Site Hazard Assessment
Recommendation for No Further Action
Everett City Police Gun Range
701 1/2 Mukilteo Boulevard, Everett, WA
Snohomish County, Section: 31 Township: 29N Range: 05E
Ecology Facility Site ID: 96236126
Latitude: 47°57'36.24"
Longitude: 122°13'31.14"
January 25, 2002

Site History/Background

The Everett City Police Gun Range site is located at 701 1/2 Mukilteo Boulevard east of Evergreen Way in Everett. The gun range is situated in Forest Park immediately west of the old City of Mukilteo Fire Station. Residential neighborhoods are located to the west, east, and south of Forest Park.

Pigeon Creek runs along Pigeon Creek Road to the west of the site. It is approximately 1,200 feet and is down gradient from the site. There are two private wells within two miles of the gun range with the nearest at 6,600 feet from the site. The majority of people who live near the gun range are on public water supply. Their source of water comes from Spada Lake, which is located north of Monroe.

The surface soil in the area consists of gravelly sandy loam and is on till plains. It is moderately deep over a hardpan, and soil is formed in glacial till. The well logs indicate a layer of hard pan from 25 to 32 feet. A highbank exists behind the backstop. The highbank is approximately 45 feet from the ground surface of the firing range. The soil of the highbank is composed of glacial till and outwash sediment.

Everett Police Firing Range has been in operation as a small arms firing range since 1949. The entire area is relatively flat. East of the gun range in an office building. There is a storm water drain located in an unpaved area between the gun range and the office building.

The site was referred to the Department of Ecology (Ecology) for an Initial Investigation, which was conducted on May 29, 1998, by Gail Colburn and Norm Peck. During the initial investigation two soil samples were collected from the site. Analytical results indicate that lead concentration in the soil exceeded the Model Toxics Control Act (MTCA) cleanup standard.

On June 5, 1999 the site was listed on Ecology's Confirmed and Suspected Contaminated Sites List. The listing was for confirmed soil contamination by metals and for suspected groundwater contamination by metals. The Early Notice Letter was sent on July 7, 1999, and a letter regarding the site hazard assessment was sent on March 28, 2001.

In 1999 CH2M HILL conducted a site investigation to characterize the extent of lead contamination. The scope was to determine the concentrations and to define extent of lead contamination. Surface and subsurface soil samples were collected from impacted areas.

The site investigation was conducted in three phases. Phase I investigation concentrated on the natural bluff and ground surface behind the backstop. Analytical results show that

samples from behind and next to the metal backstop, the toe area, and surface drainage channels near the storage shed had lead concentrations exceeding MTCA Method A cleanup level.

Phase II investigation focused on the area behind the existing west berm and the ground area (including associated surface drainage) immediately east of the backstop since high lead concentrations were found in these areas. Results reveal that soil collected in the gully in front of, along, and behind the old berm had lead above MTCA Method A cleanup standard.

Phase III investigation was conducted to characterize lead contamination on the backside of the firing range. Four samples collected exceeded the MTCA Method A cleanup level.

In summary, results from the site investigation show that lead contamination in the hillside is near and along the back of the old berm; and the contamination is restricted to surface soil except within the gully area and at the end of the old berm. Lead concentrations in the contaminated areas range from non-detect to 27,000 mg/kg.

After the site investigation, soil samples were collected at three locations and analyzed using the toxicity characteristics leaching procedure (TCLP). Two of the three samples failed the TCLP criteria for lead. As a result, the soil is classified both as a characteristic hazardous waste and as a Washington State Dangerous Waste.

On May 6, 2001, Hasina Wong and Geoffrey Crofoot of the Snohomish Health District and Michael Spencer from Ecology met with Mike Shepard of the City of Everett (City) and Bernard Wong from CH2M HILL. The City planned to conduct remedial action from mid-July to mid-August. Subsequently, confirmation sampling will be taken until samples are below the lead cleanup level.

Soil Remedial Action

On September 2001, Clearcreek Contractors began remediation activities. Soils in four locations were identified for excavation:

1. area associated with the old berm, which includes the gully in front of the berm;
2. an area at northwestern part of the bluff toe, which may contain a combination of the old and new berm;
3. ground surface behind and southeast of the metal backstop; and
4. a small area at the lower part of the bluff toe.

A total of six hundred ninety-two (692) tons of contaminated soil were transported, stabilized, and disposed of at the RCRA Subtitle C facility operated by Waste Management Inc. in Arlington, Oregon. Approximately 6,500 square feet of area was impacted by the remediation.

After contaminated soil was removed, confirmation sampling was conducted on the sidewalls and excavated bottoms to define the clean boundaries. Thirty-six confirmation samples were taken from the four excavated areas. Twenty of the 36 samples failed the lead MTCA Method A Unrestricted Land Use cleanup level of 250 ppm. As a result, additional soil was excavated and 20 locations were re-sampled. Five of the re-sampled areas still failed the Method A Unrestricted Land Use cleanup criteria.

Thus, a third round of soil excavation took place and five re-confirmation samples were collected from the five locations. Analytical results of these samples were below the

Method A Unrestricted Land Use cleanup standard. Therefore, the excavation activity was complete after this round of soil removal.

In summary, a total of 61 confirmation samples were taken from 36 locations from the four excavated areas. The last round of confirmation sampling results indicates lead concentrations below the cleanup standard. The results are displayed in the following table.

Confirmation Sampling Results

Sample Number	Lead MTCA cleanup standard @ 250 ppm
GR-10	22 ppm
GR-14	8 ppm
GR-15A	<8 ppm

After the contaminated soils were removed, the site was restored with clean backfill. Then the backfilled soil surface was hydroseeded and native trees were planted. Site demobilization was completed on November 1, 2001. Further details regarding the cleanup can be found in the Independent Remedial Action Report dated January 2002.

Conclusion

The Everett City Police Gun Range site is located Forest Park in Everett. The nearest private well is southwest and more than 6,000 feet from the site. The majority of people who live in the area get their water from Spada Lake, which is located east of Everett. Therefore, their drinking water supply is not likely to be impacted.

During remediation, four areas were identified for soil excavation. As a result, six hundred ninety-two (692) tons of lead contaminated soil were removed from the gun range. Subsequently, confirmation samples were collected from the four locations and the last round of final confirmation samples indicates lead concentrations below MTCA Method A cleanup level. Therefore, the site poses no significant threat to human health or the environment. Based on the remedial action taken by the City of Everett, the Snohomish Health District recommends no further action under MTCA for the Everett City Police Gun Range site