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July 30, 2009

Jeff Beltramini  
Engineering Department  
City of Anacortes  
P.O. Box 547  
Anacortes, WA 98221

Facility Site ID # 3097<sup>4</sup>179

Dear Mr. Beltramini:

The Skagit County Public Health Department has completed the site hazard assessment (SHA) of the A Avenue Landfill site located at A Avenue and 37<sup>th</sup> Street, Anacortes, as required under the Model Toxics Control Act. A determination of no further action (NFA) at this site has been made by Ecology based on this SHA.

For your information, Ecology will publish the results of this, and other recently completed, SHAs in the August 19, 2009 Special Issue of the Site Register.

Ecology reserves the right to initiate further investigation at this site where new information is received indicating a potential/actual threat to human health and/or the environment through the release of hazardous substance(s).

Please contact me at (360) 419-3404 if you have any questions/comments regarding this SHA/determination of NFA.

Sincerely,

Polly Dubbel  
Environmental Health Specialist II

cc Donna Musa, Washington Department of Ecology

SITE HAZARD ASSESSMENT  
No Further Action Report

Sent  
8/11/09

**SITE INFORMATION:**

Name           **A Avenue Landfill** (Also known as 37<sup>th</sup> and D Landfill or Dump)  
Address       **A Avenue and 37<sup>th</sup> Street**  
City           **Anacortes**     County **Skagit**        State **WA**     Zip **98221**  
Parcel         **P32340**  
Section/Township/Range   **East ½ Section 26 Township 35 North Range 01 East**

Latitude       **48° 29' 31.7"**   Longitude   **-122° 38' 23.3"**  
FSID #         **3094179**

No Further Action through Site Hazard Assessment issued for August 2009 update  
May 26, 2009

**SITE DESCRIPTION :**

The A Avenue Landfill is located in the City of Anacortes inside an area managed by the city parks department as recreational forest land. The landfill occupies approximately 6 acres. It is bordered on all sides by recreational forest. A large wetland (32<sup>nd</sup> Street Swamp) lies approximately 300 feet to the northeast of the landfill and surface water (Mitten Pond) is 300 feet to the northwest. Smaller wetland areas are adjacent to the landfill on the north and west. The recreational forest extends for many acres to the north, west, and south of the site. To the east, residential development begins across from A Avenue, approximately 400 feet away. The area down-gradient of the landfill is served by City of Anacortes water and sewer. Refer to Figure 1 for the landfill area map.

The landfill was managed by the city and received municipal solid waste during the 1960s up to 1970 or so. The solid waste was burned. Once regulations prohibited open burning of garbage the city began using a different site for solid waste disposal. The landfill was closed by placing 1-2 feet of soil over the surface. From the 1970s to 2006 the city continued to use the site as a dump for wood waste, concrete and asphalt, metals, informal composting of yardwaste, vector waste, and street sweepings. These uses were without permit or oversight of the Skagit County Health Department. At one time in the early 1990's the surface of the landfill was used as a bed for the treatment of petroleum contaminated soils. An impermeable layer of plastic was placed under the soils to prevent migration of contamination to the landfill cover soil. An area to the east of the landfill was covered in concrete and used for sewage sludge drying beds for the City of Anacortes during the 1980s. Until very recently the landfill has been open to access by the public. A gate has prevented general vehicle access but motorcycles and bicycles used the landfill for sports riding.

The landfill surface lies approximately 25-30 feet above the surrounding grade at the site. Until recent work, the surface was pitted and metals and glass could be found sticking through the dirt in areas of the surface. Glass and metal debris also extend off of the grade of the landfill into a wetland area to the west over one to two acres. The surface of the landfill collected surface water and ponding could be seen in wet weather. In the fall of 2008 the City of Anacortes brought in soil cover for surface of the landfill and graded the east and northeast sides. A six foot high chain link fence was placed

around the immediate perimeter of the landfill to restrict access. A closure plan for landfill is currently pending from the city.

The Skagit County Health Department conducted an Initial Investigation on the A Avenue Landfill in 2003. During the investigation the city contracted with Geomatrix to develop a sampling plan for the landfill to determine if the site was likely to have contaminants that would trigger action under the Model Toxics Control Act. The Health Department reviewed and approved the sampling plan. Because the landfill had been a burning landfill during the years that municipal solid waste was placed it was deemed that the fill from this time would pose a lower risk for residual contamination. Since the surface of the burn area had been since covered with various materials, including petroleum contaminated soils, the sample plan involved sampling into the cover material rather than drilling all the way through the original fill. In addition, water from the main seeps leading from the base of the landfill to the adjacent wetland was sampled. Figure 2, copied from Geomatrix, 2004, shows sample locations.

On December 18, 2003, five soil samples were taken from the surface of the landfill at depths ranging from 1.0 to 2.5 feet below ground surface using a hand auger. Soil samples were analyzed for Total Petroleum Hydrocarbons diesel and heavy oil by method NWTPH-Dx, Total Metals by EPA Method 6000/7000 series, and semi-volatile organic compounds by EPA Method 8270C. All results were either not detected or detected below the applicable clean up level (either MTCA Method A for unrestricted land use or B for direct) with one exception. Sample S-2 had heavy oil range hydrocarbons at 2970 mg/kg. City staff report that this sample location looked like a motor vehicle (likely motorcycle) had dumped a small quantity of oil to the ground.

The two seep samples were taken from water flowing from the base of the fill boundary on the northwest (Seep 1) and northeast (Seep 2) area of the landfill. Rust colored staining is visible around these seeps. Water samples were analyzed for volatile organic compounds (VOC) by EPA Method 8260B, Total Metals by EPA Method 6000/7000 series, Anions by EPA Method 300.0, and conventional chemistry of alkalinity, ammonia, total dissolved solids, and total organic carbon. Table 3 summarizing seep water quality results is attached from the Geomatrix report. No results exceeded applicable MTCA Method A or B clean up levels for groundwater and surface water with the exception of manganese in Seep 2. Manganese was detected in Seep 2 at 9.78 mg/L exceeding the Method B groundwater clean up level of 2.24 mg/L. VOCs were not detected in the seep samples with the exception of p-isopropyltoluene in Seep 2 at 0.270 mg/L. There is no clean up level listed for surface or groundwater for this compound. Results from conventional chemistry parameters did not have any outstanding detections although we do not have background data at this site for comparison.

After reviewing the results from the 2003 sampling, the site was placed on the Confirmed and Suspected Contaminated Sites list by Ecology for confirmed soil contamination with petroleum products and suspected soil and sediment contamination with petroleum and polycyclic aromatic hydrocarbons (PAH). No further sampling has occurred at the site since 2003. Sediment sampling in the wetlands has been considered at the site but not pursued by the city or the health department.

On April 7, 2009 Skagit County Public Health Department conducted a site visit to the A Avenue Landfill for the Site Hazard Assessment. The site visit confirmed that the city has limited access to the landfill surface with the chain link fence. Additional fill had been brought in to the site since the 2003 initial investigation. The soil cover had been placed over the main exposed landfill surface and graded in two level tiers. The new soil cover was sufficient to cover all exposed solid waste that had been apparent on the landfill surface in 2003. A drainage channel had been dug along the southeast side of

the landfill to direct drainage to the northeast. No changes had been made to the brush covered slopes of the landfill to the south, west and north or to wetland areas outside of the main landfill where solid waste debris has been found. Ponding of rainwater was evident on the flat surfaces of the top of the landfill. Site photos are attached.

The Skagit County Public Health Department proposes to maintain oversight over the landfill under the solid waste program. We recommend no further action under the Model Toxics Control Act as there is limited current evidence that the site is releasing hazardous substances exceeding MTCRA clean up levels. The areas receiving runoff from the landfill are native wetlands and dredging or additional work in the wetlands would cause more environmental degradation to the wetland environment. No drinking water systems are impacted from this site as everyone down-gradient of the site is served by public water. We believe the best approach at this point is to have the city proceed through a long term closure at the landfill that will accomplish the following:

- Continue to limit access to the landfill by the public
- Complete the soil cap on the landfill with contouring that will prevent ponding and reduce infiltration of surface water into the landfill
- Remove accessible appliances and vehicle parts from the surface perimeter of the landfill where the disturbance will not negatively impact the environment
- Use vegetation and/or fencing to discourage public access to the wetland to the west of the landfill where significant metal and glass debris is found
- Maintain a grass cover on the landfill cap and inspect regularly for signs of cap break down or seep formation
- Monitor seep water or surface water near the landfill in one or two locations immediately after closure and five years after closure. Test the water for total metals, VOCs, pH, and conductivity to determine effectiveness of the cap at decreasing leachate production from the landfill
- Review the status of the landfill with the health department 5 years and 10 years after these closure actions to determine the need for further follow up

## SOURCES

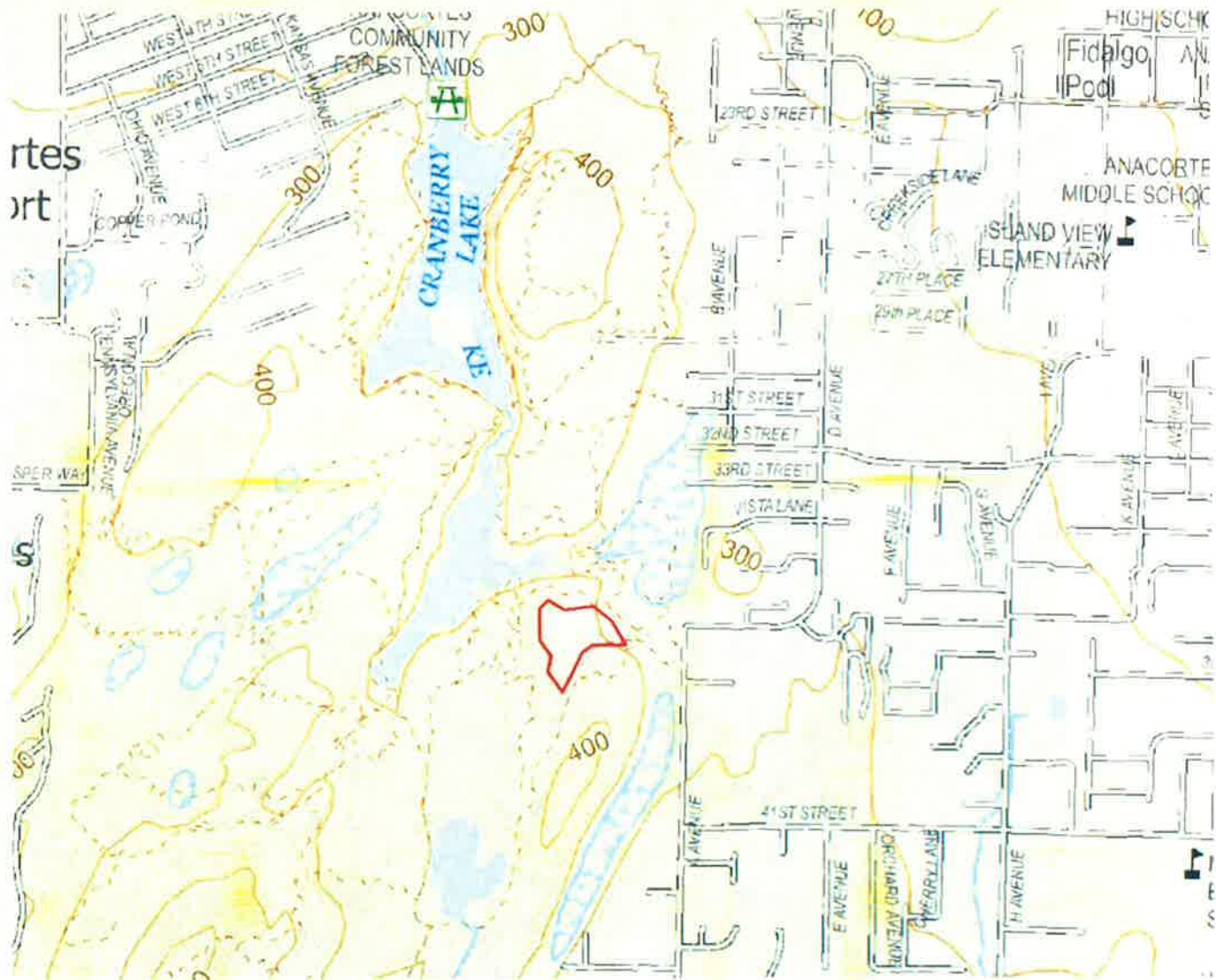
- 1 Skagit County Health Department files and site visit notes for A Avenue Landfill, 1980 - 2009
- 2 Skagit County Health Department, A Century of Garbage, August 1990
- 3 Geomatrix, "A" Avenue Landfill Site Sampling Results, Anacortes, Washington, February, 2004
- 4 Washington State Department of Ecology, Model Toxics Control Act Chapter 173-340 WAC, February 12, 2001.
- 5 Skagit County Mapping, SkagitView 5.0, 2008

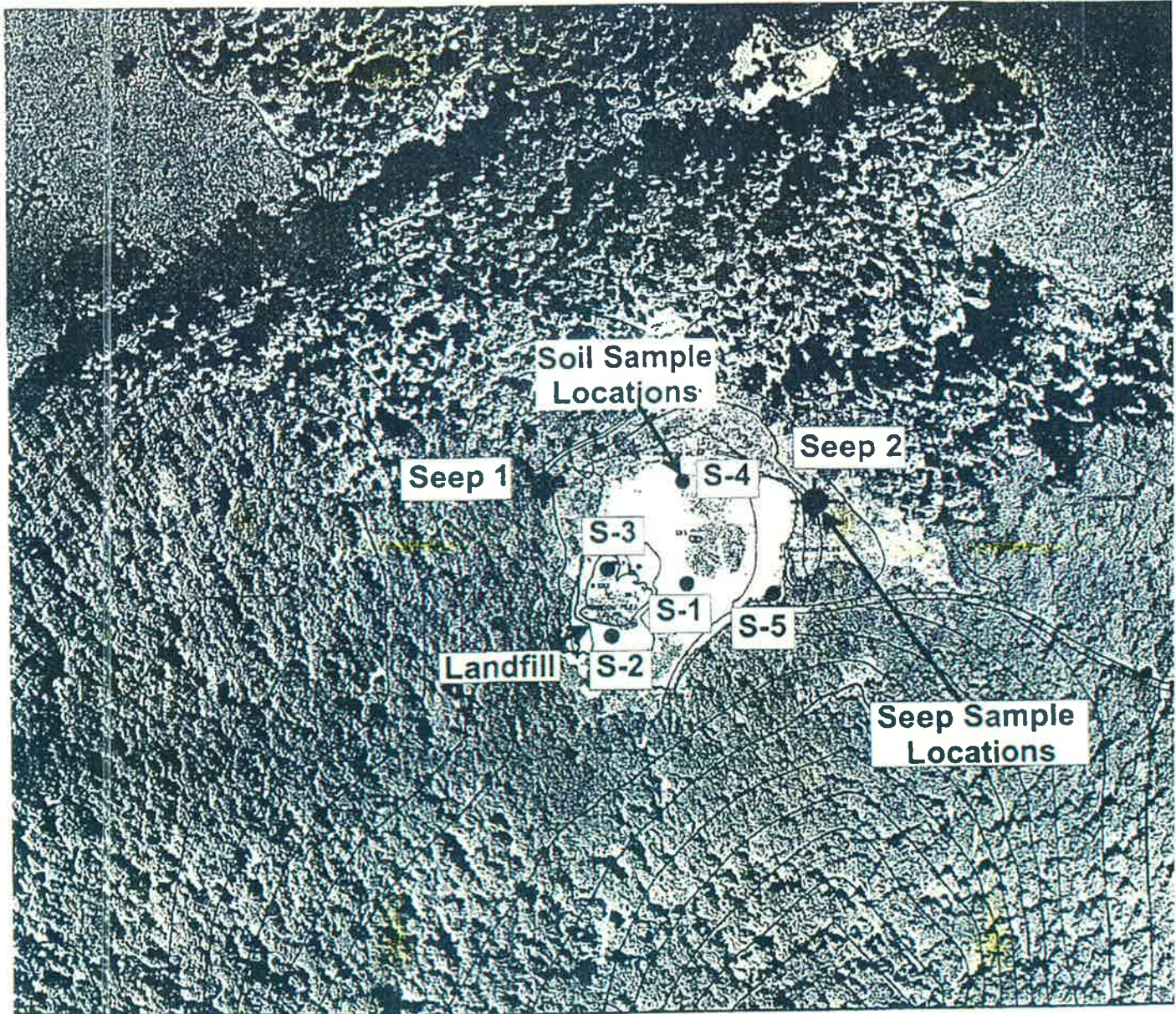
**Figure 1 – A Avenue Landfill and Vicinity**  
Site hazard Assessment May 26, 2009 - All locations on map are approximate



# Figure 1 – A Avenue Landfill and Vicinity

Site hazard Assessment May 26, 2009 - All locations on map are approximate





MAP OF SAMPLING LOCATIONS  
"A" Avenue Landfill Project  
Anacortes, Washington



**A Avenue Landfill SHA Photos – view from access road to NW  
photos by Polly Dubbel**





**A Avenue Landfill SHA Photos – view along west side of dump area  
photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view over dump looking North  
photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view over dump looking SE  
photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view over dump looking east  
photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view over dump looking west  
from east edge - photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view of drainage ditch along south side  
photos by Polly Dubbel**



**A Avenue Landfill SHA Photos – view of outfall from drainage ditch  
photos by Polly Dubbel**

