patch manufacturing.

1991

- DES verifies that on site soil and floating oil (LNAPL) are a source of contamination to abutting residential wells.
- Site Owner conducts some investigations and removes a leaking underground storage tank which was the primary source of LNAPL from the site to Kelley Brook.

1992

- State files suit and obtains preliminary injunction order for site owner to control the LNAPL, investigate site and control hazardous waste.
- DES places sorbent pads in Kelley Brook to contain the floating oil.

1994

- Current owner is sentenced in Federal Court to serve 37 months for illegal and improper handling of hazardous waste.

1995

- DES conducts investigation of site conditions and nature of waste.

1996

- NH Fish and Game, DES and EPA conduct fish tissue survey to measure potential impacts of contaminants in Kelley Brook.
- DES and EPA initiate removal actions to address contaminated material left in the tanks and drums. This action was completed in the summer of 1997.
- The site is added to the Superfund NPL list, making additional federal funds available for investigation and cleanup.

1997

- EPA and DES initiate remedial investigation and an engineering evaluation / cost analysis.

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of residential wells in the area continues. Ironically, the distillation tank was probably meant to be used for site cleanup by the owners.

The RI report is expected next spring, followed several months later by the selection of a remedy. Possible remedies will be presented for your comment before a decision is made. ▲

Innovative Technology Evaluation at Beede

EPA is committed to finding better methods to clean up contaminated sites and to help companies develop new clean up ideas therefore, EPA established the Superfund Innovative Technology Evaluation (SITE). In 1997, DES applied to the SITE program to perform innovative studies at Beede.

Since August, 1998, Green Mountain Laboratories of Vermont, has been testing their new method of biologically removing PCBs and other organic contaminants from soil at the Beede site.

Using soil from the former above-ground storage tanks area, they are running ten test plots - literally covered sand boxes! - with different variations of microorganisms which should break down the PCBs into non-hazardous materials.

We are interested to see if Green Mountain Labs discovers a new, safe and more cost-effective way to clean up PCB contaminated soil. The testing at the site should conclude later this month.

If the work shows good results, a larger demonstration may be run on approximately 10 tons of soil next spring. ▲

ARE THE FISH IN KELLEY BROOK SAFE TO EAT?

Scott Sudweeks, NH Department of Health and Human Services
Bureau of Health Risk Assessment

Addressing community health concerns is an important goal that the New Hampshire Department of Health and Human Services (DHHS) shares with EPA and the NH Department of Environmental Services (DES). DHHS has been involved with the Beede Waste Oil site from the start and has worked with EPA and DES to address community health concerns and eliminate public health impacts from exposure to chemicals released from the site.

Why the concern?

In 1996, DHHS released a comprehensive public health assessment on the Beede site as a requirement of Superfund legislation. One item that was identified in the document that needed follow up was the issue of fish contamination in Kelley Brook and possible exposure to those chemical contaminants by anglers who catch and eat these fish. Contaminants like PCBs and mercury can build up in the bodies of fish, and possibly pose a health risk to the people and animals that eat them.

A recent activity undertaken by DHHS was to conduct a study evaluating the safety of eating fish from Kelley Brook. The community expressed concerns that fish may contain contaminants released from the Beede Waste Oil site. Upon hearing these concerns, state and federal agencies involved with the site cooperated on collecting and sampling the fish. Further prompted by community concerns, DHHS performed an independent evaluation of health risks posed by eating contaminated fish from Kelley Brook. This resulted in a health consultation released last June.

What is a health consultation?

A health consultation provides advice on a specific public health issue related to real or possible human exposure to toxic materials. Health consultations are designed to provide a more rapid response to a public health issue than a larger health study or assessment. The advantage of this is that if a problem is identified, actions to reduce or eliminate health risks can be taken more quickly. Anyone can request a consultation by contacting the DHHS Bureau of Health Risk Assessment.

What were the results of the consultation?

To summarize the health consultation, trout from Kelley Brook near the Beede Waste Oil site were tested for chemical contamination. Although the amount of contamination varied in individual fish, contaminants were found in all the fish collected for the study. The conclusion of the health consultation is that the contamination in the fish may, over time, pose an elevated health risk to people who regularly eat fish caught near the Beede site.

To reduce the likelihood of harmful effects from exposure to these contaminants it is recommended that people limit consumption of fish according to the guidelines below:

- Adult males should limit their consumption to four 8 ounce meals per month.
- Women of childbearing age, and pregnant or nursing women, should limit their consumption to one 8 ounce meal per month.
- Children one to six years of age should limit their consumption to one 3 ounce meal per month.

Because many contaminants build up in the fatty tissues of of fish, you can further reduce your exposure to

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Health Assessment, continued from p. 3

contaminants in fish by skinning and trimming away the fatty tissue from the belly, back and sides. Cook your fish by broiling, baking or grilling and throw away the drippings.

The basis for these recommendations is the current state-wide advisory on mercury in fish from all inland fresh water bodies throughout New Hampshire. This advisory provides consumption advice that is more restrictive than one based upon PCBs in Kelley Brook fish alone. The above recommendations protect consumers from not only mercury, but PCBs found in the fish as well.

DHHS will remain active at the Beede site and be available to assist community members who have concerns or questions about health impacts that may be associated with site contaminants. ▲

For copies of this health consultation, other documents that discuss health concerns related to chemicals in the environment, or to learn more about DHHS's role in protecting the public health of New Hampshire citizens, contact:

Bureau of Health Risk Assessment
NH Department of Health and Human Services
6 Hazen Drive
Concord NH 03301
(603) 271-4664
or toll free in NH
(800) 852-3345 X4664

Removal Activites, continued from p. 1

groundwater and air will be recovered by the VEE system. The oil and groundwater will be collected and sent off-site for proper disposal. The air will be sent through a carbon-filter prior to discharge.

The existing 100 foot interceptor trench, which was constructed as part of the recent treatability study, will be extended an additional 24 feet to fully capture the floating oil plume and prevent seepage into Kelley Brook. Construction on the extraction wells and the recovery trench is planned during the summer of 1999.

The VEE is expected to operate for 5 to 9 months during which time, EPA and DES expect it to remove 40,000 gallons of mobile floating oil from the groundwater.

EPA and DES will monitor the performance of the extraction wells and make adjustments to the VEE system as needed.

The combined activities of passively collecting oil in the interceptor trench and actively operating the VEE system will keep the floating oil from moving off site and remove a known source of contamination at the site, accelerating the overall site cleanup. ▲

Newsletter Feedback

If you have suggestions for topics to be covered and questions to be answered in future newsletters, please contact:

Bob Minicucci
DES
(603) 271-2941
rpm2@des.state.nh.us

Angela Bonarrigo
EPA
(617) 565-2501
bonarrigo.angela@epamail.epa.gov

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Check here to:

☐ Be added to the mailing list
☐ Note a change of address
☐ Be deleted from the mailing list

Name: _____
Address: _____
_____
_____

Please send above information to:

Angela Bonarrigo
US EPA, Region 1
JFK Federal Building (RAA)
Boston MA 02203