Everett Landfill/Tire Fire Site

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Remedial Investigation/Feasibility Study completed: Public comment sought

Public comment period:
September 27 to October 27

Public meeting:
Wednesday, October 6, 1993
Everett Public Works Building
Spada Conference Room
3200 Cedar Street
Everett, WA 7:00 p.m.

(The Washington State Department of Ecology (Ecology) has prepared this fact sheet to inform you of the cleanup activities at the Everett Landfill/Tire Fire Site. Remedial actions are being conducted at this site according to the terms of the Model Toxics Control Act (MTCA), Chapter 70-105D of the Revised Code of Washington (RCW).)

Landfill Study Complete

The Remedial Investigation/Feasibility Study (RI/FS) for the Everett Landfill/Tire Fire site has been completed and is available for review and comment. The report compiles the results of various investigations and studies concerning environmental problems at the site and presents cleanup alternatives for the site as a whole.

The Everett Landfill is located between Interstate Highway 5 and the Snohomish River, east of downtown Everett, Washington. The site is bordered on the north by 36th Street SE and on the south by Burlington Northern Railroad tracks at about 45th Street SE.

This report differs somewhat from a typical RI/FS because of the unique way the investigation progressed. The RI/FS began with the goal of investigating and determining possible cleanup actions for the tire fire ash. The study of the tire fire ash revealed that the landfill itself also posed environmental problems on the site. Therefore, cleanup alternatives presented in the RI/FS report are intended to address both problems resulting from the tire fire ash and the landfill.

Although this study is not a complete RI/FS of the landfill, Ecology and the City feel that enough data is available to identify appropriate cleanup actions for the site as a whole.

We want your comments

You are invited to comment on the report during a 30-day public comment period from September 27 to October 27, 1993. A public meeting will be held October 6 to talk with you about the results of the investigation and compare the cleanup alternatives.

You may review the report at the information repositories listed in the box at the right. During the public comment period, you may send written comments to Dave Nazy (see address listed at the right.)

September 1993

Send written comments to:

Dave Nazy, Site Manager
Department of Ecology
Toxics Cleanup Program
3190 160th Avenue SE
Bellevue, WA 98008-5452
(206) 649-7258

For information call:

Susan Lee, Public Involvement
(206) 649-7138

Repositories:

Everett Public Library
2702 Hoyt
Everett, WA 98201
(206) 259-8000

Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452
(206) 649-7239
Attn: Judy Fisher

This information can be provided in alternate ways for people with special accomodation needs and in other languages. Call (206) 649-7138 ie (206) 649-4259 (TDD).

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Results of the remedial investigation

The remedial investigation identified two main sources of contamination on the site. The first is the 70-acre landfill itself. The second is about 7 acres of ash left on the surface, which resulted from the tire fires.

The landfill contains municipal garbage up to 30 feet thick that is partially saturated with ground water. Ground water within the garbage contains a wide range of contaminants typical of what would be expected in landfills (volatile organics, petroleum aromatic hydrocarbons or PAH's, PCB's, pesticides, conventional contaminants including ammonia, nitrate, sulfate, and inorganics including lead, zinc, manganese). This ground water containing dissolved contaminants is called leachate.

The tire fire ash contains elevated concentrations of inorganics (including zinc, lead, cadmium, iron) and PAH's (including naphthalene, dibenzofuran, anthracene, chrysene).

With the exception of a thin soil cover on most of the landfill, contaminants on the site are presently uncontrolled. Thus, there is the potential threat of people coming in direct contact with hazardous garbage, tire fire ash, and leachate. In addition, the landfill may be generating methane gas, posing an additional risk on the site. The leachate within the landfill is known to discharge via seeps into a ditch that flows directly into the Snohomish River. The tire fire ash, known to be toxic to fish, can be transported off-site via storm water runoff.

In summary, ground water, surface water, soil, and ditch sediments are known to contain concentrations of contaminants that exceed appropriate MTCA cleanup standards. All of the contaminants detected can be attributed to the landfill and/or the tire fire ash.

Summary of feasible alternatives

The feasibility study report describes possible cleanup technologies that could be conducted to address environmental problems associated with both the landfill and tire fire ash. A wide variety of possible cleanup technologies were considered for cleaning up the tire fire ash. Ecology considers containment options to be the only practicable cleanup technology for large municipal landfills, therefore, only containment options were considered for cleaning up the landfill.

Feasible cleanup technologies for the tire fire ash include mixing the ash with lime to reduce the mobility and toxicity of the ash, excavation and off-site disposal of the ash at a hazardous waste landfill, and on-site containment of the ash. Feasible containment options for the landfill include intercepting the leachate before it reaches the Snohomish River and improving the existing cover on the landfill. Other remedial actions include limited additional data collection on the landfill cover, institutional controls, and long term maintenance and monitoring.

The ash cleanup technologies and landfill capping options are combined into six remedial alternatives, plus a no action alternative. These remedial alternatives are listed below. Please note that all of the seven alternatives include long-term monitoring and maintenance, and institutional controls. In addition, all of the alternatives, except the no action alternative, include the installation of a leachate interceptor trench along the eastern boundary of the site (between the landfill and the river). The collected leachate would be treated at the Everett sewage treatment plant.

- #1 No Action
- #2 Permeable Cover Over Entire Site and Leachate Interceptor Trench
- #3 Impermeable Cover Over Tire Fire Ash, Permeable Cover Over Remainder of Site, and Leachate Interceptor Trench
- #4 Impermeable Cover Over Entire Site and Leachate Interceptor Trench

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- #5 Impermeable Cover Over the Tire Fire Ash, Leachate Interceptor Trench, and Further Evaluation of the Landfill Cover
- #6 Permeable Cover Over the Tire Fire Ash, Leachate Interceptor Trench, and Further Evaluation of the Landfill Cover (including characterization of landfill gas)
- #7 Excavation and Off-Site Disposal of the Tire Fire Ash, Permeable Cover Over Tire Fire Areas, Leachate Interceptor Trench, and Further Evaluation of the Landfill Cover

The City of Everett proposes selecting Alternative # 6 as the cleanup action at this site. After considering public comment, Ecology will make the final decision.

Human health and environmental concerns

The contamination at this site poses no immediate human health threat. Long-term exposure to the landfill refuse, tire fire ash, landfill leachate, and contaminated soils and sediment could pose a potential threat.

The site may pose greater risk to the environment. These risks are associated with landfill leachate flowing into the Snohomish River and the potential for tire fire ash to also enter the river via storm water runoff. These risks currently pose a chronic, long-term threat to the environment.

Site background

The landfill was used from approximately 1917 until 1974 for various purposes. Some of the purposes included a burn dump, a scrap metal burial site, and a municipal landfill. In 1975, the site was closed under applicable state regulations (graded, and covered with a 12-inch cover). Beginning in 1977, a commercial recycling operation stored old rubber tires at the site.

In 1983 and 1984, two separate fires occurred in the piles of used rubber tires at the Everett Landfill. The fires, involving approximately one million tires, were allowed to burn themselves out, leaving several acres of ash. An emergency environmental cleanup involving collection and removal of the pyrolytic oil reduced the immediate threat to nearby wetlands and the Snohomish River. The ash was left in place while cleanup options were studied.

In 1989, Ecology began implementing the MTCA. This site was then listed and ranked on Ecology's Hazardous Sites List. This listing was based on the presence of tire fire ash, not because the site is a closed municipal landfill. In 1990, Ecology and the City of Everett signed an Order on Consent that required the City to conduct an RI/FS on the tire fire site. The City then began the process of investigating and determining how to cleanup the tire fire ash.

As the investigation progressed, it became apparent that the landfill itself was also a source of environmental contaminants on the site. Numerous contaminants were detected during the investigation, most of which could not be attributed to the tire fire ash. Many of these landfill contaminants were detected at concentrations that exceeded appropriate MTCA cleanup standards. Because the tire fire ash sits directly on top of the landfill, the most efficient approach was to look at the site as a whole. All the cleanup alternatives discussed in the report include actions that are meant to cleanup both the landfill and the tire fire ash.

What happens next?

All comments received during the comment period will become part of the official record and will be addressed in a document called a Responsiveness Summary. This document will be mailed to all who comment and be available for review at the Everett Library and Ecology's Northwest Regional Office in Bellevue.

After considering all public comments regarding the RI/FS report, Ecology will select a cleanup action and prepare a Draft Cleanup Action Plan (DCAP). This plan will include a general description of the cleanup action that Ecology selects for the site. Ecology and the City will then negotiate a Consent Decree that

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will specify both party's legal obligations during the cleanup action. The plan and Consent Decree with then be made available for public comment. After considering all public comments regarding the DCAP, Ecology will issue a Final Cleanup Action Plan. The City will then begin cleaning up the site.

More Information?

For questions about the technical aspects of the site, the remedial investigation, or the feasibility study, contact site manager Dave Nazy. For questions about public involvement or the cleanup process, contact Susan Lee (see the box on page one for the contact information.)

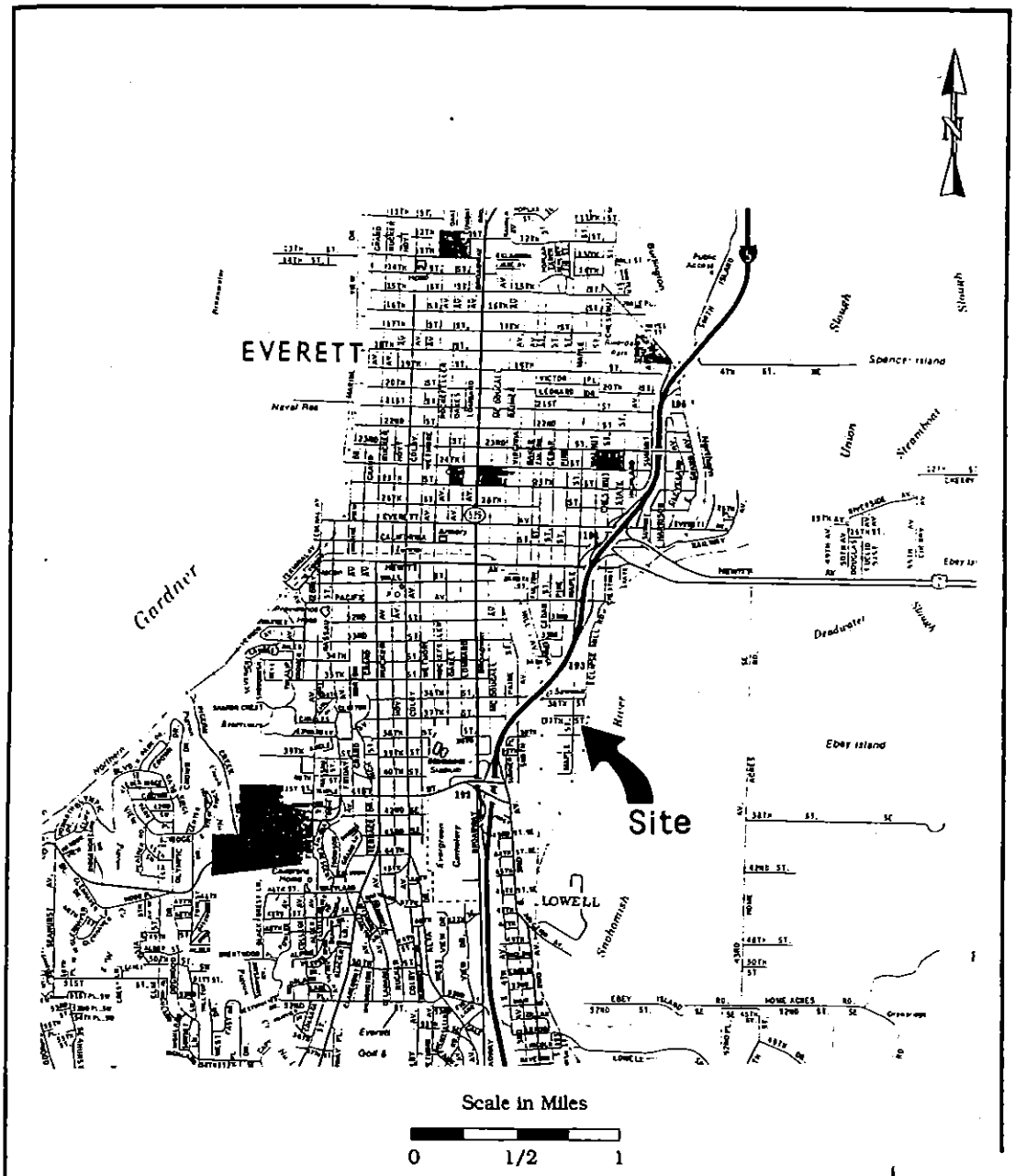

FIGURE 1-1
Site Vicinity Map
Everett Landfill
Everett, Washington

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